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American Institute of Certified Public Accountants. Agribusiness Special Committee

# EXPOSURE DRAFT

## PROPOSED AUDIT AND ACCOUNTING GUIDE

## AUDITS OF AGRICULTURAL PRODUCERS AND AGRICULTURAL COOPERATIVES

JANUARY 17, 1986

Prepared by the Agribusiness Special Committee of the
American Institute of Certified Public Accountants

Comments should be received by May 15, 1986 and addressed to
Auditing Standards Division, File 2107
AICPA, 1211 Avenue of the Americas, New York, New York 10036–8775

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AICPA

American Institute of Certified Public Accountants
1211 Avenue of the Americas, New York, New York 10036 (212) 575-6200

January 17, 1986

An exposure draft of a proposed AICPA Audit and Accounting Guide, Audits of Agricultural Producers and Agricultural Cooperatives, accompanies this letter.

Commentators on the proposed guide are requested to give particular attention to the discussion of--

- o Accounting for income taxes of agricultural cooperatives in chapter 11 and the example of a deferred income tax calculation in Appendix A.
- o Cost accounting and cost allocations in chapter 3.
- o Normal versus abnormal costs in chapter 3.
- o Auditing procedures applicable to both producers' and cooperatives' investments in and transactions with cooperatives.

Accounting for deferred income taxes of a cooperative is affected by several factors. One such factor is whether patronage is allocated on a book or tax basis. Other factors include the use of nonqualified written notices of allocation and whether earnings are attributable to patronage or nonpatronage operations.

Agricultural producers face problems of cost identification and determination because the same personnel and equipment are often used in the production and sale of assets, in administration, and in the construction of productive assets. Also, questions arise about the accounting treatment of costs incurred for replanting, costs attributable to prior crops, double-cropping costs, and costs of crops that require more than one year to mature.

In valuing agricultural assets, the producer should distinguish normal costs from abnormal costs and recognize current losses in the current period. When abnormal losses occur in a particular year, the undepreciated costs of lost animals, trees, or vines should be charged to expense. No separate accounting is necessary for normal losses.

In testing investments in and transactions with cooperatives, the auditor is principally concerned with valuation. Commentators are requested to specifically consider whether this exposure draft sufficiently describes auditing procedures that may be applied to limit the audit risk associated with investments in and transactions with cooperatives.

Comments or suggestions on the issues contained in the exposure draft will be appreciated. The committee's consideration of responses will be helped if the comments refer to specific paragraphs, explain the problems, and include supporting reasons for any suggestions or comments.

In developing guidance, the AICPA auditing standards division considers the relationship between the cost imposed and the benefits reasonably expected to be derived from services rendered by accountants. It also considers differences that may be encountered in rendering such services to small businesses and, when appropriate, makes special provisions to meet those needs. The committee would particularly appreciate comments on those matters.

Responses should be addressed to the AICPA Auditing Standards Division, File 2107, in time to be received by May 15, 1986. Written comments on the exposure draft will become part of the public record of the AICPA auditing standards division and will be available for public inspection at the offices of the AICPA after June 15, 1986, for one year.

Sincerely,

Donald F. Linsteadt

Donald F. Linsteadt
Chairman
Agribusiness Special Committee

Don Pallais

Don Pallais
Director
Audit and Accounting Guides

# SUMMARY

This proposed audit and accounting guide primarily codifies existing practice in (1) auditing the financial statements of agricultural producers and agricultural cooperatives and (2) accounting by those types of entities. AICPA Statement of Position (SOP) 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives, is included as an appendix to this proposed guide; its recommendations on accounting for agricultural producers and agricultural cooperatives are an integral part of this proposed guide. SOP 85-3 and the accounting provisions of this guide do not apply to personal financial statements of agricultural producers or statements prepared on a comprehensive basis of accounting other than generally accepted accounting principles. They also do not apply to the following: growers of timber; growers of pineapple and sugarcane in tropical regions; raisers of animals for competitive sports; or merchants or noncooperative processors of agricultural products that purchase commodities from growers, contract harvesters, or others serving agricultural producers.

Significant areas discussed in this guide include--

- Cost accounting and cost allocations by agricultural producers.

- Normal versus abnormal costs of agricultural producers.

- Accounting for income taxes by agricultural producers and agricultural cooperatives.

- Accounting for losses by agricultural cooperatives.

- Departmental and functional accounting by agricultural cooperatives.

- Auditing procedures applicable to producers' and cooperatives' investments in agricultural cooperatives.

In addition, the proposed guide includes illustrative financial statements of an agricultural producer and of an agricultural cooperative.

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## PART III

## HEDGING

# PREFACE

This guide has been prepared to assist the independent auditor in examining and reporting on financial statements of agricultural producers and agricultural cooperatives by describing relevant matters unique to the industry. It is intended--

- o To provide background information on the nature and characteristics of the agricultural industry.
- o To assist agricultural producers and cooperatives in applying generally accepted accounting principles.
- o To assist the independent auditor in applying generally accepted auditing standards and knowledge of generally accepted accounting principles to determine whether generally accepted accounting principles have been applied by management, which has the primary responsibility for financial statements.

Generally accepted auditing standards and accounting principles are applicable to all types of agribusiness. The general application of these standards and principles is not discussed herein; rather, this guide focuses on the special problems inherent in auditing and reporting on the financial statements of agricultural producers and agricultural cooperatives.

This guide contains some suggested auditing procedures, but detailed internal accounting control questionnaires and audit programs are not included. The nature, timing, and extent of auditing procedures are matters of professional judgment and will vary depending on the degree of audit risk and materiality.

This guide also includes information regarding statutory rules and regulations applicable to the industry and illustrations of the form and content of financial statements of agricultural producers and agricultural cooperatives and the independent auditor's reports thereon.

Statement of Position (SOP) 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives, is included as an appendix to this document, and its recommendations on accounting for agricultural producers and cooperatives are an integral part of this guide. SOP 85-3 and the accounting provisions of this guide do not apply to personal financial statements of agricultural producers or statements prepared on a comprehensive basis of accounting other than generally accepted accounting principles (for example, the income tax or the cash basis of accounting). They also do not apply to growers of timber; growers of pineapple and sugarcane in tropical regions; raisers of animals for competitive sports; or merchants or noncooperative processors of agricultural products that purchase commodities from growers, contract harvesters, or others serving agricultural producers.

Agribusiness Special Committee

# PART I

# AGRICULTURAL PRODUCERS

## CHAPTER 1

## INTRODUCTION

1. Agriculture ranks among the largest industries in the United States and, until recent times, was the country's principal occupation and employer. Although the number of people involved in agricultural production is still large, that number has been steadily shrinking as a result of increased farm productivity, a growth in the size of individual farms and ranches, and the population shift toward urban centers. Despite the trend toward larger business units, however, entities engaged in agriculture still range from small noncorporate family groups to publicly held multinational corporations.

2. For purposes of this guide, the term agricultural producers includes farmers and ranchers who grow or raise agricultural products for sale or for use in the production of other agricultural products. In their transactions with agricultural cooperatives, they may be referred to as members or patrons.

3. Audits of agricultural producers should be designed and conducted in the same manner as audits of other enterprises, giving due consideration to the size and nature of the organization and the system of internal accounting control. The auditing procedures suggested herein are presented to provide guidance on matters that are unique to the industry but are not intended to replace or limit the use of prudent audit judgment in determining the nature, timing, and extent of audit procedures to be applied in a particular audit.

4. Sample financial statements, whose form and content are currently acceptable, are illustrated in the appendixes.

## CHAPTER 2

## INDUSTRY BACKGROUND INFORMATION

5. Organizations ranging from small proprietorships to large public companies engage in a variety of farming and ranching activities, including the following:

- Growing wheat, milo, corn, and other grains
- Growing soybeans, vegetables, sugar beets, and sugarcane
- Growing citrus fruits, other fruits, grapes, berries, and nuts
- Growing cotton and other vegetable fibers
- Operating nurseries
- Breeding and feeding cattle, hogs, and sheep, including wool production
- Operating dairies
- Raising fish and shellfish
- Operating poultry and egg-production facilities
- Breeding horses
- Raising mink, chinchilla, and similar small animals

Agricultural producers may be involved in one or more activities, and their practices and products may vary because of differences in temperature, soil, rainfall, and regional economics.

6. Agricultural producers primarily market their products directly to existing commercial enterprises, consume them in a related activity, such as the feeding of raised hay and grains to livestock, or market them through agricultural cooperatives. Agricultural cooperatives may act as agents and account for the separate products of each producer, or they may commingle the patrons' products and either market them in the form in which the products were received or process them before sale. Producers also sell some products through governmental programs. Prices of most agricultural products are determined by economic forces, but some product prices are established by federal and state regulatory agencies. Agricultural producers may use forward sales contracts or commodity futures contracts to reduce the risks associated with fluctuating commodity prices.

7. Agricultural producers conduct their operations in various manners. Some agricultural producers manage the entire productive activities of their farms and ranches. Others conduct agricultural operations as tenants under cash or crop-sharing rental agreements. Terms of crop-sharing agreements usually provide for a portion of the crop to be sold for the account of or delivered to the landowner. The extent of the landowner's participation in costs, profits, and management depends on the terms of each agreement.

8. The daily activities of farmers and ranchers who produce market crops may also create additions to fixed assets. Examples include the addition of raised animals to a breeding herd and the construction of buildings, fences, and various types of land improvements by using the producer's equipment and employees.

9. Federal and state income tax laws have significantly affected the operations and accounting practices of agricultural producers. Some accounting practices have been partially justified based on their acceptance for income tax purposes, but these practices may not be in accordance with generally accepted accounting principles. Economic decisions and productive activities of many agricultural producers have also been influenced by government subsidy and credit programs.

# CHAPTER 3

## ACCOUNTING SYSTEMS, INTERNAL ACCOUNTING CONTROLS, AND OTHER ACCOUNTING CONSIDERATIONS

### ACCOUNTING SYSTEMS

10. More attention has been given to accounting systems and practices in the agricultural industry in recent years because of the increased size and complexity of operating units as well as the greater number of formally educated and trained agricultural producers and managers. Many large private entities and publicly held corporations engaging in agricultural production have sophisticated accounting systems. However, many producers maintain elementary accounting records that are used for both tax and financial accounting. There are numerous sources of accounting forms and systems designed for agricultural producers, including computer processing offered by computer service bureaus and many universities.

### INTERNAL ACCOUNTING CONTROLS

11. As in other small businesses, the internal accounting controls of many small agricultural operations are weak because they typically have small or part-time accounting staffs and little or no segregation of duties. However, involvement of the owner/manager in the operations frequently provides some control, particularly over access to assets and authorization of transactions.

12. Large agricultural operators are likely to have adequate accounting controls over critical functions, such as sales, costs of production, inventories of products and supplies, purchases and disbursements, equipment use, and personnel utilization.

### COST ACCOUNTING AND COST ALLOCATIONS

13. Accounting for the cost of agricultural products is similar to accounting for the cost of manufactured products. However, agricultural producers are faced with significant problems of cost identification and determination because the same personnel and equipment are often used in the production and sale of products, administration, and construction and production of assets. In addition, producers may raise diverse crops and animals, which further complicates the process of cost allocation.

14. Certain production costs, such as those for seed, planting, feed, and fertilizer, may be allocated directly to a particular product. Other production costs may be accumulated by department or function and allocated on systematic and rational bases to various products through cost or support centers. For example, costs may be accumulated for machinery and equipment used for more than one agricultural activity and allocated to the activities based on usage records. Departments providing goods or services for more than one product are often called <u>cost</u> or <u>support centers</u> and may be established for the purpose of accumulating indirect costs and direct costs for activities such as irrigation and pest and disease control.

15. Production overhead includes all production costs that are common to various products, support centers, and other cost objectives. These costs should be accumulated for each period and allocated to products based on direct labor hours, machinery and equipment use, or another basis that correlates with the use of resources.

16. If overhead and support center costs are estimated in advance and allocated on an interim basis, under- or overapplied costs may result. Under- or overapplied costs should be allocated to cost of goods sold, inventories, and growing crops.

17. Costs should be allocated when one raised product is used in the development of another. For example, grain or hay raised by the producer may be used to feed livestock. The costs of producing the grain or hay should be accumulated and allocated to the cost of producing the livestock.

18. The accounting system of the agricultural producer should be designed to match costs and expenses with related revenues. Costs of resources that are expected to provide future benefits should be deferred as assets on the balance sheet. Costs without expected future benefits should be charged to operations as incurred.

19. Questions frequently arise about the accounting treatment of costs incurred for replanting, costs attributable to prior crops, double-cropping costs, and costs of crops that take over one year to mature. These items, which do not apply to orchards, vineyards, and groves, are discussed below.

Partial Replanting

20. Partial replanting occurs for a variety of reasons, including damage from insects, crop disease, and drought. Costs of replanting may include land preparation, irrigation, seed, and labor. If those costs are considered normal costs and, when combined with other capitalized costs, do not exceed estimated net realizable value, they should be included as part of the growing or harvested crop's cost. If the costs are abnormal or excessive, they should be charged to operations.[1]

Complete Replanting

21. Complete replanting of a field may occur at some point during the crop year for various reasons, including economic considerations. Generally, the costs incurred with respect to the crop removed should be charged to expense, and the cost of the new planting should be capitalized as the cost of the new crop. However, some costs incurred for an earlier planting may benefit a replanted crop and be appropriately considered costs of the new crop. Examples of such items include deep plowing, estimated residual value of earlier fertilizing, and seedbed preparation.

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[1]See paragraphs 26 and 27 for a discussion of normal and abnormal costs.

## Double-Cropping

22. A parcel of land may be used for more than one crop in the same growing season. For example, winter wheat might be planted in the fall and harvested in early summer of the following year. Immediately following the wheat harvest, soybeans may be planted and harvested that fall. Costs would be generally allocated to each crop by following the principles just discussed. For example, the same land preparation or fertilizer costs may benefit both crops and should be allocated to each crop, either on the basis of the relative values of the two crops or on another logical basis.

## Extended-Period Crops and Methods

23. Some crop costs, such as soil preparation, are incurred prior to planting and should be deferred and allocated to the growing crop. Other cultural practices, such as clearing the residue of harvested crops, cannot be performed or completed until after harvest, which may be in a succeeding year; those costs should be estimated, accrued, and allocated to the harvested crop. Some crops require more than one year to mature and the costs should be deferred until harvest.

24. It is not uncommon for assets to be constructed by using labor and materials from the farm or ranch rather than by employing an outside contractor. When this occurs, the costs of materials, labor, machinery and equipment, and related overhead applicable to such assets should be capitalized. Ordinarily, the cost of constructed assets includes only the direct construction costs and allocated overhead costs. The overhead rate used in capitalization should generally not be higher than the rate used for product costing. Other general and administrative expenses should not be capitalized. The amount of costs capitalized for internally constructed assets generally should not be more than the estimated external purchase price of such assets.

25. The interest costs related to construction or production of major assets should be capitalized in accordance with Financial Accounting Standards Board (FASB) Statement No. 34, Capitalization of Interest Cost.

## NORMAL COSTS VERSUS ABNORMAL OR EXCESSIVE COSTS

26. In order to record assets at amounts that do not defer losses to future periods, the producer should distinguish normal costs from abnormal costs.[2] Identification of abnormal costs involves consideration of the producer's performance, which can be measured by various statistics, such as utilization rates, per-acre crop yields, and insecticide application rates. Regional averages, the experience of others producing the same or similar products in a comparable area, and the opinions of specialists may be used to determine the level of performance that represents an acceptable standard of achievement under ordinary operating conditions.

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[2] Accounting Research Study No. 13, The Accounting Basis of Inventories, contains discussions of "abnormal costs" and "normalizing direct costs" that may be useful in distinguishing normal costs from abnormal costs.

27. Identification of abnormal costs of agricultural assets may require a general knowledge of the normal loss rate of animals, trees, or vines. No separate accounting is necessary for normal losses. When abnormal losses occur in a particular year, the undepreciated costs of lost animals, trees, or vines should be charged to expense. In some cases the auditor may need to consider the use of specialists in determining normal loss rates (see Statement on Auditing Standards (SAS) No. 11, Using the Work of a Specialist).

## CHAPTER 4

## ENGAGEMENT PLANNING AND STUDY AND EVALUATION OF INTERNAL ACCOUNTING CONTROL FOR AGRICULTURAL PRODUCERS

### ENGAGEMENT PLANNING

28. SAS No. 22, Planning and Supervision, provides general guidance to the auditor for planning an audit engagement. To assist in planning the audit of an agricultural producer, numerous publications are available that contain detailed descriptions of most production operations. Such publications are available from U.S. government agencies, state agricultural universities, agricultural extension services, and commodity and trade organizations.

29. There are several unique planning considerations in the audit of an agricultural producer, including the following:

a. The relationship of the producer's fiscal year-end to the harvest cycle of the producer's major crops. (For example, a producer with a fiscal year ending on June 30 whose major crop is rice will have a growing crop for the auditor to consider at year-end; however, the auditor for a similar producer with a fiscal year ending on December 31 would not have that same concern.)

b. The existence of share-crop arrangements. (For example, the auditor should consider terms of the share crop agreement, title to the growing or harvested crops, possibility of inventory and accounting distortions because of planting schedules and different fiscal years, and the landowner's right to participate in management decisions, including the planting and sale of crops.)

c. Special conditions affecting the producer's crops, plants, and animals, such as diseases and unfavorable weather conditions. (For example, yields expected for a tree-fruit crop may be adversely affected to such a degree by weather conditions that accumulated costs may exceed inventory values. When these costs are increased by growing and harvest costs yet to be incurred, they may exceed anticipated crop revenues.)

d. Government regulations affecting the producer. (For example, the producer may be adversely affected by changes in the farm program or by local restrictions on the use of herbicides, pesticides, or fungicides.)

e. The need for the services of a specialist to evaluate the quality of the producer's crops, plants, or animals. (For example, in some instances the auditors may not possess the knowledge or experience to evaluate the health of plants and animals, estimate crop quality and expected yields, or recognize the existence of disease, infestations, etc.) (See SAS No. 11, Using the Work of a Specialist.)

THE AUDITOR'S STUDY AND EVALUATION OF INTERNAL ACCOUNTING CONTROL

30. The internal accounting controls that are appropriate for agricultural producers are similar to those appropriate for entities engaged in manufacturing. Controls normally exist over the producer's major transaction cycles, such as purchasing, sales, and payroll. In addition, the producer normally maintains controls over production activities that provide reasonable assurance that costs are appropriately allocated to inventories and self-constructed assets.

31. The AICPA's Professional Standards, vol. 1, AU sec. 320, as amended by SAS No. 48, The Effects of Computer Processing on the Examination of Financial Statements, describes the auditor's study and evaluation of internal accounting controls as a basis for reliance thereon in determining the nature, extent, and timing of audit tests to be applied in the examination. At a minimum, the auditor should obtain an understanding of the producer's control environment and the flow of transactions through the accounting system. If, after this preliminary review, the auditor plans to rely on the system of internal accounting control, the review should be completed, and compliance tests should be performed to determine whether control procedures are suitably designed to provide reasonable assurance that they will prevent or detect errors or irregularities.

# CHAPTER 5

# INVENTORIES

## ACCOUNTING FOR INVENTORIES

32. Inventories of agricultural producers include growing crops, developing animals to be held for sale, harvested crops, livestock held for sale, and secondary products, such as calves from dairy herds and wool from sheep.

33. Growing crops and developing animals to be held for sale should be valued at the lower of cost or market. Inventories of harvested crops and livestock held for sale may be valued at the lower of cost or market or, in accordance with established industry practice, at sales price less estimated costs of disposal, when all the following conditions exist:

- The product has a reliable, readily determinable and realizable market price.

- The product has relatively insignificant and predictable costs of disposal.

- The product is available for immediate delivery.

34. For the purpose of this section, market means net realizable value as defined in statement 6 of chapter 4 in Accounting Research Bulletin No. 43 and discussed later in this section of the guide. A reliable market price should be found in an established market for products that are comparable to the product being valued and that do not vary significantly because of differences in grade or variety.

35. The product should be located sufficiently close to the marketplace to make delivery practical without significant costs or time delays. These circumstances affect the amount and predictability of market prices. In addition, the marketing procedures should be well established so that transportation and other disposal costs, which should be relatively small, can be estimated with reasonable accuracy.

## NET REALIZABLE VALUE

36. Inventories of harvested crops and livestock held for sale and commonly referred to as valued at market are actually valued at net realizable value. Thus, whether harvested crops and livestock held for sale are valued at market or at the lower of cost or market, it is necessary to determine the net realizable value of those inventories. At times, net-realizable-value calculations are required for growing crops and developing animals. For these categories, costs to complete, including direct costs, production overhead, and costs of disposal should be estimated and deducted from the anticipated sales prices to determine the net realizable value for the growing crops and developing animals and to compare it to costs incurred.

37. Determining net realizable value requires estimating selling prices and related costs of disposal in the ordinary course of business. Realized and unrealized gains and losses from hedging transactions and the provisions of forward sales contracts, both of which are discussed in other sections of this guide, should be considered in estimating net sales proceeds. Disposal costs include handling, packing, transportation costs identified with sale of the specific product, and selling expenses such as commissions and other types of direct sales expense.

38. Sources of market information for agricultural commodities are numerous. They include quoted daily prices for traded commodities such as grains and livestock. For other commodities, information may be available from local dealers, crop-reporting services, commercial-lending institutions, county extension services, and trade publications. The reputation and credibility of the information source should be considered. The market data should be adjusted to the local price because there are usually significant variations between the local and central market prices, reflecting, at the least, the freight differential. In addition, prices of most agricultural products will depend on their grade classifications, which should be considered in determining net realizable value.

39. Any estimate of net realizable value by the producer should be based on the most reliable evidence available at the balance sheet date. If a material variation from that amount exists at the date the financial statements are issued, the auditor should refer to the AICPA's Professional Standards, vol. 1, AU sec. 560 (as amended by SAS No. 12, Inquiry of a Client's Lawyer Concerning Litigation, Claims, and Assessments) for guidance regarding consideration of subsequent events.

## AN OVERVIEW OF THE AUDIT OF INVENTORIES

40. Audit objectives include (a) obtaining reasonable assurance that inventory quantities represent all agricultural products and animals belonging to the producer and (b) determining that an acceptable valuation method has been properly and consistently applied.[3] If a cost method is used to value inventories, cost should not exceed net realizable value. Adequate disclosure related to inventories should be made.

41. Audit procedures for inventories generally are similar to those performed in the audit of manufacturing entities. Unique audit risks may require modification of those procedures, as described here.

a. When no documents exist to evidence title to raised products, reviews of cost records, yield statistics, and supporting documents should

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[3]The level of the auditor's responsibility for performing procedures or achieving objectives can be described in two ways -- with the terms assurance or risk. Assurance is the complement or converse of risk. SAS No. 47, Audit Risk and Materiality in Conducting an Audit, discusses reducing audit risk to an appropriately low level. The term reasonable assurance is used in this guide to describe the same level of the auditor's responsibility.

indicate the nature and extent of the farming activity and thus provide that evidence.

b. When there is a lack of documentary evidence to support the ownership of raised livestock, the number of animals represented as produced for a period may be tested for reasonableness by applying normal productivity rates to the productive animals in the breeding herd. Inspection of records evidencing real estate ownership may provide additional support for ownership of crops and livestock on the land. Tenant lease agreements should also be considered.

c. Inventories of agricultural products are often stored in public warehouses. The auditor should perform those procedures considered necessary (a) to obtain reasonable assurance that the inventories exist, are owned by the entity, and are in a marketable condition and (b) to determine whether they are pledged as collateral for loans. (See the AICPA's Professional Standards, vol. 1, AU sec. 331.14, as amended by SAS No. 43.)

# CHAPTER 6

## SPECIFIC ACCOUNTING PRINCIPLES AND AUDITING PROCEDURES

### FIELD AND ROW CROPS

#### Background and Unique Characteristics

42. Field and row crops with cycles of less than one year are generally classed as annuals. These crops include wheat, barley, milo, corn, soybeans, sugar beets, tobacco, cotton, crops raised for seed, tomatoes, lettuce, beans, cabbage, and melons.

43. Field and row crops are usually planted from seeds or are transplanted from beds and develop to the point of harvest within several months. In certain areas, when weather conditions permit, two and sometimes three different crops can be raised and harvested from the same field during one year. These practices are referred to as double- and triple-cropping.

44. Good management of field and row crops demands careful protection from spoilage. The delicate nature of some crops requires quick handling from harvest to storage because the product may become worthless in a short period of time. Current methods of harvesting and handling usually prevent spoilage from becoming a significant problem.

45. In recent years hybridization has resulted in plant varieties that carry substantially improved growth, maturation, and yield characteristics compared with older varieties. The development of improved varieties has occurred simultaneously with improvements in both cultural techniques and harvesting equipment. These innovations have increased yields per acre, reduced per-unit costs, and enhanced the general economic value of those plantings.

#### Accounting Principles

46. Costs of growing crops should be accumulated until the time of harvest, subject to lower of cost or market adjustments. Harvested crops may be valued at the lower of cost or market or market. (See paragraphs 38 and 39 in SOP 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives.)

47. Cost centers may be established by field, crop, ranch, or other geographic area. To adequately allocate costs to inventories, each cost center should be charged with direct material and labor and an allocation of indirect costs. Where there are multiple crops, records should be maintained to provide a basis for allocation of total costs to the separate crops.

48. Most costs related to producing field and row crops benefit only the current-year crop (for example, furrows and beds constructed for annual plantings). However, certain costs may be expended for resources benefiting more than one crop year and should be allocated to the appropriate years. For instance, in the production of rice crops the engineering and grading costs for borders (ridges used to retain water) may benefit several years. Such costs are properly included in property and equipment and amortized over their useful lives.

49. Generally, farming procedures undertaken after the current year harvest benefit the crop of the succeeding year. There may be instances where additional costs such as costs of special tillage, chopping, or burning are required after harvest of a particular crop to overcome a physical or noxious condition. Those costs should be estimated and accrued as costs of the harvested crop.

50. In some agricultural operations a field or row crop is raised for use in the development of another product, such as grain or hay used by the producer to feed livestock. The costs involved in the production of the field or row crops for the producer's own use should be identified as part of the maintenance costs of the livestock and accounted for in the same manner as other maintenance costs.

## Auditing Considerations

51. When planning the engagement, the auditor should inquire about the farming procedures and become familiar with the overall operation and any unusual events and practices.

52. The auditor should consider performing the following audit procedures for harvested and growing field and row crops:

a. Physically observing and reviewing crop maturity and quality

b. Testing the capitalized costs of growing crops

c. Reviewing capitalized costs of crops for reasonableness

d. Confirming the existence of harvested crops stored in outside warehouses. (See the AICPA's Professional Standards, vol. 1, AU sec. 331.14, as amended by SAS No. 43.)

53. When records of ownership are inadequate or nonexistent, determining the ownership of harvested crops can present special audit risks. In those situations, evidence of crop ownership may be provided by a review of direct crop costs, harvesting and handling expenses, and applicable leases and tenant agreements.

54. Unique audit risks also may be encountered in reviewing the quality of harvested crops. When inventories include harvested crops, the auditor should seek reasonable assurance that the stored commodity is of acceptable variety and quality. Assessing the value of a commodity can be a demanding procedure. In addition to market conditions, the value will be influenced by physical condition, variety, and quality.

55. The physical state of the product may be affected by obvious conditions, such as mold, decay, or other evidence of physical spoilage, or by deterioration discernible only to those experienced and technically qualified. For instance, seed held in storage for long periods may suffer loss of germination potential that can only be detected by laboratory tests. Other damage may include insect infestations that require microscopic examination to determine the type and extent of deterioration.

56. The variety of a stored commodity may have a material influence on value. For instance, recent technical advances in hybridization have resulted in the

development of varieties and strains of agricultural products far superior to the varieties they replaced. As a consequence, stored seeds of an old variety may have only a fraction of their former value. There have even been instances where inventories of plants and trees growing in nursery farms were obsolete before they were ready for market.

57. Quality, though similar to condition, is distinguishable from it. For instance, two groups of seeds may be in good condition and of the same variety but may have distinctive quality differences. One group may pass germination tests with high percentages, whereas the second group may have low percentages or undesirable germination qualities.

58. In reviewing the quantity, condition, quality, and relative value of agricultural products, the auditor should consider using specialists whose credentials demonstrate their ability to evaluate farm products. (See SAS No. 11.)

59. Special attention should be given to seed crops. Although the commodity may be corn or some other grain, seed crops are significantly different from crops of the same product sold in the general market. Consequently, the auditor should refer to markets applicable to seed crops because general market prices may not be appropriate.

## ORCHARDS AND VINEYARDS

### Background and Unique Characteristics

60. Orchards and groves produce such commodities as citrus, walnuts, almonds, pecans, peaches, pears, apples, apricots, cherries, and avocados. There are many varieties and subvarieties of each. The term vines, for purposes of this section, refers primarily to grape vines, of which there are several hundred varieties.

61. Each variety and type of tree or vine requires a period of development to reach a stage of maturity at which it produces in commercial quantities. During this development period there are substantial expenditures for labor and material to shape and train the tree or vine into an efficient form. For instance, the lower limbs of fruit or nut trees are held apart to spread the tree and develop a wider and more open crown to improve productivity. In addition, trees are pruned and shaped in the early growth stages to encourage a lower profile. Such practices can limit the height of the tree and alter its shape to accommodate mechanical picking or more rapid picking from vehicles.

62. During the development period trees and vines require grafting, pruning, spraying, cultivation, and similar care. Occasionally, row crops are grown between the rows of developing trees or vines to provide a supplemental source of revenue until the trees or vines reach maturity.

63. Although fruits, nuts, and grapes can be grown in most parts of the nation, different varieties may produce more effectively in particular geographic areas. As a result, the crop development periods and cultural cycles vary significantly in different geographic areas.

64. Trees and vines require several years of development before production occurs in commercial quantities. The costs of labor and materials to shape and

train trees and vines contribute significantly to the costs incurred during the development years. During the last two or three years of the development period, it is not unusual for trees and vines to produce fruit or nuts in less than commercial quantities. Once the trees and vines have matured adequately, production generally continues for a number of years, depending upon the plant, soil, climate, and other influences. The productive lives of trees and vines with the same general classification may vary, depending on the particular variety.

65. The products of trees and vines require careful handling after harvest. They must be skillfully graded due to wide variations in quality. Then, because of the perishable nature of the products they can be downgraded or become worthless if not stored so that they are protected against temperature variations and insects.

Accounting Principles

66. In most cases trees and vines are planted and brought to production by the producer. The young trees and vines are usually purchased as nursery stock and transplanted into the orchard or vineyard in the desired pattern. Cultural costs during the development period, including stakes and wires, grafting, and labor for pruning and forming, should be capitalized. Net proceeds from sales of products before commercial production begins should be applied to the capitalized cost of the plants, trees, or vines.

67. The productive lives of the trees or vines can usually be estimated by considering such factors as the geographical area (influence of water, humidity, and temperature), variety or classification of the plant, type of rootstock used, grafting and pruning practices, plant-spacing intervals, and picking or harvesting methods. The best sources of data regarding these factors are grower and commodity associations and the local agricultural extension service.

68. Not all plants in a developing orchard, vineyard, or grove will survive to a productive stage. Normal losses do not generally reduce the capitalized cost of an orchard or grove. However, the capitalized cost of trees or vines lost through abnormal events, such as unusual disease, frost, or flood, should be written off in the year of the loss and the costs to replant should be capitalized. (The distinction between normal and abnormal is determined on the basis of the procedures discussed in "Normal Costs Versus Abnormal or Excessive Costs" in chapter 3 of this guide.)

69. Each orchard, vineyard, or grove may be considered a cost center, and all costs incurred prior to the time of commercial production should be accumulated in the property accounts. The costs should be depreciated over the estimated useful life of the particular orchard, vineyard, or grove.

70. Operators of orchards and vineyards should account for costs of growing crops in the same manner as other agricultural producers, as discussed in paragraphs 46-50. Those costs include annual maintenance costs of the orchard or vineyard, such as cultivation, spraying, fertilizing, and pruning; annual depreciation of the orchard or vineyard; and normal tree and vine replacement.

## Auditing Considerations

71. Audit procedures for orchards and vineyards are similar to those performed for other types of property, plant, and equipment and may include--

- Consideration of the relative health and conditions of the trees or vines.

- Reviews of the estimated remaining productive lives of the trees or vines. This may require an annual inspection of the orchard or vineyard and, where questions arise, the auditor may need to consult a specialist.

- Tests of the recoverability of total capitalized costs of orchards and vineyards. In performing such tests, comparisons should be made with prevailing costs for similar orchards and vineyards and with data obtainable from state agricultural universities, agricultural extension services, and commodity and trade organizations.

72. In testing the recoverability of accumulated costs of growing crops, the auditor should consider prospective yield, weather conditions, expected market price, and ability to economically harvest and transport the crop to the marketplace. It is not uncommon for the net realizable value of a growing crop to be less than the accumulated costs. The auditor may perform the following audit procedures:

a. Tests of the accumulation of costs of growing crops for accuracy of classification.

b. Comparisons of accumulated costs with market prices and estimated disposition costs.

c. Consideration of the physical condition of the inventory in reviewing its net realizable value. The use of a specialist may be advisable. (See SAS No. 11.)

# INTERMEDIATE-LIFE PLANTS

## Background and Unique Characteristics

73. Intermediate-life plants include perennial plants and vines that have growth cycles of more than one year. Such plants include artichokes, asparagus, various types of bush berries, kiwifruit, alfalfa, and grazing grasses. Those plants produce for more than one year, depending on the type of plant and the geographic area, but not as long as trees and vines.

## Accounting Principles

74. Accounting principles for intermediate-life plants are similar to the principles applicable to orchards and vineyards.

75. Intermediate-life plants may be developed by the agricultural producer or developed by others on a contract basis. Costs of intermediate-life plants

developed by the producer include costs of land preparation, plants, preparation of planting beds, stakes and wires, cultural care during the development period, and overhead. Accumulated costs for these plants and vines, whether acquired on a contract basis or self-developed, should be capitalized.

76. When production in commercial quantities begins, the capitalized costs should be depreciated over the estimated productive life of the plantings. Regional differences, climate and soil conditions, and cultural practices may affect the productive capacity and life of intermediate life plants and should be considered when establishing depreciable lives. The capitalized costs should be classified with property, plant, and equipment; financial statement disclosure of the costs and estimated useful lives should be made.

77. After the development period, annual maintenance costs become a portion of the cost of the current-year crop, along with harvesting costs, depreciation of the plants, and allocated overhead costs. Annual maintenance costs include cultivation, spraying, pruning, and fertilizing. The harvested crop should be valued at the lower of cost or market or market. See paragraphs 38 and 39 in SOP 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives.

Auditing Considerations

78. Audit procedures for intermediate-life plants are similar to those performed for other types of property, plant, and equipment, and may include--

- Physical observation of the condition of the plants.

- Tests of accumulated costs for properly capitalized amounts.

- Comparisons of accumulated costs to prevailing costs for similar plants.

- Tests of accumulated costs for recoverability. If there is a question about future productive capability of the plants, it may be necessary to consult a specialist. (For example, unusually heavy rainfall or inadequate drainage may have "drowned" all or a substantial portion of an alfalfa planting [an intermediate-life plant]; in this case, the auditor should consider whether the remaining deferred costs of that crop are recoverable and may need to consult a specialist.)

- Tests of the useful lives or depreciation rates used in accounting for the plants. Actual or anticipated production declines may lead to a revision of useful lives or depreciation rates.

## BREEDING AND PRODUCTION ANIMALS

### Background and Unique Characteristics

79. Breeding herds consist of mature and immature male and female animals, either of registered or commercial grade, that are maintained for their progeny. Registered herds are used to preserve or improve the desirable characteristics of the animals and commercial herds provide animals for consumption. Registered

animals are bred and retained on the basis of the demand for particular characteristics and their ability to reproduce animals with the same desirable attributes. The values of registered animals may be comparatively high and significantly greater than those of commercial-grade animals.

80. Production animals provide a service or primary product other than their progeny. Examples are dairy cows (milk), poultry (meat and eggs), and sheep (meat and wool).

81. In many areas of the country, commercial-grade cattle are maintained on large grazing areas or on open ranges, such as land rented from the Bureau of Land Management, the U.S. Forest Service, or various state agencies. Range conditions and infrequent observation may result in a higher percentage of unbred females and lower calf-survival rates than those for animals confined in smaller areas and more closely observed.

82. Horses are still used by agricultural producers, particularly by those who raise cattle and sheep. Some have extensive programs for breeding, raising, and training the saddle horses used in their operations.

83. Dairy herds are used primarily for the production of milk that is often unprocessed when sold to a cooperative or other buyer. Calves are a secondary product of dairy operations and may be retained as replacement animals. Animals not selected as herd replacements, along with those later culled from the productive dairy herd, are usually sold for slaughter.

84. The marketing of milk is controlled in most states. In some jurisdictions the producer owns rights called milk quotas or can contracts that entitle the producer to sell the processor a stated quantity of milk per period. Those rights are separate from the milk-producing herd in some states, and in others they remain with the herd. If the rights are separate, they have a market value and may be purchased and sold.

85. Poultry operations may include the raising of birds for meat, the production of eggs for human consumption, and the raising of breeder pullets. Chicken and turkey operations are similar. There are usually three separate phases of poultry operations: the brooder, meat, and egg divisions. All phases might be found in one integrated operation, or an operation might be limited to one phase. Examples are turkey operations that raise meat birds or chicken operations that raise broilers as the principal source of revenue. In either operation, hatchlings may be purchased from other producers.

86. Other examples of single-phase operations are brooder-chicken farms that produce layer pullets (young hens) and egg-laying units where the sale of eggs is the principal source of income. Income from the sale of older or "spent" hens for meat is nominal and incidental to an egg-laying operation.

87. Poultry operations can utilize the following: complex and costly brooder facilities; large flocks of breeder chickens and laying hens; extensive specialized buildings; feed mills and storage facilities; rooms for washing, candling, and packaging eggs; cold storage; transportation equipment; and manure-handling and manure-processing equipment. Around-the-clock intensive care of the flocks requires employees to be on duty or nearby at all times. Therefore, it is common for employee housing to be a significant part of the overall operating facilities.

## Accounting Principles for Breeding Animals

88. Whether breeding animals are of registered or commercial grade, their purpose is to produce young animals. Thus, accounting for livestock operations usually requires accumulation of the annual maintenance costs of the breeding herd as a means of establishing the cost of young animals. Included in the total to be allocated to the animals produced are costs of feed, veterinary care, medicines, labor, land and pasture rent, and depreciation of the herd and facilities. Costs of maintaining raised animals prior to maturity or disposition are capitalized as an additional cost of the animals. Costs of raising the young animals should be accumulated and allocated on a fair and equitable basis. Not all young animals survive to maturity or disposition; normal losses of young animals are usually not expensed directly because total annual maintenance costs are assigned to the survivors. The accumulated costs of animals lost through causes considered abnormal should be written off in the period in which the abnormal losses occur. (See "Normal Costs Versus Abnormal or Excessive Costs" in chapter 3.)

89. Regardless of the size or quality of the herd, the accounting principles applicable to accumulating costs remain the same. The accounting system should provide accumulated costs of replacement animals as well as costs of animals culled.

90. When males are maintained for the breeding herd, the ownership and maintenance costs usually constitute a separate cost center. When artificial insemination is used, the costs of the semen and insemination process are direct costs. Practices of the producer will usually dictate the accounting methods to be used.

91. As the animals mature and costs are accumulated, the accounting considerations may vary depending on the future use of each animal. The usual alternatives include the following:

- Transfer to the breeding herd, in which case the costs would be accumulated until the animal is mature and the breeding process is begun. The costs then become part of the depreciable cost of the breeding herd.

- Sale of young animals to another breeder or feeder, in which case the costs would be accumulated until the animal is sold. A gain or loss equal to the sale proceeds, less the accumulated costs and the expenses of sale, would then be recognized.

- Retained until fattened and sold, in which case the costs of production, care, and feeding to date of sale are accumulated and charged to cost of sales.

92. Some producers raise feed for their animals. Costs of producing the feed should be considered a cost of the animals and capitalized or accounted for as a production cost based on classification of the animals.

93. The total capitalized costs of raised breeding animals, including interest required to be treated as a cost under FASB Statement No. 34, should generally not exceed the estimated external purchase price of such animals.

94. Breeding animals are fixed assets and their costs should be depreciated over their useful lives. Immature animals are not considered to be in service until they reach maturity, at which time their accumulated costs become subject to depreciation. The same general accounting principles apply to all livestock, which includes cattle, hogs, sheep, goats, poultry, rabbits, and fur-bearing animals.

Auditing Considerations for Breeding Animals

95. Major audit objectives for breeding animals include establishing the existence and proper valuation of the animals. The auditor may choose to perform audit procedures such as the following:

- Physically observing the animals

- Reviewing and testing the applicable acquisition and accounting records

- Reviewing the reasonableness of the useful lives of the animals, the depreciation rates, and salvage values. The reasonableness of useful lives should be reviewed in light of the experience of similar operations in the same geographical area.

- Observing and performing test counts of animals. Special audit risks exist where animals are left on grazing areas or open ranges. In those situations, the auditor may need to observe test counts at interim periods or may decide to use the services of a specialist. (See SAS No. 11.)

- Considering the use of a specialist where it is necessary (a) to identify breeds; (b) to read brands, tattoos, ear tags, earmarks, and other special identification marks; or (c) to evaluate the quality of the animals

- Additional procedures that are described in the section of this guide dealing with auditing considerations applicable to animals held for sale

Accounting Principles for Production Animals

96. Production animals are fixed assets subject to depreciation procedures described for breeding animals. The principles are similar to group depreciation methods applicable to other fixed assets.

97. When milk-marketing rights remain with the producing herd, it may be necessary to allocate acquisition costs between the animals and the rights. The costs allocated to the animals should be depreciated over their estimated useful lives. Costs allocated to the marketing rights should be accounted for in accordance with Accounting Principles Board Opinion No. 17.

98. The accounting principles for poultry operations are much the same as those for livestock, although the operating cycles are much shorter. The production costs of chickens raised for an egg-laying unit should include the initial cost of the birds (or, if hatched, the cost of eggs and hatching expenses), the costs

of materials and labor, and allocated indirect costs during the prematurity period. These costs, less estimated salvage value of the chickens, should be amortized over the egg-laying period, which usually ranges from eight to fourteen months.

99. Costs attributed to eggs produced for human consumption consist of the costs for maintaining the production flock, applicable overhead, and depreciation of the production flock and the facilities.

100. Some production animals produce more than one product. For example, sheep produce lambs, wool, and meat; dairy cattle produce milk, calves, and meat. The primary products are lambs and milk, whereas the secondary products are usually wool and calves. Costs may be allocated as either joint products or by-products depending on the estimated relative values of each. In most instances the meat, or slaughter value, of the production animal is considered salvage. The method of accounting should be determined by the amounts anticipated to be received for each product. Those amounts are affected by the breeding, production, and marketing practices of the producer.

### Auditing Considerations for Production Animals

101. Audit procedures for production animals are similar to those for other fixed assets. They include the following:

- Tests of capitalized costs
- Reviews of the reasonableness of depreciation policies, including lives, depreciation rates, and salvage values
- Tests of depreciation calculations
- Other applicable procedures described in the sections of this guide dealing with auditing considerations applicable to breeding animals and animals held for sale

## ANIMALS HELD FOR SALE

### Background and Unique Characteristics

102. Animals held for sale include all the progeny of the breeding herds except those retained for the expansion or replacement of existing herds. In some operations, young animals are purchased and maintained until they develop further and are sold. Animals held for sale are usually not retained beyond the time they reach optimal size or weight because their value usually does not increase thereafter and may even decrease.

103. In this section cattle operations are described in more detail than other animal-feeding operations because they have the longest operating cycle; however, the same principles apply to operations with shorter operating cycles. A calf will usually be kept with its mother from birth until the time it is weaned. These young animals, referred to as weaners, will then be placed on pasture for a period of months or sent to a feedlot.

104. Young feeder animals bought by producers in the spring of the year are often kept on large grazing areas or open ranges, where they are subject to the same physical conditions described for breeding herds, until the fall, when they are transferred to feedlots. Cattle feeders may transfer raised cattle to feedlots or purchase young cattle to be placed in feedlots.

105. Some feed producers and breeders supply young animals and chicks to other producers who raise the animals to maturity, and they provide breeding animals and dairy cows on a rental basis. Terms of the agreements under which these arrangements are made generally provide for sharing the income from the use and sale of the animals. These arrangements provide a source of capital for the producers and reduce their risk of loss; consequently, they are used extensively in cattle, hog, poultry, and dairy operations.

106. Agricultural producers also engage in farming for oysters, abalone, and catfish. The major differences between these operations and the ones already described usually relate to the length of the operating cycles, ease of identification of the operating cycles, ease of identification of the productive group (breeding versus held for sale) for costing purposes, the nature of certain costs, and the environment in which they live.

## Accounting Principles

107. Animals held for sale, like growing and harvested crops, are inventories of the producer.

108. The costs of raised or purchased animals kept in grazing areas or open ranges are determined in the manner discussed in the section of this guide dealing with breeding animals.

109. Costs during the period the cattle are held in feeding pens should be readily determinable. The cattle are in a controlled environment for a relatively short period of time, usually not over six months, and are typically segregated into pens by expected date of slaughter. Accordingly, costs can frequently be aggregated by pens. The purchase price (or transferred cost, if applicable), labor and yard expenses (including depreciation of equipment and pens), veterinary supplies, and feed represent the total costs of the animals at the time of slaughter.

## Auditing Considerations

110. The audit procedures applied in animal-feeding operations should be designed to deal with the special audit risks resulting from the lack of documents to evidence the ownership of raised animals. Possession of the animals does not necessarily establish ownership. Evidence of ownership of raised animals may be obtained by performing tests that apply the usual productivity rates to the number of breeding animals. The presence of animals without indication of ownership or purchase records should alert the auditor to the possible existence of a leasing or profit-sharing arrangement. Records of feed consumption may provide an indication of the total number of animals in the possession of the producer. Moreover, the client representation letter should contain an affirmation of ownership for the recorded number of animals.

111. In addition, the auditor should consider performing the following audit procedures:

a. Observing test counts of animals held for sale

b. Testing the costs capitalized for the animals

c. Testing the net realizable value of the animals by reference to quoted market prices. Consideration should be given to local market prices that may differ from regional prices.

## LAND DEVELOPMENT COSTS

### Background and Unique Characteristics

112. The following discussion of land development costs is limited to development costs applicable to the creation of productive assets possessing identifiable value and expected to create future income. These costs generally include costs of changes to make land suitable for general agricultural use, but they may also include improvements to land already used for agricultural production. Examples of land development activities are clearing brush, removing rocks, and leveling.

113. Land improvement and development costs generally fall within two broad classifications:

a. Permanent land development costs include the costs of initial land surveys, titles, initial clearing, and initial leveling.

b. Limited-life land development costs are those that will lose value as time passes or as the land and its improvements are used. Costs identified as limited-life improvements include water distribution systems, fencing, and drainage tile. The useful lives of those improvements are reasonably determinable.

### Regional Differences

114. The nature and treatment of costs often vary in different areas of the country. For example, regional differences affect the frequency of brush removal, the useful lives of water wells, salinity control requirements and practices, and types of water conveyance systems. In some regions, deep-ripping of the soil is an initial cost that is usually not repeated. In other areas deep-ripping is required at three-to-five-year intervals.

### Accounting Principles

115. Land development costs other than those of a recurring nature represent additions to fixed assets and should be capitalized. Permanent land development costs should not be subject to depreciation or amortization because they have an indefinite useful life. Limited-life development costs should be capitalized and depreciated over the estimated useful life of the particular improvement.

### Auditing Considerations

116. The main audit objectives for land development costs are to obtain evidence that costs have been properly capitalized and properly classified as per-

manent or limited-life and that the useful lives and salvage values assigned are reasonable. Accordingly, the auditor should consider performing the following audit procedures:

- o Tests of the capitalized costs by reference to cost accounting records

- o Reviews of the capitalized assets for proper classification

- o Reviews of the reasonableness of depreciation policies

RESEARCH AND DEVELOPMENT ACTIVITIES

117. In accordance with FASB Statement No. 2, Accounting for Research and Development Costs, all costs related to the research and development of new and improved products should be expensed as incurred. Those costs would include the development of improved animal bloodlines or hybrid plants, trees, and vines. When this type of research and development is conducted through use of productive fields, groves, or herds, it is inappropriate to allocate costs to such newly developed breed, seed, tree, or vine types. The provisions of FASB Statement No. 2 apply when costs related to research and development of new breeds of animals or new varieties of agricultural crops are accumulated and identified.

INVESTMENTS IN AND TRANSACTIONS WITH COOPERATIVES

Investments in Cooperatives

118. Background. Investments in both supply and marketing cooperatives may consist of common or preferred stock acquired for cash and patronage allocations withheld under various capital plans. Cooperatives may issue patronage through qualified notices of allocation (a taxable distribution to the patron) or through nonqualified notices of allocation (a distribution not taxable to the patron until redeemed by the cooperative). Per-unit retains issued by marketing cooperatives are another method of financing. (A detailed history and description of agricultural cooperatives will be found in part II of this guide.)

119. Accounting Principles. Agricultural producers (patrons) should account for investments in agricultural cooperatives at cost, including allocated equities and retains. The carrying amount of those investments should be reduced when the cooperatives allocate losses to the patron or if the patron is unable to recover the full carrying amount of the investment.

120. Losses incurred by a cooperative that are not allocated to the patron may indicate such an inability on the part of the patron. At a minimum, the excess of unallocated losses over unallocated equities should be recognized by the patron on the basis of the patron's proportionate share of the total equity of the investee cooperative, or any other appropriate method, unless the patron demonstrates a likelihood that the carrying amount of the investment in the cooperative can be fully recovered.

121. Auditing Considerations. Audit procedures for investments in cooperatives are similar to those performed for other investments. The carrying amount of in-

vestments should be evaluated on the basis of records of disbursements, notices of allocation, and financial statements of the cooperatives.

Transactions With Cooperatives

122. Background of Supply and Manufacturing Cooperatives. Supply and manufacturing cooperatives produce or purchase goods and materials for their members. Products are generally sold to members at prices that approximate those charged at the same level of distribution by other suppliers of similar products. To the extent that sales proceeds exceed costs of goods sold and all other operating costs, the cooperatives may distribute patronage refunds. These refunds are generally based on the volume of business conducted with the cooperative and may vary by product line.

123. Accounting Principles for Supply and Manufacturing Cooperatives. Patronage refunds, in cash or equities, should either be accrued on notification by the distributing cooperative, or they should be accrued as soon as it is probable that--

a. A refund applicable to the period will be declared.

b. One or more future events confirming the receipt of the refund are expected to occur.

c. The amount of the refund can be reasonably estimated.

d. The accrual can be made consistently from year to year.

124. Classification of the refunds in the financial statements should follow the recording of the costs or proceeds, or the refunds should be presented separately.

125. Auditing Considerations for Supply and Manufacturing Cooperatives. The primary objective in testing producers' transactions with supply and manufacturing cooperatives is to determine that the conditions for accrual as stated in paragraph 123 existed at the balance sheet date. Audit procedures to evaluate the reasonableness of patronage refunds to be received may include--

a. Review of records of refunds from previous years and consideration of the estimates provided by the cooperative.

b. Confirmation of patronage refunds receivable with the cooperative.

c. Examination of patronage refund notifications.

126. Background for Marketing Cooperatives. Marketing cooperatives provide sales outlets for the products of their members and patrons. The products may be sold in a processed or unprocessed condition. For certain products there are readily determinable bases for recording exchange transactions between the cooperative and the member. Deliveries to dairy cooperatives can be recorded at market-order prices and deliveries to grain cooperatives at readily available market prices.

127. When marketing cooperatives operate on a pooling basis, products are usually delivered to the cooperatives for processing and sale. The identity of

the product is lost upon delivery because it is commingled with products of other patrons on a multiple- or single-pool basis. The pools are closed (accounted for) at weekly, monthly, annual, or longer intervals. Proceeds from the sale of pooled products, less processing, marketing, and other costs of the cooperative, are returned to members of the pool, but generally some funds are retained to provide capital for the cooperative. Some processed products may not be sold for a long period of time after delivery; however, the producer generally receives advances against final settlement.

128. Accounting Principles for Marketing Cooperatives. The major accounting considerations encountered in transactions between patrons and marketing cooperatives involve the timing and method of recording the sale of products delivered. If control over the future economic benefits relative to the product has passed, ordinarily evidenced by the transfer of title, and if a reliable market price is available or the cooperative assigns a price to be paid for the product, the producer should record the delivery of product as a sale at the specified price at date of delivery. If the prior performance of the cooperative or unfavorable market conditions indicate that proceeds from the cooperative will be less than the specified price, the lower amount should be used in recording the sale.

129. When there is no established market price (a price determined by other market buyers or amounts assigned by the cooperative) or market prices are erratic, unstable, or volatile, the producer should treat the delivery to the cooperative as a sale at an amount equal to the accumulated cost of the product and should establish an unbilled receivable. If there are indications that the expected net proceeds will be less than cost, the unbilled receivable should be recorded at estimated net realizable value. Advances from the cooperative should be treated as reductions of the unbilled receivable and should not be used as amounts for recording sales. Variances from the amount recorded as an unbilled receivable should be recognized when reasonably determinable.

130. If the ultimate sales proceeds vary from the estimates made in the year of delivery, it is recommended that the financial statements disclose the amount of current-year revenues that represent an adjustment of revenues from prior years (see APB Opinion No. 20, paragraph 33).

131. When a cooperative segregates the product delivered by the producer and accounts for it separately and title has not been transferred, an agency relationship is created. In those situations, the producer should carry the product as inventory and record a sale only when the product has been sold by the cooperative.

132. Marketing cooperatives often deduct amounts referred to as per-unit retains from the estimated proceeds due producers. Per-unit retains are based on the quantity of product delivered by the producer and are a method of financing for the cooperative. For producers the retains represent investments in the cooperative. Producers should record the per-unit retains at face value and, if the retains are not to be redeemed in the current year, they should be classified as noncurrent.

133. Accruals of patronage refunds from marketing cooperatives should follow the principles stated in paragraphs 123 and 124.

134. When a producer is economically dependent on a cooperative for sale of all or a significant portion of annual production, the extent of such transactions should be disclosed in the financial statements.

135. Auditing Considerations for Marketing Cooperatives. The primary audit objective in testing producers' transactions with marketing cooperatives is to obtain evidence regarding the propriety of the amount recognized as a sale at the time the product is delivered to the cooperative. Audit procedures may include the following:

- For products with reliable market prices, tests of the reasonableness of sales amounts by reference to quoted prices adjusted for estimated marketing and distribution costs to be deducted by the cooperative

- Confirmation of receivables from the cooperative

- Examination of cash receipts from the cooperative

- Inspection of correspondence from the cooperative

- Inspection of bills of lading and weight tickets

## GOVERNMENT LOANS AND AGRICULTURAL PROGRAMS

### Loan Programs

136. Under various stabilization programs, producers of certain crops or products may receive federal agency loans that are collateralized by security interests in negotiable warehouse receipts. The producer is not required to repay the loans but may relinquish title to the stored crop or product to satisfy the obligation. Because the producer has title to the product until a decision is made to liquidate the obligation by transfer of title to the lender, the loan should be shown in total in the liability section of the balance sheet and the inventory recorded as an asset. The AICPA's Professional Standards, vol. 1, AU sec. 331.14, as amended by SAS No. 43, discusses controls and auditing procedures for goods stored in public warehouses.

### Income Replacement and Subsidy Programs

137. Income replacement and subsidy programs are designed to bring income from commodities to certain predetermined levels and include--

a. Deficiency payments, which are subsidy payments due to low prices for commodities such as cotton, peanuts, tobacco, rice, wheat, and feed grains.

b. Disaster payments, which may be made to producers when disasters reduce commodity yields on crops.

c. Other programs, which are available to producers to encourage production, provide indemnity for certain types of losses, and reimburse producers for withholding land from production.

Existing programs change periodically and it may be necessary to know their current status on a particular audit engagement. Information regarding these programs can be obtained from offices of the Agricultural Stabilization and Conservation Service, United States Department of Agriculture.

138. All of the above payments, while different in nature, constitute additional income and should be recorded when the amount of, and right to receive, the payment can be reasonably determined.

Cost-Sharing Programs

139. Under cost-sharing programs the government reimburses producers or shares the cost of certain expenditures with them. Such programs include reimbursement for weed control and cost-sharing of expenditures for ditch lining, earthen dams, and prevention of soil erosion.

140. Reimbursements of costs for capital expenditures should be accumulated and applied against the total fixed asset costs. Direct payments by the government agency should be accounted for as if the producer had received the payment and made the expenditure. Reimbursements of expense items should be applied to reduce the recorded amount of the expenses. The payments should be recorded in the period when the original expenditure occurred, unless it is not practicable to estimate the amount of the reimbursement or determine eligibility for the benefit.

## INCOME TAXES

141. Agricultural producers receive special treatment under income tax laws, including the right to elect to use the cash method of accounting, the right to use certain inventory valuation methods that are not in accordance with generally accepted accounting principles, and the right to currently deduct certain expenditures for items of a capital nature. As a consequence, many transactions affect the determination of pretax accounting income in one period and the computation of taxable income in another reporting period. Those transactions create timing differences that require the recognition of deferred income taxes in the financial statements.

142. The provisions of APB Opinion No. 11, Accounting for Income Taxes, are applicable to agricultural enterprises. Accordingly, deferred income taxes should be provided for all timing differences between financial and income tax reporting.

# PART II

# AGRICULTURAL COOPERATIVES

## CHAPTER 7

## INTRODUCTION

### HISTORY

143. The genesis of the modern cooperative movement is attributed to the first consumer cooperative organized in 1844 by a small group of laborers in Rochdale, Lancashire, England. The following principles were developed in that first cooperative: (a) sale for cash and not on credit, (b) charges that matched prevailing local prices, (c) refunds in proportion to purchases, (d) limited interest on capital investments, (e) one vote for each member, and (f) regular and frequent meetings.

144. The emergence of the cooperative movement in the United States came in 1875, when the so-called Rochdale principles were formally adopted at a convention of the National Grange (an organization of farmers). By 1900, a substantial number of these farmer-owned organizations were in operation, and although most of them were small, they were beginning to exert an influence on the agricultural economy of the nation. Since that early beginning, cooperatives have grown in size and number. There are about 7,500 agricultural cooperatives in the United States, with about 5,800 active in performing marketing, purchasing, and other service functions for about 7.5 million farmer members.

145. Congress has encouraged the development of agricultural cooperatives through favorable legislation, including--

- o Special rules that soften or nullify the effect of antitrust laws.

- o Recognition of the cooperative's nonprofit nature by allowing patrons' qualifying distributions to be excluded from taxable income of the cooperative.

### ORGANIZATIONAL CHARACTERISTICS AND FUNCTIONS

146. Agricultural cooperatives engage in a variety of activities, including the following: food processing and distribution; oil production and refining; manufacturing; transportation; and research. Cooperatives are not identified by any particular activity, but rather by their form of organization. The basic characteristics of cooperatives are summarized as follows.

a. Most agricultural cooperatives are organized as corporations, but they may or may not issue capital stock. Cooperatives differ from other corporations in that the net earnings of cooperatives are allocated to patrons on a patronage basis rather than to members on the basis of equities held. Dividends paid on stock or membership capital are usually limited.

b. Cooperatives are owned and controlled by their members, generally based on the one member-one vote principle, regardless of the amount of stock or membership capital owned.

c. To be recognized as a cooperative for federal income tax purposes, an organization must operate on a cooperative basis. To qualify as a tax exempt cooperative, to borrow from the banks for cooperatives, and to qualify for exemption from registration under the federal securities acts, a cooperative must meet certain quantitative requirements relating to the value of business done with members.

d. Except for a few large organizations, cooperatives do not have substantial amounts of nonpatron capital. Typically, cooperatives are organized with small amounts of original capital, and equity is accumulated by retaining allocated earnings and issuing qualified or nonqualified written notices of allocation to patrons. These notices of allocation are called <u>equity certificates</u>, <u>revolving-fund certificates</u>, <u>letters of advice</u>, or <u>certificates of ownership</u>. Capital may also be accumulated by retaining after-tax nonpatronage earnings.

e. The federal income tax status of agricultural cooperatives is an important characteristic. Some cooperatives are exempt from federal income taxes under Internal Revenue Code (IRC) section 521. However, because of the requirements and restrictions necessary to retain exempt status, some cooperatives have elected to operate as nonexempt cooperative organizations under subchapter T, IRC sections 1381 through 1388. The requirements for maintaining cooperative status under the IRC are outlined in chapter 8 of this guide.

CHAPTER 8

# INDUSTRY BACKGROUND INFORMATION

## TYPES OF COOPERATIVE ORGANIZATIONS AND SERVICES

147. Agricultural cooperatives may be classified by their operational characteristics in the following manner.

a. Marketing cooperatives market agricultural products for patrons in unprocessed and processed condition. Products typically marketed include milk, fruits, vegetables, nuts, livestock, poultry, eggs, grain, wool, and cotton. Marketing cooperatives range in size from small country grain elevators to very large organizations with nationally advertised brands. Most marketing cooperatives take title to patrons' products and process or pack them for sale to wholesale or retail customers. Other cooperatives act as agents for their patrons on a commission or brokerage basis.

b. Bargaining cooperatives negotiate with packers and processors, provide market information, and act as intermediaries between their patrons and packers and processors.

c. Supply or purchasing cooperatives purchase, manufacture, distribute, and provide feed, farm supplies, and services of various kinds to their patrons. Supply cooperatives range in size from very small local retail units to large regional manufacturing and wholesale organizations. Most small retail cooperatives purchase the equipment and supplies sold to their patrons from large regional cooperatives or other trade sources. Many large regional cooperatives operate manufacturing facilities for the production of various products and supplies. The facilities may be operated independently or in association with other large regional cooperatives.

d. Service cooperatives provide artificial insemination, breeding of livestock, data processing, equipment leasing, insurance, financing, and other services to agricultural producers.

148. Large regional cooperatives, as well as many small cooperatives, may engage in both marketing and supply activities. Grain marketing cooperatives, for example, often sell feed, fertilizer, and farm supplies to patrons.

## RELATIONSHIPS WITH MEMBERS AND PATRONS

149. The members of a cooperative are usually its patrons. (As defined in the Glossary, the terms members and patrons are often used interchangeably.) There is a unique relationship between the cooperative and its members and patrons: The cooperative performs marketing, supply, or other services for its patrons and usually agrees to distribute to them, on a patronage basis, any revenues in excess of costs that it derives from performing those services.

150. An underlying concept of cooperative ownership and operation is the equitable treatment of patrons. This is particularly significant for cooperatives claiming exempt status under section 521 of the Internal Revenue Code. Cooperatives may be denied tax exempt status if they do not deal with member and nonmember patrons on an equitable basis. Equitable treatment in the allocation of net earnings among patrons is also important for nonexempt cooperatives, because it is generally required in order to maintain cooperative status under the federal income tax laws. Cooperatives' eligibility to borrow from various banks for cooperatives may also be affected by inequitable treatment of patrons. In addition, failure to treat patrons equitably may subject a cooperative to litigation by patrons.

151. After cooperatives have provided supplies or other services or performed marketing functions for their patrons, they generally allocate revenues in excess of costs from those activities on a patronage basis. This excess is referred to as net earnings, net margin, net proceeds, or net savings. Regardless of the terminology used, allocation of earnings must be made on an equitable and consistent basis.

152. Generally, the earnings of cooperatives are classified as either patronage or nonpatronage. The excess of revenues over costs resulting from transactions for or with patrons is patronage source earnings.

153. Nonpatronage earnings result from transactions other than those with or for patrons. Examples are income from investments in securities, rental income from nonpatronage activities, and income earned on sales or purchases made on a nonpatronage basis. It is sometimes difficult to distinguish between patronage and nonpatronage earnings, especially when patronage and nonpatronage activities overlap. However, distinguishing between the two types of earnings is very important because of the special tax treatment of patronage source income.

154. Allocations of net earnings to patrons are called patronage refunds, patronage dividends, or patronage distributions. Patronage refunds may be made in cash or in a combination of cash and equity certificates. Equity certificates, such as revolving-fund certificates and capital certificates, are credited to the individual patron's account and are usually revolved (paid) over a period of years. The proportion of refunds to be distributed as cash and equity certificates and the revolving period of these certificates are specified in the cooperative's bylaws or determined by its board of directors.

## RELATED-PARTY TRANSACTIONS

155. The underlying concept of cooperatives is ownership and control by members and patrons with and for whom cooperatives conduct their operations. Officers and directors are elected from the membership, and they may own or have interests in enterprises that transact business with the cooperatives. Accordingly, cooperatives are involved in related-party transactions as a result of their patronage or nonpatronage activities.

## FEDERAL INCOME TAXES AND COOPERATIVE OPERATIONS

156. Internal Revenue Code section 521 provides an exemption for associations of farmers organized and operated as cooperatives for either (a) marketing the

producers' products and returning the net earnings to them on the basis of either quantity or value of the products furnished or (b) purchasing supplies and equipment for use by the members or other persons and returning the net earnings to them on the basis of the purchases made.

157. Prior to 1951 cooperatives described in IRC section 521 were not subject to income taxes. Income taxes, if any, were paid at the patron level. In 1951 legislation was passed to ensure that cooperative earnings would be currently taxable to either the cooperatives or the patrons. However, court decisions have generally held that, under the 1951 act, noncash allocations of patronage were not taxable to the patron even though they were deductible by the cooperatives.

158. Subchapter T of the Internal Revenue Code (IRC sections 1381 through 1388) was enacted in 1962 to resolve this situation. It provided the first statutory recognition for the patronage distributions of nonexempt cooperatives and continued the tax advantages previously enjoyed by exempt cooperatives with respect to nonpatronage distributions and dividends on capital stock. The principal change introduced by subchapter T was to limit deductions for cooperative distributions to amounts that their patrons individually consent to recognize as income for tax purposes.

159. The criteria necessary for an organization to qualify as an exempt cooperative under the IRC follow.

a. The dividend rate on the capital stock may not exceed the legal rate of interest in the state of incorporation or 8 percent per year, whichever is greater.

b. Substantially all capital stock (other than nonvoting preferred stock) must be owned by the producers that market their products or purchase their supplies and equipment through the cooperative.

c. Owners of nonvoting preferred stock are not permitted by virtue of their stock ownership to participate directly or indirectly in cooperative earnings beyond fixed dividends.

d. Products marketed for nonmembers by a marketing cooperative may not exceed the value of products marketed for members.

e. The value of supplies and equipment purchased by a supply cooperative for nonmembers should not exceed the value of supplies and equipment purchased for members, provided the value of purchases made for persons who are neither members nor producers does not exceed 15 percent of the value of all purchases.

f. Business done for the United States government or any of its agencies is disregarded in determining the right to exemption.

160. If a cooperative is exempt under IRC section 521, it obtains the two deductions in addition to those allowed cooperatives in general:

a. Limited amounts paid as dividends on capital stock during the taxable year.

b. Amounts of nonpatronage earnings paid on a patronage basis to patrons within eight-and-one-half months after the close of the taxable year.

161. Internal Revenue Code sections 1381 through 1388 and related regulations prescribe the tax treatment for cooperatives. In general, these sections apply to all cooperatives except rural electric and telephone cooperatives, although certain portions apply only to exempt cooperatives.

162. Internal Revenue Code sections 1381 through 1388 impose a tax on all cooperative net earnings that are not distributed to patrons in cash or qualified written notices of allocation. These sections enable exempt and nonexempt cooperatives to avail themselves of tax deductions for patronage distributions and also permit exempt cooperatives to deduct distributions of nonpatronage income and dividends on capital. The tax treatment for the recipients is also covered in these sections.

163. For patronage distributions to be treated as qualified allocations, at least 20 percent of the distribution must be paid in cash. The noncash portion of the allocation must be in the form of a qualified written notice of allocation and must be furnished to the patron within eight-and-one-half months after the end of the fiscal year of the cooperative. The patrons must agree, either in writing or through bylaw consent, to include the amount of the qualified written notice of allocation, together with the cash received, in taxable income in the year of receipt.

164. Cooperatives may elect to accumulate tax-paid capital by issuing nonqualified written notices of allocation. Upon redemption of nonqualified notices of allocation, the issuing cooperatives are entitled to a tax deduction for the year of origination or the year of redemption, whichever provides the greater tax benefit.

165. Per-unit retains withheld from patrons of marketing cooperatives are generally based on units of products delivered or on some other unit or percentage basis rather than on earnings. They may be issued on a qualified or nonqualified basis. Qualified per-unit retains are deductible by the cooperative for income tax purposes but nonqualified per-unit retains are not. The rules governing the issuance of per-unit retains are similar to those applicable to patronage refunds, except a minimum payment of 20 percent in cash is not required for per-unit retains issued on a qualified basis.

166. Many marketing cooperatives, for processing and marketing purposes, commingle agricultural products into a pool. The products are treated as a unit, and each pool patron receives an equitable share of net earnings from the pool. Some pools may be held open beyond the end of the fiscal year. In those instances earnings for patronage-refund purposes are recognized in the year the pool is closed (IRC section 1382[a]).

## REGULATORY COMMISSIONS

167. Most debt and equity instruments of cooperatives are exempt from the registration provisions of the Securities Act of 1933. The specific exemptions given to farmer cooperative organizations are found in section 3 of the act and include any security issued by an agricultural cooperative exempt from tax under IRC section 521. However, certain securities of nonexempt cooperatives are subject to the provisions of the Securities Act of 1933.

168. The Securities Exchange Act of 1934, on the other hand, exempts substantially all agricultural cooperatives from its section 12(g) registration provisions, related annual and periodic reporting, and proxy and insider trading requirements.

169. Cooperatives are, to some extent, exempt from antitrust prosecution by the Federal Trade Commission under the Capper-Volstead Act. As cooperatives grow in size and influence, there are continuous challenges to this exemption from the monopoly and restraint-of-trade rules contained in the Sherman and Clayton Acts. Section 2 of the Capper-Volstead Act gives the secretary of agriculture the power to prevent cooperatives from using monopoly power for "undue price enhancement."

## MARKET ORDERS AND GOVERNMENT SUPPORT PROGRAMS

170. Marketing cooperatives may be affected by federal and state market orders and support programs for products such as milk, fresh fruits and vegetables, grains, dried fruits, and nuts. Marketing orders are usually initiated by the producers of an agricultural commodity in an attempt to stabilize the market and assure an adequate return. If the secretary of agriculture or the appropriate state agencies agree it is needed, an order legally obligating commodity handlers to comply with specified trade practices and sales restrictions is issued.

171. Market orders may restrict the quality, size, or grade of the commodity to be marketed. Specific provisions of market orders vary. Some orders apply to the entire U.S. production of a commodity, while others apply only to production in certain areas. Some orders limit the absolute quantity that can be marketed, while others limit only the quantity in certain markets (fresh or processed, for example) or the amount that can be marketed at certain times of the year.

172. Cooperatives may participate in government support programs (the Commodity Credit Corporation) on behalf of their members. This participation requires special segregation of sales proceeds, inventories, interest expense, and other amounts for the commodities covered by the programs.

## CHAPTER 9

# ENGAGEMENT PLANNING AND STUDY AND EVALUATION OF INTERNAL ACCOUNTING CONTROL FOR AGRICULTURAL COOPERATIVES

## ENGAGEMENT PLANNING

173. SAS No. 22 provides general guidance for planning an audit engagement. There are several unique planning considerations in the audit of agricultural cooperatives, including the following:

a. The method of accounting for unprocessed products delivered by patrons of marketing cooperatives, including the basis for assigned amounts if they are used

b. The valuation of inventories of finished products in marketing cooperatives operating on a pooling basis

c. The board of directors' intentions regarding redemptions of equities and retains

d. The existence of forward and futures contracts

e. The methods of allocation of gains and losses to various pools

f. Timing and amounts of advances against estimated pool proceeds

g. The need for services of a specialist to evaluate the quality of the cooperative's inventories (see SAS No. 11)

h. Government and tax regulations that affect cooperatives' activities

## THE AUDITOR'S STUDY AND EVALUATION OF INTERNAL ACCOUNTING CONTROL

174. Agricultural cooperatives usually establish internal accounting controls that are similar to those of other commercial enterprises. Internal accounting controls normally exist over the cooperative's major transaction cycles, such as marketing, purchasing, production, and payroll. Also, the internal accounting control system usually provides reasonable assurance that transactions and activities undertaken by the cooperative are authorized by the board of directors.

175. The AICPA's Professional Standards, vol. 1, AU sec. 320, as amended by SAS No. 48, describes the auditor's study and evaluation of internal accounting controls as a basis for reliance thereon in determining the nature, extent, and timing of audit tests to be applied in the examination. At a minimum, the auditor should obtain an understanding of the cooperative's control environment and the flow of transactions through the accounting system. If, after this preliminary review, the auditor plans to rely on the system of internal accounting control, the review should be completed to determine whether control procedures designed to provide reasonable assurance that they will prevent or detect errors or irregularities are being complied with.

CHAPTER 10

# SPECIAL ACCOUNTING AND AUDITING CONSIDERATIONS

## POOL ACCOUNTING IN MARKETING COOPERATIVES

### Background and Unique Characteristics

176. Because specific product identification is not practical for marketing patrons' products that must be commingled and processed before they are sold, cooperatives generally have adopted the pool method of accounting for these products. Under that method cooperatives take title to the patrons' products on delivery, commingle products of like kind and grade, and sell the finished products for their own account. Records of sales, payments for products, and costs are maintained for each pool. When the pool is closed, the net earnings are distributed to members of the pool, based on the amounts assigned to the products provided by each patron.

177. Accounting periods for pools vary from a week to longer than a year, based on the production and marketing cycle. Short pool periods are used for products such as eggs, which have a short production and marketing cycle. Longer pool periods are often necessary for such products as canned fruits and vegetables that require more than one year to process and market.

178. The following methods have been developed to allocate net earnings to pools:

a. Single-pool method. Net earnings from operations are distributed to members on a proportional basis, usually based on the amounts assigned to the products delivered to the cooperative.

b. Multiple-pool method. Products received are accounted for in separate product pools. Net earnings are allocated to patrons of each pool on the basis of the earnings of that pool.

### Accounting Principles

179. Both single- and multiple-pool methods of accounting are used by marketing cooperatives operating on a pooling basis. The single-pool method is used because it spreads the risk of loss over a larger number of commodities. Profitable products support less profitable products in a particular year as long as the overall operation of the cooperative is successful.

180. Overhead allocations to product lines are unnecessary when the single-pool method is used. This allows the management of marketing cooperatives with several departments, such as canning, freezing, or fresh shipping, more flexibility in determining alternative levels of production.

181. The following example illustrates pool settlement under multiple- and single-pool methods:

| Product | Assigned Amounts for Unprocessed Product | Percent | Net Proceeds Allocated to Patrons — Multiple Pool Amount | Multiple Pool Percent | Single Pool Amount | Single Pool Percent |
|---|---|---|---|---|---|---|
| Beans | $ 5,000 | 50 | $ 700 | 70 | $ 500 | 50 |
| Corn | 2,000 | 20 | 100 | 10 | 200 | 20 |
| Carrots | 3,000 | 30 | 200 | 20 | 300 | 30 |
| Total | $10,000 | 100 | $1,000 | 100 | $1,000 | 100 |

182. In this example, the allocation of net proceeds to patrons under the multiple-pool method was determined by the separate accounting for the operations of each product (each product is a separate pool); therefore, the percentages differ from the unprocessed product percentages. Under the single-pool method, the net proceeds from total operations are allocated on the basis of the value of the unprocessed product and the percentages are the same as the unprocessed product percentages.

183. If the production and marketing cycle extends beyond one year, marketing cooperatives may have substantial inventories of finished goods on hand at the end of the fiscal year. Marketing cooperatives often transfer (in effect, "sell") such inventories to the succeeding year's pools, thus allowing the current pools to be closed on an annual basis. This method is often used when the type and quantity of products delivered by members do not vary materially from year to year. Other cooperatives hold the pools open beyond one year and do not close them until substantially all the pooled inventories have been sold.

184. Accounting for overall losses is a difficult problem for both single- and multiple-pool operations. In addition, multiple-pool operations may be faced with the problem of disposing of losses from individual pools. Accounting for those losses is addressed in the "Accounting for Losses" and "Departmental and Functional Accounting" sections that follow.

185. While the preceding paragraphs relate primarily to marketing cooperatives, supply cooperatives encounter similar problems in allocating earnings to members, particularly if both manufacturing and distribution are involved. Patrons of supply cooperatives buy goods and services at approximately the same prices that would be paid to other suppliers. Earnings are determined periodically and allocated to patrons on the basis of the business done by each patron with the cooperative.

## Auditing Considerations

186. The auditor should consider performing the following procedures when auditing the allocation of pool proceeds:

a. Studying and evaluating the internal accounting controls over the system of recording sales and cost of sales

b. Testing the allocation of pool earnings to patrons for--

   (1) Clerical accuracy

(2) Compliance with the board of directors' actions

(3) Compliance with the cooperative's bylaws

(4) Compliance with tax regulations

(5) Compliance with established accounting policies

(6) Consistency of application from year to year

## ACCOUNTING FOR LOSSES

### Background

187. A cooperative may incur an overall patronage net loss in a given year. The disposition of such a loss should be accomplished on a fair, consistent, and timely basis.

### Accounting Principles

188. Cooperatives use a number of different methods, including the following, for disposing of an overall operating loss:

- Allocating the loss to patrons on the basis of current patronage. The loss may offset the patrons' prior equities, future patronage allocations, or future cash contributions.

- Allocating the loss to all prior equities without considering current patronage. However, patrons with substantial equities and decreasing patronage may be treated inequitably if this method is used.

- Charging the loss to unallocated retained earnings. This method is equitable when the loss is attributable to nonpatronage business. However, in other circumstances, it may be inequitable to inactive patrons since it reduces the value of their ownership equity in the cooperative.

- Charging the loss to operations in subsequent years. This method may be acceptable if the patrons are substantially the same from year to year.

### Auditing Considerations

189. The auditor should perform the following procedures in reviewing the disposition of overall operating losses of cooperatives:

a. Read those sections of the bylaws and articles of incorporation describing the procedures for disposition of losses

b. Review the board of directors' minutes to determine policies or actions for allocation of losses

c. Review the method of allocating losses to determine that the method is in accordance with the cooperative's bylaws or board actions

d. Test the mathematical accuracy of allocated losses

## DEPARTMENTAL AND FUNCTIONAL ACCOUNTING

### Background and Unique Characteristics

190. Cooperatives operating on a functional or departmental basis may have net earnings from one function or department and operating losses from another. It is a common practice for losses from one function or department to be absorbed by profits from another function or department before earnings to patrons are allocated. Some cooperatives distribute departmental earnings to patrons and charge departmental losses to unallocated retained earnings. The method of accounting for functional or departmental earnings and losses, and the basis for making allocations to patrons, may be provided for in the bylaws or by actions of the board of directors.

### Accounting Principles

191. To equitably allocate earnings to patrons, cooperatives usually account for revenues and costs by function (supply or marketing) or departments within the function.

192. Expenses common to one or more functions or departments should be allocated on a reasonable and consistent basis. In addition, one department of a cooperative may handle several commodities and departmental revenues and expenses may have to be allocated among them.

193. Cooperatives may incur a loss in one department or function and realize earnings in another. Methods of accounting for these departmental and functional losses include the following:

- Offsetting the losses of unprofitable departments against profitable ones, and allocating the remaining profit to the patrons of the profitable departments by using the allocation method adopted by the cooperative.

- Recovering the departmental or functional loss from the patrons of that department or function on the basis of bylaws provisions or a marketing agreement.

- Subtracting the departmental or functional loss from net nonpatronage income. Offsetting patronage losses against nonpatronage income may not eliminate the income tax due on the nonpatronage income of a nonexempt cooperative.

- Charging the loss to unallocated retained earnings, and allocating income from profitable departments or functions to patrons on the basis of the cooperative's allocation methods.

## Auditing Considerations

194. The auditor should understand the process of accounting for functional or departmental results and the allocation of net earnings to patrons. He or she should also consider the following additional procedures for functional or departmental operations:

a. Studying and evaluating the internal accounting controls over the generation of information on a functional or departmental basis, including sales, direct costs, and the allocation of common costs by department and commodity

b. Reviewing the allocation of overhead costs for reasonableness and consistency

c. Reviewing the reasonableness of methods for allocating departmental losses while considering equitable treatment of patrons

# CHAPTER 11

## SPECIFIC ACCOUNTING PRINCIPLES AND AUDITING CONSIDERATIONS

### INVENTORIES

#### Background and Unique Characteristics

195. Inventory methods of cooperatives encompass a wide range of practices. Supply cooperatives generally have a reliable purchase price for inventories on hand. Many marketing cooperatives have a known or determinable market price on which to base amounts to be paid for patrons' products. However, some marketing cooperatives operating on a pooling basis do not have a reliable market price on which to value and account for receipt of patrons' products.

#### Accounting Principles

196. Selecting a method to account for product inventories depends on the financial information available, marketing agreements, bylaws, and actions of the board of directors. A discussion of accounting for product inventories at lower of cost or market and net realizable value is included in the paragraphs that follow. (Also see paragraphs 83 to 86 in SOP 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives.)

197. Net-Realizable-Value Method. Some marketing cooperatives operating on a pooling basis cannot determine the market price of patrons' products when received because a reliable price for the products is not available. Such cooperatives usually process and market a high percentage of limited specialty crops. Many of those cooperatives account for inventories of goods in process and finished goods at net realizable value, determined by deducting estimated completion and disposition costs from the estimated sales price of the processed inventory. Furthermore, many processing cooperatives use net realizable value for product inventories in order to comply with bylaw provisions and contractual obligations and to facilitate equitable pool settlements from pool period to pool period and among various classes of patrons. If inventories are accounted for at net realizable value, there should be a corresponding effect on earnings and amounts due patrons.

198. The calculation of net realizable value for product inventories requires the determination of sales dates, sales prices, and the estimated costs of completion and disposal. The sales prices may be based on comparable sales or published market prices.

199. Lower of Cost or Market. Inventories of supply, manufacturing, and other service cooperatives present no unusual accounting problems and are usually accounted for at the lower of cost or market on a FIFO, LIFO, or average cost basis.

200. Marketing cooperatives, such as grain and dairy cooperatives, that receive products from patrons and pay their patrons a firm market price at time of delivery or shortly thereafter, regardless of the amount of the cooperative's earnings, should treat the payments as purchases. Those cooperatives usually

account for product inventories at the lower of cost or market, with cost determined on a FIFO, LIFO, or average cost basis.

201. Boards of directors of marketing cooperatives that operate on a pooling basis with no obligation to pay patrons fixed prices may assign to patrons' products amounts that approximate estimated market. These assigned amounts are cost and should be charged to cost of production and credited to amounts due patrons. Inventories are then accounted for at the lower of cost or market. However, some cooperatives may value the inventories at net realizable value to facilitate determination of pool proceeds.

202. Hedging-Procedures Method. Cooperatives with grain inventories may use the hedging-procedures method. Grain merchants commonly use this inventory-valuation method, which determines the theoretical cost of substantially hedged inventories by pricing them at market and adjusting for gains and losses on related open futures and forward contracts. This method is acceptable only when inventories are substantially hedged.

Auditing Considerations

203. The auditor should consider the following procedures in the audit of product-delivery transactions between the patron and the cooperative.

a. Reviewing the reasonableness of the amounts assigned to patrons' products by comparing the amounts with values for products obtained from established markets, bargaining-association contracts, and federal and state crop reporting services

b. Selecting patron statements on a test basis, and--

  (1) Reviewing approval of patrons' product prices

  (2) Testing the accuracy of extensions and footings

  (3) Comparing the amounts due patrons with subsequent payments

  (4) Comparing quantities delivered by patrons with weight tickets

  (5) Comparing deductions for freight and other expenses with approved deduction schedules

c. Comparing statements to determine that patrons receive similar treatment and terms

d. Confirming directly with patrons the quantity of products delivered, payments received, and equity balances

e. Determining whether such retains are recorded correctly as an element of equity if per-unit retains are deducted from patrons' products payments

f. Determining whether payments to patrons are made in accordance with written agreements and whether all parties have complied with all the terms

g. Determining whether payments to nonmembers are made in accordance with established policies and rates

204. In addition to the normal audit tests of product inventories, the following audit procedures should be considered when inventories are valued at the lower of cost or market or at net realizable value.

a. Testing inventory costs as follows:

   (1) Comparing amounts assigned to patrons' products with market prices paid by others or prices established by the board

   (2) Reviewing additional processing and packaging costs for reasonableness and consistency

   (3) Reviewing variances between actual and standard costs for reasonableness and consistency

b. Testing net realizable value, which is calculated in essentially the same way as market, for inventories valued at the lower of cost or market, as follows:

   (1) Reviewing price lists and actual sales at and subsequent to the valuation date

   (2) Testing sales prices by referring to available prices for similar products of other processors

   (3) Reviewing marketability of various groups of finished-product inventories on the basis of existing market conditions

   (4) Reviewing open orders to determine future sales prices

   (5) Determining that disposal costs include normal shipping, storage, and selling costs and, when appropriate, general and administrative expenses related to production

   (6) Test computation of completion and disposal costs for reasonableness and consistency

c. Testing the lower of cost or market calculations by comparing net realizable values with cost and determining that writedowns have been consistently recognized on a line-by-line, a commodity-by-commodity, or an overall basis

d. Reviewing the mix of finished goods to be packed from those inventories if bulk and in-process inventories are to be valued at net realizable value. Comparing the projected mix with prior experience for reasonableness, and considering a writedown of any excess inventory quantities.

## INVESTMENTS IN OTHER COOPERATIVES

### Background and Unique Characteristics

205. Agricultural cooperatives may join and invest in one or more other cooperatives to purchase farm-related products, to process and market farm products, or to obtain financing. The investments are long-term in nature and are an extension of the cooperative's own productive facilities and capital. In most instances voting rights accompanying these investments are based on the one member-one vote principle or are limited to weighted voting based on patronage rather than on the amount of the investment. The sale of such investments to parties other than the issuer is often restricted or prohibited. Accordingly, such investments are made primarily to obtain the benefits offered by the cooperative rather than for investment or capital-appreciation purposes.

206. Investments in agricultural cooperatives may include initial cash commitments for common and preferred stock, subsequent per-unit retains under base capital or revolving capital plans, patronage refunds, and other allocated equities. An investor cooperative may also be required to invest in some form of interest-bearing debt instrument.

207. To borrow from regional banks for cooperatives, investments in such banks are required. The extent of the investment is usually based on the amount and terms of the loans. Investments in the banks for cooperatives may also include capital stock received as patronage refunds.

### Accounting Principles

208. Investments in other cooperatives should be accounted for at cost, including allocated equities and retains. For this purpose cost means the amount of any cash investment and the face amount of written notices of allocation (patronage dividends) in the form of per-unit retains, capital equity credits, revolving fund certificates, and certificates of equity.

209. The carrying amount of an investment in a cooperative should be reduced if the patron is unable to recover the full carrying value of the investment. Losses unallocated by the investee may indicate such an inability, and, at a minimum, the excess of unallocated losses over unallocated equities should be recognized by the patron, based on the patron's proportionate share of the total equity of the investee cooperative or any other appropriate method, unless the patron demonstrates a likelihood that the carrying amount of the investment in the cooperative can be fully recovered. Factors to consider in making the determination include--

a. Whether the unallocated losses resulted from identifiable, isolated, and nonrecurring events.

b. Whether the investee cooperative has been profitable over a long period of time and suffered only occasional losses that were offset by unallocated earnings or equities.

c. Whether the investor has ceased or will cease to patronize the investee cooperative on a permanent basis or for an extended period of time.

210. Patrons should recognize patronage refunds either on notification by the distributing cooperative or when the related patronage occurs if it is then probable that (a) a patronage refund applicable to the period will be declared, (b) one or more future events confirming the receipt of a patronage refund are expected to occur, (c) the amount of the refund can be reasonably estimated, and (d) the accrual can be consistently made from year to year. The accrual should be based on the latest available reliable information and should be adjusted on notification of allocation.

211. Classification of the allocations in the financial statements should follow the recording of the costs or proceeds, or the allocations should be presented separately.

212. When a cooperative allocates all earnings to patrons (on a tax or book basis) and there are no unallocated earnings (on a book basis), the principles set forth in APB Opinion No.18, The Equity Method of Accounting for Investments in Common Stock, have no effect. In those infrequent instances where the investor's share of unallocated retained earnings of an investee cooperative is material to the investor, the equity method of accounting should be applied in a manner that gives consideration to the voting rules applicable to the cooperative.

Auditing Considerations

213. For investments in cooperatives the auditor should analyze the investment accounts for the period and examine the documentation supporting the transactions, including securities on hand.

214. An investor will normally receive notification of amounts allocated by the investee cooperative, and the auditor should consider direct confirmation with the investee cooperative. If patronage refunds are accrued before notices of allocation have been received, the accrual should be tested for reasonableness and consistency. Consideration should be given to reviewing the estimated amount with the investee cooperatives.

215. The auditor should review the accounting for qualified and nonqualified allocations. It should be determined that these allocations were made in proper form and within the prescribed time limit.

216. In evaluating the carrying amounts of investments in other cooperatives, the auditor should consider the investor's continued participation in the investee cooperative and recent reliable financial information about the investee. Where the carrying amounts are material to the financial position of the investor cooperative and possible disclosure may be necessary, a more detailed review of the operations and financial status of the investee cooperative should be considered. If the carrying amount of an investment has been or should be reduced, the auditor should review financial information and obtain support showing that the investor cooperative will be unable to fully recover the carrying amount of the investment.

## EQUITIES AND MEMBERS' INVESTMENTS

### Background and Unique Characteristics

217. The composition of the equity section of a cooperative's balance sheet distinguishes it from other balance sheets. Generally, its equities arise from investments by members and nonmembers and from patronage allocations. In addition, cooperatives may accumulate unallocated retained earnings arising from after-tax earnings on nonpatronage business.

### Accounting Principles

218. Various forms of equities arising from patronage are used by cooperatives. A brief description of those commonly used follows.

- Retained patronage allocations. Retaining patronage earnings through methods such as the issuance of qualified or nonqualified written notices of allocation is a major form of financing by cooperatives.

- Per-unit retains. Per-unit retains are used in marketing cooperatives in accordance with debt agreements, bylaws, or board of directors' authorizations. These amounts are determined without regard to earnings and may be based on a rate per ton or on a percentage of the dollar amount of raw product delivered. Amounts are withheld from payments to patrons for deliveries of raw product and are credited to the account of each patron.

219. If the retained patronage allocations and per-unit retains have no fixed maturity dates and are subordinated to all debt instruments, they should be treated as equity with appropriate disclosure of face value, dividend rate, negotiability, subordination agreements, and any revolving or retirement plan.

220. Allocated equities are usually paid, or revolved, over a number of years. The timing may be specified in the cooperative's bylaws, but it is usually at the discretion of its board of directors. The amounts should not be classified as current liabilities until the board has formally acted to revolve the equities.

221. In addition to allocated equities, cooperatives may issue common and preferred stock. Common stock is often issued to establish members' voting rights, while preferred stock may be sold to members and nonmembers on a nonpatronage basis. Cooperatives may also issue preferred stock as a form of earnings distribution. Limited amounts of dividends on preferred stock are tax deductible by exempt cooperatives, but they are not tax deductible by nonexempt cooperatives. Disclosure of a cooperative's equity is similar to that required for other corporate entities.

222. Certain transactions of cooperatives may result in unallocated equities. For example, cooperatives may derive earnings from nonpatronage business and account for these earnings as other corporations do. Nonpatronage earnings are frequently unallocated and are classified as retained earnings in the equity section. In addition, a cooperative may elect at times not to allocate patronage earnings or losses.

Auditing Considerations

223. The following procedures should be considered when auditing a cooperative's equity account.

Procedures for Patronage Allocations and Per-Unit Retains

a. Examining, on a test basis, individual records of patrons' equity and test allocations and revolvements for compliance with bylaws and board minutes

b. Considering whether allocation and revolvement provisions comply with statutory requirements

c. Confirming balances in various equity classifications with patrons

d. Reviewing allocations that are due to be retired within a year, and considering whether they should be reclassified as liabilities

e. Ascertaining that unallocated equities are indeed unallocated and that there are no special provisions or restrictions that should be disclosed

Procedures for Common and Preferred Stock

a. Considering compliance with statutory requirements, bylaw provisions, and articles of incorporation

b. Reviewing minutes of the meetings of members and of the board of directors for approval of changes in capital structure

c. Reviewing provisions of stock issuance for possible redemption requirements and the need for reclassification as a liability

INCOME TAXES

Background and Unique Characteristics

224. The special exemptions and deductions available to cooperatives have been discussed in prior sections of this guide. The applicable federal tax law is found in sections 521 and 1381 through 1388 of the Internal Revenue Code. State income tax laws may also have applicable provisions.

225. Because of the special tax treatment afforded tax-exempt cooperatives, accounting records should provide the patronage information necessary to determine that the cooperative has maintained its tax-exempt status. If the cooperative is nonexempt, the accounting records should identify patronage and nonpatronage income to facilitate the determination of taxable income.

226. Both exempt and nonexempt cooperatives may have tax-timing differences as a result of differences in the accounting treatment of deductions and patronage allocations for financial and tax reporting. The manner in which patronage allocations are made is usually specified in the bylaws, resolutions of the

board of directors, and marketing or other agreements. Whether allocations are based on book or tax earnings is usually controlled by bylaw provisions or action of the board of directors.

## Accounting Principles

227. When timing differences relate to nonpatronage earnings, the provisions of APB Opinion No. 11 should be followed.

228. If the cooperative issues nonqualified written notices of allocation, the tax benefit for the deduction should be provided for in accordance with APB Opinion No. 11 only if <u>all</u> the following conditions are met:

a. The board of directors has a policy that provides for the redemption of nonqualified written notices of allocation on an annual basis.

b. The redemption policy is consistently followed.

c. The financial strength of the cooperative is such that future redemption is reasonably assured.

229. When the above criteria are met, the nonqualified written notices of allocation should be classified in the equity section of a cooperative's balance sheet until the board of directors approves redemption, at which time the amount of the notices should be reclassified as a current liability. If no redemption policy regarding nonqualified written notices of allocation exists or the policy has been inconsistently followed, the income tax benefit should not be recognized until the notices are redeemed in accordance with the provisions of the Internal Revenue Code. Although the tax benefit of redemption does not depend on future taxable income, its realization is not assured beyond a reasonable doubt, and it is analogous to the nonrecognition of a contingent income tax benefit from an operating loss carryover, as set forth in APB Opinion No. 11. In such circumstances, when the nonqualified written notices of allocation are issued, the applicable income taxes should be charged to the appropriate equity account. Upon redemption, the applicable income tax credit should be made to the appropriate equity account.

230. Accounting for deferred income taxes of a cooperative is affected by several factors. One such factor is whether or not patronage is allocated on a book or tax basis. Other factors include the impact of patronage versus nonpatronage earnings and the use of nonqualified written notices of allocation.

231. Appendix A provides an example of a deferred income tax calculation.

## Auditing Considerations

232. The auditor should consider performing the following procedures when reviewing a cooperative's tax liability:

a. Reviewing marketing and other contracts between the cooperative and its patrons and nonpatrons

b. Reviewing the bylaws and articles of incorporation for their effect on patronage deductions

c. Determining that a bylaw consent effective under IRC section 1388(c) or (h) has been adopted and that notice has been given to new members. (If no bylaw consent is in effect, individual written consents from patrons or qualified checks issued in accordance with tax regulations should be reviewed.)

d. Reviewing the accounting methods used by the cooperative to determine earnings subject to patronage distributions

e. Reviewing the minutes approving the per-unit retain and annual patronage distribution to members

f. Determining that allocations of patronage dividends and per-unit retains are made pursuant to written obligations in effect prior to the delivery of agricultural products or purchases of goods and services by patrons (see IRC section 1388(h))

g. Inquiring whether patronage information returns, such as Forms 1099-PATR, have been appropriately filed

h. Determining that patronage dividends, per-unit retains, and payments in cash claimed as deductions for the prior year were paid or issued with proper notice to patrons during the eight-and-one-half-month period after year-end

i. Inquiring whether an exempt cooperative has engaged in activities that could result in the loss of its exempt status

j. Determining that separate records are maintained for each function and that separate earnings allocations are made on the basis of business transacted within each function or each department within a function

# PART III

# HEDGING

## CHAPTER 12

## HEDGING BY AGRICULTURAL PRODUCERS AND AGRICULTURAL COOPERATIVES

### BACKGROUND AND UNIQUE CHARACTERISTICS

233. Agricultural producers often enter into marketing agreements with buyers, merchandisers, or processors to assure a sales market and a specific price for their products. These agreements, called forward contracts, usually require the delivery of a fixed quantity of the product or the delivery of all of a crop produced on a designated number of acres. Terms of the contracts vary by product type and the geographic area of the country.

234. A fixed-quantity contract requires the producer to deliver a fixed quantity of a certain commodity by a particular date. The price may be fixed at the time the contract is executed, established at the date of delivery, or established at a later date by basing it on a defined relationship to a quoted market price. The contract may provide for deferred payment of all or part of the contract amount.

235. An acreage contract requires the delivery of all the crop produced on a specified number of acres. Prices may be fixed on a per-unit basis or may vary with quoted market prices for the product.

236. In addition to the marketing agreements described above, producers frequently enter into transactions in commodity futures markets to reduce, or hedge, the risk of losses from fluctuations in the market prices of agricultural products. For example, a producer might hedge a grain inventory by selling an equivalent number of bushels of the same grain on a commodity futures market for delivery in the expected month of sale.

237. Producers may want protection against prospective increases in the costs of materials and supplies used in their operations. That protection can be provided by purchasing futures contracts for the quantities expected to be needed at the contract delivery dates. For example, producers with large numbers of animals to feed may buy grain futures contracts in amounts and for delivery dates that coincide with their projected needs.

238. Many factors, including weather and transportation, affect the supply and demand for agricultural commodities and result in price variations. To reduce the risk of loss from these variations, cooperatives may use forward sales contracts, forward purchase contracts, and commodity futures contracts as vehicles for hedging. Hedging with futures contracts reduces the risk of loss from unfavorable price changes and also effectively eliminates the possibility of gain from favorable price changes. The use of options provides a method for

reducing the risk of loss from unfavorable price changes while the possibility of gain from favorable price changes is retained, subject to the cost incurred to acquire the options.

239. Hedges are classified as either buying (long) hedges or selling (short) hedges. Buying hedges may be entered into (a) to fix the cost or assure the availability of a commodity when producers or cooperatives have entered into fixed-price sales commitments, or (b) to fix the purchase price of commodities to be used in production or processing. Selling hedges are used to establish sales prices when cooperatives own the inventory or have entered into fixed-price purchase commitments.

240. Not all commodities that producers and cooperatives may wish to hedge are traded on futures exchanges. However, a substitute commodity that is traded on a futures exchange may be used to establish a hedge if there is a clear economic relationship between the prices of the two commodities and high correlation is probable. Those transactions are referred to as cross hedges.

241. A producer may establish a hedge position for the future sale of a crop before it is harvested and, at times, before it is planted. These are referred to as anticipatory hedges.

242. Usually, deliveries are not made against futures contracts. Rather, the contracts are closed by buying or selling an offsetting number of contracts on the futures exchange when the original commodity is purchased or sold.

## ACCOUNTING FOR FORWARD CONTRACTS

### Agricultural Producers

243. During the periods in which forward contracts remain open, there are accounting decisions to be made concerning the nature of the asset represented by the product, the manner in which it should be valued, the recognition of related liabilities, and the circumstances under which gain or loss should be recognized.

244. If the producer retains control over the future economic benefits relating to the product, it should be accounted for as inventory. The contract price should be considered in determining net realizable value for a lower-of-cost-or-market comparison.

245. Once control over the future economic benefits has passed, the producer should record the transaction as a sale and establish the related receivable. If the price has not been fixed but will be determined at a future date, based on a defined relationship to a regularly quoted market price (as in sell now-price later contracts), the sale should be recorded at estimated net realizable value based on the most reliable evidence available at the balance sheet date. If a material variation from that amount exists at the date of the accountant's report, the AICPA's Professional Standards, vol. 1, AU sec. 560, as amended by SAS No. 12, should be consulted regarding type-2 subsequent events.

246. When accumulated costs of a commodity exceed the contracted sales price, the inventory should be reduced to net realizable value. The producer should

also recognize a loss when (a) the physical quantity of a commodity produced or reasonably expected to be produced is less than the physical quantity specified by the forward sales contract and (b) the existing cash market is higher than the sales price stipulated in the forward contract. In this situation the loss is the difference between the cash market price and the contract price for the actual or overall expected production shortage. Losses on forward sales contracts should be recognized in the current period. (See statement 5 of chapter 4 of ARB No. 43.)

247. Losses on forward purchase contracts of goods for inventory should be measured in the same way as inventory losses, as described by statement 10 of chapter 4 of ARB No. 43.[1] Forward sales contracts are discussed in statement 6 of chapter 4 of ARB No. 43, which indicates that such contracts should be taken into account to calculate market price in determining the lower of cost or market.

248. If a producer enters into forward contracts with a cooperative, the transactions should be accounted for in accordance with the provisions in the section entitled "Investments in and Transactions With Cooperatives" in chapter 5.

Agricultural Cooperatives

249. When commodity costs exceed a contracted sales price, the inventory should be reduced to net realizable value. Losses on unhedged forward purchase contracts should be measured in the same way as inventory losses. The cooperative should recognize a loss when forward sales contracts require delivery of specified physical quantities of commodities in excess of those on hand or committed for and the existing cash market is higher than the sales prices stipulated in the forward contracts. In this situation, the loss is the difference between the cash market price and the contract price for the actual or overall expected shortage. Losses on forward sales contracts should be recognized in the current period. (See statements 6 and 10 of chapter 4 of ARB No. 43.)

250. If the cooperative acquires control over the future economic benefits relating to the product, it becomes inventory. Once that control has passed, the cooperative should recognize the transaction as a sale and record the related receivable. If the cooperative acquires inventory and the purchase price is not fixed but is to be determined by the producer at a future date, based on a defined relationship to a quoted market price (as in sell now-price later contracts), the liability should be estimated at the financial statement date.

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[1]The recognition in a current period of losses arising from decline in the utility of cost expenditures is equally applicable to similar losses expected to arise from firm, uncancellable, and unhedged commitments for the future purchase of inventory items. The net loss on such commitments should be measured in the same way as inventory losses are and, if material, should be recognized in the accounts and separately disclosed in the income statement. The utility of such commitments is not impaired, and hence there is no loss, when the amounts to be realized from the disposition of the future inventory items are adequately protected by firm sales contracts or when there are other circumstances that reasonably assure continuing sales without price decline.

251. In accordance with FASB Statement No. 80, Accounting for Futures Contracts, accounting for gains and losses resulting from a commodity futures transaction depends on classification of the transaction as either an economic hedge of an existing exposure, or a transaction that qualifies as an anticipatory hedge, or a nonhedge.[2] Futures contracts should be considered economic hedges of an existing exposure if both the following conditions are met:

a. The item to be hedged exposes the enterprise to price risk.

b. The futures contract reduces the exposure to price risk and is designated as a hedge.

252. Some futures contracts may relate to transactions (other than transactions involving existing assets or firm commitments) the producer or cooperative expects, but is not obligated, to carry out in the normal course of business. Those futures contracts may each be classified as a transaction that relates to certain probable future transactions (referred to as an anticipatory hedge) if both the criteria in paragraph 251 and the following conditions are met:

a. The significant characteristics and expected terms of the anticipated transaction are identified.

b. It is probable that the anticipated transaction will occur.

253. If the criteria in paragraphs 251 or 252 are not met or inventories are accounted for at market, a change in the market value of a futures contract should be recognized as a gain or loss in the period of the change.

254. Producers and cooperatives accounting for inventories at the lower of cost or market should defer gains and losses on open and closed futures contracts that qualify as hedges until the related hedged inventory is sold. Gains and losses on open or closed futures contracts that meet the appropriate criteria for deferral may be accumulated in an inventory adjustment or similar balance sheet account. The offsetting entry on open futures contracts is an adjustment to the receivable from the broker.

255. Producers and cooperatives accounting for inventories at market should recognize gains and losses on both open and closed commodity futures contracts designated as hedges when they occur.

256. The margin deposits made in cash upon initiating futures contracts should be recognized as an amount due from the broker. During the period the contracts are outstanding, the amount due from the broker should be increased or decreased for changes in the market values of the open futures contracts. Margin deposit requirements that are satisfied by deposits of securities or letters of credit should be reported as such and not as amounts due from the broker.

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[2]Paragraphs 251 through 257 summarize the provisions of FASB Statement No. 80. Although a summary of an authoritative statement may be useful, the auditor should consult the Accounting Standards Current Text or Original Pronouncements.

257. When producers or cooperatives enter into futures contracts that qualify as hedges, their financial statements should disclose (a) the nature of the assets, liabilities, firm commitments, or anticipated transactions that are hedged with futures contracts and (b) the method of accounting for futures contracts. Disclosure of the accounting method should include a description of the events or transactions that result in recognition in income of changes in value of the futures contract.

## AUDITING CONSIDERATIONS

### Agricultural Producers

258. Audit procedures should be designed to determine the existence and proper reporting of marketing agreements and should include (a) obtaining an understanding of the producer's normal marketing channels and methods, (b) inquiring and obtaining written representations from management and owners, (c) reviewing transactions subsequent to the balance sheet date for undisclosed agreements, and (d) confirming pertinent details of the existing agreements with other parties. The facts required for making judgments about the need to reduce the value of existing inventory or to otherwise recognize a loss resulting from unfulfilled marketing agreements should be obtained and evaluated.

259. The auditor has two primary objectives with respect to commodity futures contracts:

a. To determine whether the futures transactions meet the criteria necessary to be accounted for as hedges

b. To determine that realized and unrealized gains and losses resulting from the transactions are properly reported

260. The auditor should obtain a statement of the producer's hedging policy. The policy statement should include (a) the criteria used to determine when a hedge should be initiated, (b) the authorization and approval procedure required to establish a hedge position, and (c) the procedure, authorization, and approval to terminate a hedge position. The auditor should expect each futures transaction to be designated as a hedge or nonhedge position at the date the contract is initiated. If the producer knowingly enters into nonhedge transactions, the authorization and approval for those transactions should be known to the auditor. Facts to support the position that futures contracts are anticipatory hedges should be reviewed.

261. The auditor should consider all elements of the producer's inventory position to determine whether specific futures transactions are hedges. For example, if a producer has sold the entire crop on a forward sales contract with a fixed price and anticipates no production shortage, there is no need to hedge against further price fluctuations.

262. When the producer utilizes a cross hedge, support for the position that there is a clear economic relationship between the futures price and the local cash market price should be reviewed.

263. If the futures contracts are hedging transactions, the following procedures should provide reasonable assurance that gains and losses are properly reported:

a. Reviewing transactions to determine that the hedging policy is being followed

b. Obtaining a copy of the producer's inventory position, including inventory on hand and to be produced, forward purchase or sales contracts (both fixed and variable price), and futures contracts, then determining the reliability of the individual elements of the position by a review of supporting documents and other inventory procedures

c. Obtaining statements of broker margin accounts and confirming year-end balances and open positions with the broker. If the amount due from the broker has been adjusted for unrealized gains and losses, the closing balances will require reconciliation.

Agricultural Cooperatives

264. The auditor should ascertain that futures transactions have been properly authorized by the board of directors and maintained within authorized limits and policies. For transactions involving commodity futures contracts, the auditor should determine that the futures transactions meet the criteria necessary to be accounted for as hedges and that realized and unrealized gains and losses resulting from the transactions are properly reported. The auditor should consider all elements of the cooperative's inventory position to determine whether specific futures contracts are hedges or nonhedges.

265. Audit procedures to substantiate that the criteria for hedge accounting have been met may include the following:

- Making inquiries of management

- Reviewing brokerage statements in relation to recorded inventories

- Reviewing documentation identifying quantities and locations of commodities being hedged

- Reviewing documentation supporting the purposes of the hedges

- Reviewing documentation for cross hedges to assure that the futures prices of the substitute commodity and the cash price of the commodity being hedged have moved in tandem or otherwise demonstrated the required economic relationship

- Comparing contract quantities and periods with historic information, processing capacity, and other data to support the classification of futures contracts as anticipatory hedges

266. The auditor should consider the following procedures to obtain reasonable assurance that hedging gains and losses from futures contracts are properly recorded:

a. Obtaining a statement of hedging policies and reviewing the accounting to determine that the policies have been followed

b. Obtaining a copy of the cooperative's inventory position, including inventory on hand, forward purchase and sales contracts (both fixed and variable price), and futures contracts, then testing the accuracy of the individual elements of the position by reviewing the supporting documents

c. Obtaining copies of broker's statements and confirming year-end balances and open positions. If the amount due from the broker has been adjusted for unrealized gains and losses, the closing balances will require reconciliation.

d. Reviewing the accounting for realized and unrealized hedging gains and losses to determine that they are reported and matched against the related gains and losses of hedged inventories.

267. Audit procedures should be designed to determine the existence and proper reporting of marketing agreements and should include the following:

a. Obtaining an understanding of the cooperative's normal purchasing and marketing methods

b. Reviewing transactions subsequent to the balance sheet date for undisclosed agreements

c. Reviewing open contracts

d. Obtaining and evaluating the facts required for making a judgment about (1) the need to decrease the carrying amount of existing inventories or (2) the need to recognize a loss from open-marketing agreements

## APPENDIX A

### EXAMPLE OF A DEFERRED INCOME TAX CALCULATION

The following is an example of a tax accrual for a nonexempt cooperative that has differences between book and tax patronage identified with nonpatronage earnings. The timing differences shown below are based on the assumption that goodwill is identified entirely with patronage business. Timing differences are allocated on the basis that the cooperative had 40-percent nonpatronage business during the period. Deferred taxes have been provided on timing differences relating to nonpatronage earnings. The example is based on the assumptions that follow.

1. Earnings before income taxes for financial reporting

| | |
|---|---|
| From patronage operations | $ 3,000,000 |
| From nonpatronage operations | 2,000,000 |
| Total | $ 5,000,000 |

2. Adjustments to earnings for tax purposes

Amortization of goodwill

| | |
|---|---|
| Allocated to patronage operations | $ 150,000 |
| Allocated to nonpatronage operations | -- |
| Total | $ 150,000 |

Additional depreciation deducted for tax purposes

| | |
|---|---|
| Allocated to patronage operations | $ 200,000 |
| Allocated to nonpatronage operations | 133,000 |
| Total | $ 333,000 |

Provisions for inventory obsolescence not deductible for tax purposes

| | |
|---|---|
| Allocated to patronage operations | $ 300,000 |
| Allocated to nonpatronage operations | 200,000 |
| Total | $ 500,000 |

3. Total patronage earnings are allocated to patrons.

Based on the previous assumptions, a reconciliation of earnings before income taxes and earnings for tax purposes follows.

| | Total | Patronage | Nonpatronage |
|---|---|---|---|
| Earnings before income taxes -- financial reporting basis (book) | $5,000,000 | $3,000,000 | $2,000,000 |
| Amortization of goodwill | 150,000 | 150,000 | -- |
| Additional depreciation | (333,000) | (200,000) | (133,000) |
| Provision for inventory obsolescence | 500,000 | 300,000 | 200,000 |
| Earnings for tax purposes, before patronage allocations | $5,317,000 | $3,250,000 | $2,067,000 |

If the cooperative allocates patronage earnings based on "book earnings," it would allocate $3,000,000 to its patrons. However, if the cooperative allocates patronage based on "tax earnings," it would allocate $3,250,000, or $250,000 more than its patronage earnings for financial reporting purposes.

The provision for income taxes would also vary with the method used to allocate patronage. A comparison of the income tax provision for each patronage allocation method follows.

| | Patronage Allocations Based on Book Earnings | | |
|---|---|---|---|
| | Total | Patronage Earnings | Nonpatronage Earnings |
| Earnings for tax purposes, before patronage allocations | $5,317,000 | $3,250,000 | $2,067,000 |
| Patronage allocation deduction | 3,000,000 | 3,000,000 | -- |
| Taxable earnings | $2,317,000 | $ 250,000 | $2,067,000 |
| Income taxes payable (assumed rate of 50%) | 1,158,500 | 125,000 | 1,033,500 |
| Net deferred income taxes (benefits) related to nonpatronage timing differences | (33,500) | -- | (33,500) |
| Provision for income taxes | $1,125,000 | $ 125,000 | $1,000,000 |

There may be some who believe that the $125,000 of taxes on unallocated patronage earnings should be deferred. However, such deferment has not been made in this example because of uncertainties about the recoverability of the taxes in future years because of the current IRS position on this matter.

| | | Patronage Allocations Based on Tax Earnings | |
|---|---|---|---|
| | Total | Patronage Earnings | Nonpatronage Earnings |
| Earnings for tax purposes, before patronage allocations (from previous schedule) | $5,317,000 | $3,250,000 | $2,067,000 |
| Patronage allocation deduction | 3,250,000 | 3,250,000 | -- |
| Taxable earnings | $2,067,000 | $ -- | $2,067,000 |
| Income taxes payable (assumed rate of 50%) | 1,033,500 | -- | 1,033,500 |
| Net deferred income taxes (benefits) related to nonpatronage timing differences | (33,500) | -- | (33,500) |
| Provision for income taxes | $1,000,000 | $ -- | $1,000,000 |

In both examples the timing differences from additional depreciation and the nondeductible provision for inventory obsolescence that are allocable to nonpatronage earnings result in deferred tax items that should be provided for in accordance with APB Opinion No. 11.

If allocations to patrons were based on "book earnings," the financial statements would allocate cooperative income in this way.

| | |
|---|---|
| Earnings before income taxes | $5,000,000 |
| Less provision for income taxes | 1,125,000 |
| Net distributable earnings | $3,875,000 |
| Distributed to-- | |
| Patronage allocated to patrons | $3,000,000 |
| Retained earnings | 875,000 |
| Total | $3,875,000 |

If allocations to patrons were based on "tax earnings," the financial statements would show this allocation of cooperative income.

| | |
|---|---|
| Earnings before income taxes | $5,000,000 |
| Less provision for income taxes | 1,000,000 |
| Net distributable earnings | $4,000,000 |
| | |
| Distributed to-- | |
| Patronage allocated to patrons | $3,250,000 |
| Retained earnings | 750,000 |
| Total | $4,000,000 |

# APPENDIX B

## ILLUSTRATIVE FINANCIAL STATEMENTS

### ILLUSTRATIVE FINANCIAL STATEMENTS OF AN AGRICULTURAL PRODUCER

The following financial statements illustrate one currently acceptable form of financial reporting for an agricultural producer accounting for inventories of growing crops, harvested crops, and cattle at the lower of cost or market. A separate statement of income, with supporting calculations, illustrates one method of reporting when inventories of harvested crops are carried at net realizable value. Other forms of financial statements are acceptable, and more or less information may be appropriate, depending on the circumstances. The amounts shown on the illustrative financial statements may not necessarily indicate customary relationships between accounts.

The notes to the illustrative financial statements are representative of the basic type of disclosure for an agricultural producer. Additional disclosure may be appropriate, depending on the circumstances.

EXHIBIT 1

# GRAIN AND CATTLE PRODUCER, INC.

## Balance Sheets

| | August 31, 19X2 | August 31, 19X1 |
|---|---|---|
| **ASSETS** | | |
| Current assets | | |
| Cash and certificates of deposit | $ 112,000 | $ 195,000 |
| Receivables (notes 1 and 2) | 510,000 | 475,000 |
| Inventories (note 1) | | |
| Feed and supplies | 75,000 | 70,000 |
| Grain | 265,000 | 245,000 |
| Cattle | 410,000 | 445,000 |
| Deposits and prepaid expenses | 90,000 | 65,000 |
| Total current assets | 1,462,000 | 1,495,000 |
| Investment (note 1) | 54,000 | 47,000 |
| Property and equipment, net (notes 1 and 3) | 5,288,000 | 4,837,000 |
| Total assets | $ 6,804,000 | $ 6,379,000 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities | | |
| Notes payable (note 4) | $ 200,000 | $ 200,000 |
| Accounts payable and accrued expenses | 224,000 | 199,000 |
| Income taxes payable | 23,000 | 68,000 |
| Current maturities of long-term debt | 250,000 | 200,000 |
| Total current liabilities | 697,000 | 667,000 |
| Deferred income taxes (note 5) | 210,000 | 173,000 |
| Long-term debt (note 4) | 3,020,000 | 2,925,000 |
| Total liabilities | 3,927,000 | 3,765,000 |
| Stockholders' equity | | |
| Common stock, $100 par, authorized and issued 5,000 shares | 500,000 | 500,000 |
| Retained earnings | 2,377,000 | 2,114,000 |
| | 2,877,000 | 2,614,000 |
| Total liabilities and stockholders' equity | $ 6,804,000 | $ 6,379,000 |

See notes to financial statements.

EXHIBIT 2

GRAIN AND CATTLE PRODUCER, INC.

Statements of Income and Retained Earnings

| | Years Ended August 31, 19X2 | 19X1 |
|---|---|---|
| Revenue | | |
| Grain | $ 2,365,000 | $ 1,810,000 |
| Cattle | 1,110,000 | 1,378,000 |
| Interest | 15,000 | 17,000 |
| Other | 14,000 | 22,000 |
| Total revenue | 3,504,000 | 3,227,000 |
| Costs and expenses | | |
| Grain | 1,395,000 | 1,090,000 |
| Cattle | 910,000 | 1,025,000 |
| Interest expense | 375,000 | 355,000 |
| General and administrative expense | 280,000 | 275,000 |
| Total costs and expenses | 2,960,000 | 2,745,000 |
| Income before income taxes | 544,000 | 482,000 |
| Income taxes (note 5) | | |
| Current | 214,000 | 189,000 |
| Deferred | 37,000 | 38,000 |
| Total income taxes | 251,000 | 227,000 |
| Net income | 293,000 | 255,000 |
| Retained earnings, beginning of year | 2,114,000 | 1,889,000 |
| Dividends paid | (30,000) | (30,000) |
| Retained earnings, end of year | $ 2,377,000 | $ 2,114,000 |
| Income per share | $ 58.60 | $ 51.00 |
| Dividends per share | $ 6.00 | $ 6.00 |

See notes to financial statements.

EXHIBIT 3

## GRAIN AND CATTLE PRODUCER, INC.

Statements of Changes in Financial Position

| | Years Ended August 31, 19X2 | 19X1 |
|---|---|---|
| Cash from operations | | |
| Net income | $ 293,000 | $ 255,000 |
| Expenses (income) not requiring (providing) cash | | |
| Depreciation | 190,000 | 175,000 |
| Deferred income taxes | 37,000 | 38,000 |
| Allocated retains -- Central Supply Cooperative | (7,000) | (5,000) |
| Gain on sale of property and equipment | (6,000) | (2,000) |
| Increase in receivables | (35,000) | (50,000) |
| Decrease (increase) in inventories | 10,000 | (70,000) |
| Increase in deposits and prepaid expenses | (25,000) | (15,000) |
| Decrease in notes payable | -- | (50,000) |
| Increase in accounts payable and accrued expenses | 25,000 | 50,000 |
| Decrease in income taxes payable | (45,000) | (17,000) |
| Increase in current maturities of long-term debt | 50,000 | -- |
| Cash provided by operations | 487,000 | 309,000 |
| Other sources of cash | | |
| Sale of property and equipment | 90,000 | 72,000 |
| Issuance of long-term debt | 345,000 | -- |
| Total cash provided | 922,000 | 381,000 |
| Uses of Cash | | |
| Additions to property and equipment | 725,000 | 210,000 |
| Reduction of long-term debt | 250,000 | 200,000 |
| Dividends | 30,000 | 30,000 |
| | 1,005,000 | 440,000 |
| Decrease in cash | $ (83,000) | $ (59,000) |

See notes to financial statements.

GRAIN AND CATTLE PRODUCER, INC.

Notes to Financial Statements

Years Ended August 31, 19X2 and 19X1

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Receivables. Receivables from cattle and grain sales are based on contracted prices. The company evaluates the collectibility of all receivables at year-end. Amounts considered uncollectible or doubtful of collection are written off when such determination is made.

Inventories. Cattle inventories are stated at the lower of cost (first-in, first-out method) or market. Costs of raised cattle include proportionate costs of breeding, including depreciation of the breeding herd, plus the costs of maintenance to maturity. Purchased cattle are carried at purchase cost plus costs of maintenance to maturity.

Harvested grain inventories are stated at the lower of cost (first-in, first-out method) or market. Growing crops are valued at the lower of cost or estimated market.

The company hedges grain inventories and growing crops to the extent considered practicable for minimizing risks from market price fluctuations. Realized and unrealized gains and losses on futures contracts that qualify as hedges are deferred until the related inventories are sold. Those realized and unrealized gains and losses are considered in determining net realizable value for lower of cost or market calculations for related harvested and growing crops.

Investment. The investment in Central Supply Cooperative (Central) represents equities allocated to Grain and Cattle Producer, Inc. (the Company), by Central as of Central's most recent fiscal year-end, plus an accrual at the Company's fiscal year-end for anticipated patronage allocations. The accrual is based on the expected percentage (1 percent in both 19X2 and 19X1) of Central's total patronage applied to Central's interim operating results. Patronage refunds are credited to operating expenses.

Property and equipment. Property and equipment are stated at cost. Breeding animals are carried at purchase costs or inventory transfer amounts equal to the lower of accumulated animal maintenance costs or market. Depreciation is provided over the estimated useful lives of the assets on a straight-line basis (see note 3). Renewals and betterments are charged to property accounts. Costs of maintenance and repairs that do not improve or extend asset lives are charged to expense.

Investment tax credit

The Company accounts for the investment tax credit currently as a reduction of federal income tax (flow-through method).

2. RECEIVABLES

Receivables are composed of the following:

| | August 31, 19X2 | August 31, 19X1 |
|---|---|---|
| Note, secured, due January 19X3, interest at 12% | $ 90,000 | -- |
| Receivables, grain and livestock sales | 410,000 | $ 460,000 |
| Other | 10,000 | 15,000 |
| | $ 510,000 | $ 475,000 |

3. PROPERTY AND EQUIPMENT

Property and equipment are stated at cost. A summary of the Company's facilities is shown below.

| | August 31, 19X2 | August 31, 19X1 | Useful Lives |
|---|---|---|---|
| Land | $ 3,678,000 | $ 3,214,000 | |
| Buildings and land improvements | 840,000 | 800,000 | 5-40 years |
| Machinery and equipment | 560,000 | 515,000 | 3-15 years |
| Feedlot facilities | 285,000 | 270,000 | 10-25 years |
| Breeding herd | 1,025,000 | 978,000 | 8 years |
| | 6,388,000 | 5,777,000 | |
| Less accumulated depreciation | 1,100,000 | 940,000 | |
| Property and equipment, net | $ 5,288,000 | $ 4,837,000 | |

Depreciation charged against income for the years ended August 31, 19X2 and 19X1, amounted to $190,000 and $175,000, respectively.

4. LONG-TERM DEBT AND SHORT-TERM BORROWINGS

Long-term debt. The long-term debt, which is collateralized by real estate, outstanding as of August 31, 19X2 and 19X1, is summarized below.

| | August 31, | |
|---|---|---|
| | 19X2 | 19X1 |
| Payable in annual principal installments of $200,000 with final installment of $125,000 in 19X6; interest at 11% | $ 2,925,000 | $ 3,125,000 |
| Payable in annual principal installments of $50,000 with final installment of $45,000 in 19X8; interest at 14.5% | 345,000 | |
| | 3,270,000 | 3,125,000 |
| Less amount due within one year | 250,000 | 200,000 |
| Balance, due after one year | $ 3,020,000 | $ 2,925,000 |

Maturities of long-term debt for each of the five fiscal years subsequent to August 31, 19X2, are as follows.

| | |
|---|---|
| 19X3 | $ 250,000 |
| 19X4 | 250,000 |
| 19X5 | 250,000 |
| 19X6 | 250,000 |
| 19X7 | 250,000 |
| Total | $ 1,250,000 |

The debt agreements contain a number of restrictive covenants on the payment of dividends including, among other things, a limit of 75 percent of the net earnings over $100,000 per year.

Short-term borrowings. The company had a short-term line of credit with First National Bank of up to $300,000 in 19X2 and $250,000 in 19X1. The average interest rates were 17 percent and 18 percent for the years ended August 31, 19X2 and 19X1, respectively.

5. INCOME TAXES

Following is a reconciliation of the income tax computed at the federal statutory rates and the income tax provision.

| | Years Ended August 31, 19X2 | Years Ended August 31, 19X1 |
|---|---|---|
| Income tax at statutory rates | $ 272,000 | $ 241,000 |
| Decreases resulting from: | | |
| Benefit from breeding-herd sales income taxed at capital gains rate | (5,000) | (4,000) |
| Investment tax credit | (10,000) | (6,000) |
| Other, net | (6,000) | (4,000) |
| Total income tax provision | $ 251,000 | $ 227,000 |

Deferred income taxes have been provided to reflect the difference in timing of income and expense for accounting and income tax purposes. The sources of these differences and the related tax effect of each are summarized as follows.

| | Years Ended August 31, 19X2 | Years Ended August 31, 19X1 |
|---|---|---|
| Valuation of breeding livestock | $ 21,000 | $ 24,000 |
| Valuation of inventories | 16,000 | 14,000 |
| | $ 37,000 | $ 38,000 |

GRAIN AND CATTLE PRODUCER, INC.

Statements of Income

The presentation in exhibit 6 illustrates the statements of income of Grain and Cattle Producer, Inc., with grain inventories valued at net realizable value.* The amounts included in the statement are based on the following cost and market amounts.

| | 19X2 | 19X1 | 19X0 |
|---|---|---|---|
| Ending inventory at cost | $ 265,000 | $ 245,000 | $180,000 |
| Ending inventory at net realizable value | $ 290,000 | $ 263,000 | $200,000 |
| Cost of grain sold, with inventory stated at cost | $1,395,000 | $1,090,000 | |
| Adjusted for the change in the cost of inventories: | | | |
| for 19X2 ($265,000 less $245,000) | 20,000 | -- | |
| for 19X1 ($245,000 less $180,000) | -- | 65,000 | |
| Costs incurred for grain production | 1,415,000 | 1,155,000 | |
| Beginning inventory at net realizable value | 263,000 | 200,000 | |
| Ending inventory at net realizable value | (290,000) | (263,000) | |
| Cost of grain sold, with inventory stated at net realizable value | $1,388,000 | $1,092,000 | |

*Paragraph 39 of SOP 85-3, Accounting by Agricultural Producers and Agricultural Cooperatives, provides the criteria necessary to value inventories of producers at sales price less estimated costs of disposal.

EXHIBIT 6

GRAIN AND CATTLE PRODUCER, INC.

Alternative Statements of Income*

| | Years Ended August 31, | |
|---|---|---|
| | 19X2 | 19X1 |
| Revenue | | |
| Sales of grain | $ 2,365,000 | $ 1,810,000 |
| Sales of cattle | 1,110,000 | 1,378,000 |
| Interest | 15,000 | 17,000 |
| Other | 14,000 | 22,000 |
| Total revenue | 3,504,000 | 3,227,000 |
| Costs and expenses | | |
| Grain | 1,388,000 | 1,092,000 |
| Cattle | 910,000 | 1,025,000 |
| Interest expense | 375,000 | 355,000 |
| General and administrative expense | 280,000 | 275,000 |
| Total costs and expenses | 2,953,000 | 2,747,000 |
| Income before income taxes | $ 551,000 | $ 480,000 |

*This statement of income assumes grain inventories are accounted for at net realizable value.

## ILLUSTRATIVE FINANCIAL STATEMENTS OF AGRICULTURAL COOPERATIVES

The following sample financial statements of cooperatives are included for illustrative purposes only and are not intended to establish reporting requirements. Furthermore, the dollar amounts shown are illustrative only and may not indicate any customary relationship among accounts. The sample financial statements do not include all the accounts and transactions that might be found in practice. The notes indicate the subject matter generally disclosed. In addition to the illustrative notes that are presented, some of which are peculiar to cooperatives, the notes to financial statements of cooperatives should include any other appropriate disclosures, such as information concerning related-party transactions, subsequent events, and other matters.

Certain disclosures included in the illustrative financial statements and notes are not required for nonpublic companies.

| Disclosure | Illustration |
|---|---|
| Revenues by segment or product line | Central Supply Cooperative, statements of net earnings |
| Summary of short-term borrowings | Central Supply Cooperative, note C; Midstate Marketing Cooperative, note C |
| Reconciliation between reported total income tax expense and income tax expense computed at statutory rates | Central Supply Cooperative, note D |

Also illustrated are the statements of amounts due to patrons (for Midstate Marketing Cooperative) and the reconciliation of net earnings distributions (for Central Supply Cooperative). The same data might alternatively be presented in notes to the financial statements.

The basic financial statements for Midstate Marketing Cooperative have been prepared on the basis of charging cost of production for patrons' raw product deliveries, and inventories of finished goods and goods in process have been valued at the lower of cost or market. However, for illustration purposes certain statements for Midstate are presented (1) as if cost of production had been charged for patrons' raw product deliveries at assigned amounts, and inventories had been valued at net realizable value (exhibits 14-16) and (2) as if no value had been assigned to patrons' raw product deliveries and inventories of finished goods and goods in process had been valued at net realizable value (exhibit 13).

MIDSTATE MARKETING COOPERATIVE

Balance Sheets

ASSETS

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Current assets | | |
| Cash and temporary cash investments | $ 2,890,000 | $ 6,360,000 |
| Accounts receivable, less allowance for doubtful accounts of $500,000 and $450,000 (note C) | 13,120,000 | 9,600,000 |
| Inventories (notes B and C) | 35,050,000 | 30,980,000 |
| Prepaid expenses and other current assets | 1,170,000 | 1,370,000 |
| Total current assets | 52,230,000 | 48,310,000 |
| Investments and other assets | | |
| Investment in Bank for Cooperatives | 6,200,000 | 5,340,000 |
| Trademarks | 1,600,000 | 2,000,000 |
| Other assets | 370,000 | 190,000 |
| Total investments and other assets | 8,170,000 | 7,530,000 |
| Property, plant, and equipment (note C) | | |
| Land | 1,130,000 | 1,130,000 |
| Buildings and improvements | 10,970,000 | 10,860,000 |
| Machine and equipment | 25,280,000 | 19,760,000 |
| Total property, plant, and equipment | 37,380,000 | 31,750,000 |
| Less accumulated depreciation | (13,670,000) | (12,170,000) |
| Net property, plant, and equipment | 23,710,000 | 19,580,000 |
| Total assets | $84,110,000 | $75,420,000 |

See notes to financial statements.

LIABILITIES AND PATRONS' EQUITIES

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Current liabilities | | |
| Notes payable to bank (note C) | $17,480,000 | $16,950,000 |
| Accounts payable and accrued expenses | 7,790,000 | 7,350,000 |
| Salaries, wages, and related payroll taxes | 1,560,000 | 1,080,000 |
| Due to patrons | 10,260,000 | 8,910,000 |
| Income taxes | 310,000 | 130,000 |
| Current portion of long-term debt | 2,890,000 | 2,890,000 |
| Total current liabilities | 40,290,000 | 37,310,000 |
| Deferred Income Taxes (note D) | 2,300,000 | 2,000,000 |
| Long-term debt (note C) | 13,210,000 | 16,100,000 |
| Patrons' equities | | |
| Allocated equities | 26,360,000 | 19,710,000 |
| Retained earnings | 1,950,000 | 300,000 |
| | 28,310,000 | 20,010,000 |
| Total liabilities and patrons' equities | $84,110,000 | $75,420,000 |

See notes to financial statements.

MIDSTATE MARKETING COOPERATIVE

Statements of Net Earnings

| | Years Ended April 30, 19X2 | Years Ended April 30, 19X1 |
|---|---|---|
| Net sales | $129,630,000 | $110,110,000 |
| Expenses | | |
| Cost of sales (including proportionate share of assigned value of patrons' raw products received) | 84,630,000 | 70,200,000 |
| Selling, general, and administrative expense | 19,380,000 | 18,900,000 |
| Interest expense | 5,090,000 | 4,750,000 |
| Total expenses | 109,100,000 | 93,850,000 |
| Earnings before income taxes | 20,530,000 | 16,260,000 |
| Income taxes (note D) | 1,250,000 | 900,000 |
| Net earnings | $ 19,280,000 | $ 15,360,000 |

See notes to financial statements.

EXHIBIT 9

MIDSTATE MARKETING COOPERATIVE

Statements of Amounts Due to Patrons

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Amounts due to patrons at beginning of year | $ 8,910,000 | $ 9,070,000 |
| Assigned value of patrons' raw products (approximates market at date of receipt) | 56,500,000 | 51,500,000 |
| Net earnings | 19,280,000 | 15,360,000 |
| Total | 84,690,000 | 75,930,000 |
| Less-- | | |
| Amounts paid to patrons | 58,830,000 | 53,240,000 |
| Patronage earnings retained | 8,300,000 | 7,270,000 |
| Per-unit retains | 5,650,000 | 5,250,000 |
| Nonpatronage earnings, net | 1,650,000 | 1,260,000 |
| Total | 74,430,000 | 67,020,000 |
| Amounts due to patrons at end of year | $10,260,000 | $ 8,910,000 |

See notes to financial statements.

EXHIBIT 10

MIDSTATE MARKETING COOPERATIVE

Statements of Patrons' Equities

| | Allocated | | | Unallocated |
|---|---|---|---|---|
| | Equity Credits | Per-Unit Retains | Total | Retained Earnings (Deficit) |
| Balance, April 30, 19X0 | $ 8,730,000 | $ 5,210,000 | $13,940,000 | $ (960,000)* |
| Patronage earnings retained | 7,270,000 | -- | 7,270,000 | -- |
| Refund of prior years' allocated equity | (6,750,000) | -- | (6,750,000) | -- |
| Per-unit retains | -- | 5,250,000 | 5,250,000 | -- |
| Nonpatronage earnings | -- | -- | -- | 1,260,000 |
| Balance, April 30, 19X1 | 9,250,000 | 10,460,000 | 19,710,000 | 300,000 |
| Patronage earnings retained | 8,300,000 | -- | 8,300,000 | -- |
| Refund of prior years' allocated equity | (7,300,000) | -- | (7,300,000) | -- |
| Per-unit retains | -- | 5,650,000 | 5,650,000 | -- |
| Nonpatronage earnings | -- | -- | -- | 1,650,000 |
| Balance, April 30, 19X2 | $10,250,000 | $16,110,000 | $26,360,000 | $ 1,950,000 |

*Central Supply Cooperative, a patron of Midstate Marketing Cooperative, did not record its proportionate share of its investee's unallocated loss because of the assumption that the interim financial statements and projections reflected nonpatronage earnings sufficient to offset the loss.

See notes to financial statements.

EXHIBIT 11

MIDSTATE MARKETING COOPERATIVE

Statements of Changes in Financial Position

| | Years Ended April 30, 19X2 | Years Ended April 30, 19X1 |
|---|---|---|
| Cash from operations | | |
| Net income | $19,280,000 | $15,360,000 |
| Expenses not requiring cash | | |
| Depreciation and amortization | 3,500,000 | 3,200,000 |
| Deferred income taxes | 300,000 | 160,000 |
| Decrease (increase) in accounts receivable | (3,520,000) | 650,000 |
| Increase in inventories | (4,070,000) | (1,100,000) |
| Decrease (increase) in prepaid expenses and other current assets | 200,000 | (250,000) |
| Increase in notes payable to bank | 530,000 | 1,000,000 |
| Increase in accounts payable and accrued expenses | 440,000 | 500,000 |
| Increase (decrease) in salaries, wages, and related payroll taxes | 480,000 | (220,000) |
| Increase in due to patrons | 1,350,000 | 400,000 |
| Increase in income taxes | 180,000 | 80,000 |
| Cash provided from operations | 18,670,000 | 19,780,000 |
| Cash from financing activities | | |
| Per-unit retains | 5,650,000 | 5,250,000 |
| Total cash provided | 24,320,000 | 25,030,000 |
| Uses of cash | | |
| Distribution of current year patronage earnings | 9,330,000 | 6,830,000 |
| Refund of prior years' allocated equity | 7,300,000 | 6,750,000 |
| Additions to property, plant, and equipment | 7,230,000 | 5,440,000 |
| Reduction of long-term debt | 2,890,000 | 2,890,000 |
| Increase in investments and other assets | 1,040,000 | 520,000 |
| Cash used | 27,790,000 | 22,430,000 |
| Increase (decrease) in cash | $(3,470,000) | $ 2,600,000 |

See notes to financial statements.

MIDSTATE MARKETING COOPERATIVE

Notes to Financial Statements

Years Ended April 30, 19X2 and 19X1

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General. Midstate Marketing Cooperative is an agricultural cooperative association operating on a pool basis, and it is organized for the purpose of processing and marketing fruits and vegetables delivered by its patrons. Deliveries from nonmember growers may also be accepted on a patronage or nonpatronage basis. Patrons are credited for the assigned amounts (as determined by the board of directors) of raw products delivered. Net proceeds or losses from patronage business are allocated to patrons on the basis of their participation in the total established value of the related pool.

Equity requirements, as determined by the board of directors, are retained from amounts due to patrons and credited to patrons' equity.

Retained earnings arising from nonpatronage business and certain nonrecurring revenues and expenses, less income taxes, are not allocated to patrons.

Inventories. The cooperative's inventories are stated at the lower of cost or market using the first-in, first-out method (FIFO). Raw products received from members are included as an element of cost at their assigned amounts.

Investments. The investment in the Bank for Cooperatives consists of class C stock at cost and the cooperative's share of the bank's allocated surplus. Patronage refunds are credited to interest expense.

Trademarks. Purchase costs of trademarks are capitalized and amortized over ten years.

Property, plant, and equipment. Property, plant, and equipment are stated at cost. Depreciation is computed principally by using the straight-line method over the estimated useful lives of the related depreciable assets. Expenditures for betterments and renewals that extend useful lives are capitalized. Gains and losses on retirements and disposals are included in net earnings.

Patrons' equities. In accordance with its bylaws, the cooperative allocates patronage income to patrons, as determined for income tax purposes, in cash and equity certificates in proportions determined by its board of directors.

Income taxes. The cooperative, as a nonexempt cooperative, is taxed on nonpatronage income and any patronage earnings not paid or allocated to patrons. Investment tax credits are first applied as a reduction of the current tax provision for the year the assets are placed in service, and any unused investment tax credits must be allocated to the patrons of the cooperative.

B. INVENTORIES

A summary of inventories follows.

| | April 30, | |
|---|---|---|
| | 19X2 | 19X1 |
| Finished goods | $28,040,000 | $22,820,000 |
| Goods in process | 4,320,000 | 5,560,000 |
| Materials and supplies | 2,690,000 | 2,600,000 |
| Total | $35,050,000 | $30,980,000 |

## C. NOTES PAYABLE TO BANK AND LONG-TERM DEBT

Notes payable to bank consist of short-term loans from the Bank for Cooperatives. Following is a summary of such borrowings during the years ended April 30, 19X2, and 19X1.

| | April 30, | |
|---|---|---|
| | 19X2 | 19X1 |
| Borrowings as of April 30 | $17,480,000 | $16,950,000 |
| Average interest rate on year-end borrowings | 17.5% | 13% |
| Average borrowings during the year | $19,500,000 | $16,500,000 |
| Average interest rate on borrowings during the year | 15.75% | 14.5% |
| Maximum borrowings during the year | $20,060,000 | $25,000,000 |

Long-term debt consists of notes payable to the Bank for Cooperatives, which bear interest at 12.5 percent. Payments are due in varying installments through 19X8. Aggregate annual principal payments applicable to long-term debt for years subsequent to April 30, 19X2, are as follows.

| Year Ending April 30, | |
|---|---|
| 19X3 | $ 2,890,000 |
| 19X4 | 2,890,000 |
| 19X5 | 2,890,000 |
| 19X6 | 2,890,000 |
| 19X7 | 2,270,000 |
| Thereafter | 2,270,000 |
| Total | $16,100,000 |

Essentially, all accounts receivable and inventories are pledged as collateral under the short-term agreement.

The long-term notes are secured by property, plant, and equipment with a net book value of $18 million and by the investment in the Bank for Cooperatives.

The debt agreements with the Bank contain a number of restrictive covenants, including limitations on equipment purchases and prior approval of the bank on revolvement of retained equities.

D. INCOME TAXES

The provision for income taxes consists of the following:

| | Years Ended April 30, 19X2 | 19X1 |
|---|---|---|
| Current | | |
| Federal | $ 790,000 | $470,000 |
| State | 160,000 | 100,000 |
| Total | 950,000 | 570,000 |
| Deferred | | |
| Federal | 250,000 | 270,000 |
| State | 50,000 | 60,000 |
| | 300,000 | 330,000 |
| Total | $1,250,000 | $900,000 |

The income tax provision for both years is disproportionate to the expected statutory income tax expense, principally due to the deduction for distribution of patronage earnings to patrons and to investment tax credits.

Deferred taxes arise from timing differences related primarily to the use of accelerated depreciation methods for tax purposes.

EXHIBIT 13

MIDSTATE MARKETING COOPERATIVE

Statements of Net Proceeds*

| | Years Ended April 30, 19X2 | 19X1 |
|---|---|---|
| Net sales | $129,630,000 | $110,110,000 |
| Product inventory, ending | 35,596,000 | 31,218,000 |
| Product inventory, beginning | (31,218,000) | (24,200,000) |
| Gross proceeds | 134,008,000 | 117,128,000 |
| Costs and expenses | | |
| Processing and packing | 32,110,000 | 25,080,000 |
| Selling, general, and administrative expenses | 19,380,000 | 18,900,000 |
| Interest expense | 5,090,000 | 4,750,000 |
| | 56,580,000 | 48,730,000 |
| Proceeds before income taxes | 77,428,000 | 68,398,000 |
| Income taxes (note D) | 1,250,000 | 900,000 |
| Net proceeds | $ 76,178,000 | $ 67,498,000 |

*In this example, no charge to cost of production has been made for patrons' raw product deliveries, and inventories of finished goods and goods in process have been valued at net realizable value.

EXHIBIT 14

MIDSTATE MARKETING COOPERATIVE

Statements of Amounts Due to Patrons*

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Amounts due to patrons at beginning of year | $11,748,000 | $11,270,000 |
| Net proceeds | 76,178,000 | 67,498,000 |
| | 87,926,000 | 78,768,000 |
| Less-- | | |
| Amounts paid to patrons | 58,830,000 | 53,240,000 |
| Patronage proceeds retained | 8,300,000 | 7,270,000 |
| Per-unit retains | 5,650,000 | 5,250,000 |
| Nonpatronage earnings, net | 1,650,000 | 1,260,000 |
| | 74,430,000 | 67,020,000 |
| Amounts due to patrons at end of year | $13,496,000 | $11,748,000 |

*The amounts due to patrons at the end of the year are the same as shown in the financial statements in which cost of production has been charged for patrons' raw product deliveries, and inventories of finished goods and goods in process have been valued at the lower of cost or market, except for the difference in valuing those inventories at the end of the year. The amounts due patrons are reconciled as follows.

| | 19X2 | 19X1 |
|---|---|---|
| Amounts due to patrons, with inventories valued at the lower of cost or market | $10,260,000 | $ 8,910,000 |
| Add adjustments of inventories to net realizable value | 3,236,000 | 2,838,000 |
| Amounts due to patrons, with inventories valued at net realizable value | $13,496,000 | $11,748,000 |

* (continued)

Inventories. Product inventories are stated at estimated net realizable values, determined by reducing sales value for completion, direct distribution, and selling costs. Supply inventories are stated at the lower of cost or market using the first-in, first-out method (FIFO).

Inventories consist of the following:

| | April 30, | |
|---|---|---|
| | 19X2 | 19X1 |
| Finished goods | $30,844,000 | $25,102,000 |
| Goods in process | 4,752,000 | 6,116,000 |
| Materials and supplies | 2,690,000 | 2,600,000 |
| Total | $38,286,000 | $33,818,000 |

MIDSTATE MARKETING COOPERATIVE

Statements of Net Earnings*

| | Years Ended April 30, | |
|---|---|---|
| | 19X2 | 19X1 |
| Net sales | $129,630,000 | $110,110,000 |
| Expenses | | |
| Costs of sales (including proportionate share of assigned value of patrons' raw products received) | 84,232,000 | 69,562,000 |
| Selling, general, and administrative expense | 19,380,000 | 18,900,000 |
| Interest expense | 5,090,000 | 4,750,000 |
| Total expenses | 108,702,000 | 93,212,000 |
| Earnings before income taxes | 20,928,000 | 16,898,000 |
| Income taxes (note D) | 1,250,000 | 900,000 |
| Net earnings | $ 19,678,000 | $ 15,998,000 |

*In determining net earnings in this example, charges to cost of production, in the amounts of $56,500,000 and $51,500,000 for 19X2 and 19X1, respectively, have been made for patrons' raw product deliveries, with corresponding credits to amounts due to patrons. Inventories have been valued at net realizable value.

MIDSTATE MARKETING COOPERATIVE

Statements of Amounts Due to Patrons*

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Amounts due to patrons at beginning of year | $11,748,000 | $11,270,000 |
| Net earnings | 19,678,000 | 15,998,000 |
| Assigned value of patrons' raw product | 56,500,000 | 51,500,000 |
| Total | 87,926,000 | 78,768,000 |
| Less-- | | |
| Amounts paid to patrons | 58,830,000 | 53,240,000 |
| Patronage proceeds retained | 8,300,000 | 7,270,000 |
| Per-unit retains | 5,650,000 | 5,250,000 |
| Nonpatronage earnings, net | 1,650,000 | 1,260,000 |
| | 74,430,000 | 67,020,000 |
| Amounts due to patrons at end of year | $13,496,000 | $11,748,000 |

*The amounts due to patrons at the end of the year are the same as shown in the financial statements in which cost of production has been charged for patrons' raw product deliveries, and inventories of finished goods and goods in process have been valued at the lower of cost or market, except for the difference in valuing those inventories at the end of the year. Further, the amounts due members at the end of the year are the same as shown in the example in which cost of production has not been charged for cost of production and inventories of finished goods and goods in process have been valued at net realizable value.

* (continued)

The amounts due patrons under the two methods of inventory valuation are reconciled as follows.

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Amounts due to patrons, with inventories valued at the lower of cost or market | $10,260,000 | $ 8,910,000 |
| Add adjustment of inventories to net realizable value | 3,236,000 | 2,838,000 |
| Amounts due to patrons, with inventories valued at net realizable value | $13,496,000 | $11,748,000 |

Inventories. Product inventories are stated at estimated net realizable values, determined by reducing sales value for completion, direct distribution, and selling costs. Supply inventories are stated at the lower of cost or market using the first-in, first-out method (FIFO).

Inventories consist of the following:

| | April 30, 19X2 | April 30, 19X1 |
|---|---|---|
| Finished goods | $30,844,000 | $25,102,000 |
| Goods in process | 4,752,000 | 6,116,000 |
| Materials and supplies | 2,690,000 | 2,600,000 |
| Total | $38,286,000 | $33,818,000 |

EXHIBIT 17

CENTRAL SUPPLY COOPERATIVE

Balance Sheets

ASSETS

| | May 31, 19X2 | May 31, 19X1 |
|---|---|---|
| Current assets | | |
| Cash and temporary cash investments | $ 2,650,000 | $ 2,819,000 |
| Accounts receivable, less allowance for doubtful accounts of $750,000 and $640,000 (note C) | 6,573,000 | 6,298,000 |
| Inventories (notes B and C) | 15,520,000 | 14,686,000 |
| Advances on grain purchases and margin deposits | 1,240,000 | 1,610,000 |
| Prepaid expenses and other current assets | 1,195,000 | 1,306,000 |
| Total current assets | 27,178,000 | 26,719,000 |
| Investments and other assets | | |
| Investment in Midstate Marketing Cooperative | 1,357,000 | 1,020,000 |
| Investment in Bank for Cooperatives | 1,274,000 | 1,160,000 |
| Investment in Farm Fertilizers, Inc. | 980,000 | 908,000 |
| Other assets | 126,000 | 192,000 |
| | 3,737,000 | 3,280,000 |
| Property, plant, and equipment (note C) | | |
| Land and land improvements | 1,248,000 | 1,736,000 |
| Buildings and improvements | 10,753,000 | 9,726,000 |
| Machinery and equipment | 20,154,000 | 17,622,000 |
| Automobiles and trucks | 1,197,000 | 1,173,000 |
| | 33,352,000 | 30,257,000 |
| Less accumulated depreciation | (10,165,000) | ( 8,247,000) |
| Net property, plant, and equipment | 23,187,000 | 22,010,000 |
| Total assets | $54,102,000 | $52,009,000 |

LIABILITIES AND PATRONS' EQUITIES

| | May 31, 19X2 | May 31, 19X1 |
|---|---|---|
| Current liabilities | | |
| Notes payable to bank (note C) | $ 7,084,000 | $ 6,473,000 |
| Accounts payable and accrued expenses | 10,239,000 | 10,515,000 |
| Salaries, wages, and related payroll taxes | 2,230,000 | 1,985,000 |
| Patronage refunds payable | 874,000 | 619,000 |
| Income taxes | 755,000 | 530,000 |
| Current portion of long-term debt | 560,000 | 1,230,000 |
| Total current liabilities | 21,742,000 | 21,352,000 |
| Deferred income taxes (note D) | 1,527,000 | 1,354,000 |
| Long-term debt (note C) | 8,978,000 | 10,208,000 |
| Commitments and contingencies (note E) | | |
| Patrons' equities | | |
| Preferred stock, 6% noncumulative, $100 par value: Authorized, 100,000 shares, Issued and outstanding, 54,840 and 37,380 shares | 5,484,000 | 3,738,000 |
| Common stock, voting, $100 par value: Authorized 25,000 shares, Issued and outstanding, 5,070 and 5,020 shares | 507,000 | 502,000 |
| Allocated equities | 13,650,000 | 13,632,000 |
| Retained earnings | 2,214,000 | 1,223,000 |
| Total current liabilities | 21,855,000 | 19,095,000 |
| Total liabilities and patrons' equities | $54,102,000 | $52,009,000 |

See notes to financial statements.

# CENTRAL SUPPLY COOPERATIVE

## Statements of Earnings

| | Years Ended May 31, | |
|---|---|---|
| | 19X2 | 19X1 |
| **Revenues** | | |
| Farm supply sales | $ 71,681,000 | $ 67,391,000 |
| Farm marketing sales | 37,939,000 | 32,963,000 |
| Other | 1,055,000 | 978,000 |
| | 110,675,000 | 101,332,000 |
| **Costs and expenses** | | |
| Costs of raw materials, operations, and distribution | 98,509,000 | 91,589,000 |
| General and administrative expense | 3,149,000 | 2,913,000 |
| Interest expense | 2,785,000 | 2,610,000 |
| | 104,443,000 | 97,112,000 |
| Earnings before income taxes | 6,232,000 | 4,220,000 |
| Income taxes (note E) | 650,000 | 545,000 |
| Net earnings | $ 5,582,000 | $ 3,675,000 |
| Net earnings allocated as follows: | | |
| Farm supply patrons, to be distributed currently | 583,000 | 408,000 |
| Farm supply patrons, to be allocated in the form of equity | 2,325,000 | 1,634,000 |
| Farm marketing patrons, to be distributed currently | 291,000 | 211,000 |
| Farm marketing patrons, to be allocated in the form of equity | 1,168,000 | 842,000 |
| Retained earnings | 1,215,000 | 580,000 |
| Net Earnings | $ 5,582,000 | $ 3,675,000 |

See notes to financial statements.

CENTRAL SUPPLY COOPERATIVE

Statements of Patrons' Equities

| | Allocated | | | Unallocated |
|---|---|---|---|---|
| | Preferred Stock | Common Stock | Allocated Equity | Retained Earnings |
| Balance, May 31, 19X0 | $2,500,000 | $500,000 | $15,268,000 | $ 793,000 |
| Supply patronage earnings retained | 817,000 | -- | 817,000 | -- |
| Marketing patronage earnings retained | 421,000 | -- | 421,000 | -- |
| Refund of prior years' allocated equity | -- | -- | (2,874,000) | -- |
| Nonpatronage earnings | -- | -- | -- | 580,000 |
| Preferred stock dividends | -- | -- | -- | (150,000) |
| New memberships, net | -- | 2,000 | -- | -- |
| Balance, May 31, 19X1 | 3,738,000 | 502,000 | 13,632,000 | 1,223,000 |
| Supply patronage earnings retained | 1,162,000 | -- | 1,163,000 | -- |
| Marketing patronage earnings retained | 584,000 | | 584,000 | |
| Refund of prior years' allocated equity | -- | -- | (1,729,000) | -- |
| Nonpatronage earnings | -- | -- | -- | 1,215,000 |
| Preferred stock dividends | -- | -- | -- | (224,000) |
| New memberships, net | -- | 5,000 | -- | -- |
| Balance, May 31, 19X2 | $5,484,000 | $507,000 | $13,650,000 | $2,214,000 |

See notes to financial statements.

EXHIBIT 20

CENTRAL SUPPLY COOPERATIVE

Statements of Changes in Financial Position

| | Years Ended May 31, | |
|---|---|---|
| | 19X2 | 19X1 |
| Cash from operations | | |
| Net income | $5,582,000 | $3,675,000 |
| Expenses not requiring cash | | |
| Depreciation and amortization | 2,937,000 | 2,537,000 |
| Deferred income taxes | 173,000 | 120,000 |
| Increase in accounts receivable | (275,000) | (56,000) |
| Increase in inventories | (834,000) | 129,000 |
| Decrease (increase) in advances on grain purchases and margin deposits | 370,000 | (87,000) |
| Decrease (increase) in prepaid expenses and other current assets | 111,000 | (58,000) |
| Increase in notes payable to bank | 611,000 | 157,000 |
| Increase (decrease) in accounts payable and accrued expenses | (276,000) | 89,000 |
| Increase in salaries, wages, and related payroll taxes | 245,000 | (146,000) |
| Increase (decrease) in patronage payable | 255,000 | (168,000) |
| Increase (decrease) in income taxes | 225,000 | (60,000) |
| Increase (decrease) in current portion of long-term debt | (670,000) | 55,000 |
| Cash provided from operations | 8,454,000 | 6,187,000 |
| Other sources of cash | | |
| Sales of property, plant, and equipment | 609,000 | 4,078,000 |
| Cash from financing activities | | |
| Common stock issued | 5,000 | 2,000 |
| Total cash provided | 9,068,000 | 10,267,000 |

| | Years Ended May 31, | |
|---|---|---|
| | 19X2 | 19X1 |
| Uses of cash | | |
| Additions to property, plant, and equipment | 4,723,000 | 5,044,000 |
| Refund of prior years' allocated equity | 1,729,000 | 2,874,000 |
| Reduction of long-term debt | 1,230,000 | 1,230,000 |
| Distribution of current year patronage earnings | 874,000 | 619,000 |
| Increase in investments and other assets | 457,000 | 175,000 |
| Payment of deferred dividends | 224,000 | 150,000 |
| Cash used | 9,237,000 | 10,092,000 |
| Increase (decrease) in cash | $ (169,000) | $ 175,000 |

See notes to financial statements.

CENTRAL SUPPLY COOPERATIVE

Notes to Financial Statements

Years Ended May 31, 19X2 and 19X1

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General. Central Supply Cooperative is an agricultural cooperative association organized to provide a supply source for members and to market farm products delivered by members.

Inventories. Grain inventories are carried at market. Realized and unrealized gains and losses on futures contracts are charged to current costs of sales.

Sunflower seed inventory is stated at the lower of cost or market first-in, first-out method (FIFO). Realized and unrealized gains and losses on soybean-oil futures contracts used to hedge sunflower seed inventories and unfilled sunflower seed orders are deferred until the related inventories are sold, but are considered in lower-of-cost-or-market calculations.

The cooperative hedges its grain and sunflower seed inventories and unfilled orders for these products to the extent considered practicable for minimizing risk from market price fluctuations. These inventories are not completely hedged, however, due in part to the absence of satisfactory hedging facilities for certain commodities and in part to the cooperative's appraisal of its exposure from expected price fluctuations.

Supplies and materials are stated at the lower of cost or market first-in, first-out method (FIFO).

Investments. The investment in Midstate Marketing Cooperative (Midstate) represents equities allocated to the cooperative by Midstate as of Midstate's most recent fiscal year-end, plus an accrual to the cooperative's fiscal year-end for anticipated patronage allocations. The accrual is based on the cooperative's expected percentage (5 percent in both 19X1 and 19X2) of Midstate's total patronage applied to Midstate's interim-operating results. Patronage refunds are credited to cost of raw materials, operations, and distribution.

The investment in the Bank for Cooperatives consists of class C stock at cost and the cooperative's share of the bank's allocated surplus. Any patronage refunds received from the bank are credited to interest expense.

The investment in Farm Fertilizers, Inc. (FFI), represents allocated equities for which notification has been received by the cooperative. The patronage earnings of FFI vary substantially from year to year, and FFI does not make interim operating results available to the cooperative. Accordingly, patronage allocations for which notification has not been received cannot be reasonably determined. Patronage refunds are credited to cost of raw materials, operations, and distribution.

Property, plant, and equipment. Property, plant, and equipment are stated at cost. Depreciation is computed principally by using the straight-line method over the estimated useful lives of the related depreciable assets. Expenditures for betterments and renewals that extend useful lives are capitalized. Gains and losses on retirements and disposals are included in net earnings.

Patrons' equities. In accordance with its bylaws, the cooperative allocates patronage earnings to its patrons, as determined for income tax purposes, in cash, preferred stock, and certificates of equity in proportions determined by its board of directors.

New members are issued one share of common stock. At any time a member ceases to be active, such shares are redeemed at par value.

Income taxes. The cooperative, as a nonexempt cooperative, is taxed on nonpatronage earnings and any patronage earnings not paid or allocated to patrons. Investment tax credits are first applied as a reduction of the current tax provision for the year the assets are placed in service, and any unused investment tax credits must be allocated to the members of the cooperative.

## B. INVENTORIES

A summary of inventories follows.

| | May 31, 19X2 | May 31, 19X1 |
|---|---|---|
| Grain | $ 8,211,000 | $ 8,105,000 |
| Sunflower seed | 3,101,000 | 3,020,000 |
| Supplies and materials | 4,208,000 | 3,561,000 |
| Total | $15,520,000 | $14,686,000 |

Grain purchased from patrons is included as an element of cost of sales, based on the spot market price of the grain at date of receipt. The value of grain received from patrons amounted to $16,427,000 and $15,845,000 for the years ended May 31, 19X2 and 19X1, respectively.

## C. NOTES PAYABLE TO BANK AND LONG-TERM DEBT

Notes payable to the bank consist of short-term loans from the Bank for Cooperatives. A summary of such borrowings during the years ended May 31, 19X2, and 19X1 follows.

| | May 31, 19X2 | May 31, 19X1 |
|---|---|---|
| Borrowings as of May 31 | $7,084,000 | $6,473,000 |
| Average interest rate on year-end borrowings | 15.6% | 14.7% |
| Average borrowings during the year | $8,562,000 | $7,679,000 |
| Average interest rate on borrowings during the year | 14.9% | 14.2% |
| Maximum borrowings during the year | $9,500,000 | $8,650,000 |

Long-term debt consists of the following:

| | May 31, 19X2 | May 31, 19X1 |
|---|---|---|
| Bank for Cooperatives, 12% due in varying installments through 19X9 | $6,049,000 | $ 6,367,000 |
| Commercial bank loans, at prime, 16% at May 31, 19X2, and 14.5% at May 31, 19X1, due in varying installments through 19X8 | 3,489,000 | 5,071,000 |
| | 9,538,000 | 11,438,000 |
| Less current maturities | 560,000 | 1,230,000 |
| Total | $8,978,000 | $10,208,000 |

Aggregate annual principal payments applicable to long-term debt for the five years subsequent to May 31, 19X2, are as follows.

| Year Ending May 31, | |
|---|---|
| 19X3 | $ 560,000 |
| 19X4 | 601,000 |
| 19X5 | 892,000 |
| 19X6 | 1,802,000 |
| 19X7 | 2,186,000 |
| Thereafter | 3,497,000 |
| Total | $9,538,000 |

Inventories and accounts receivable are pledged as collateral under the short-term agreements with the Bank for Cooperatives. Property, plant, and equipment with book value of $12 million, along with the investment in the Bank for Cooperatives, are pledged under the long-term agreements with the Bank for Cooperatives and a commercial bank. The long-term agreements require maintenance of $5 million of working capital and agreement with the banks on revolvement of allocated equities and assumption of additional long-term debt. Additionally, the agreements require the cooperative to invest in class C stock of the Bank for Cooperatives in amounts determined by that bank.

## D. INCOME TAXES

Income taxes consist of the following:

| | Years Ended May 31, 19X2 | 19X1 |
|---|---|---|
| Currently payable | | |
| Federal | $365,000 | $305,000 |
| State | 112,000 | 95,000 |
| Total currently payable | 477,000 | 400,000 |
| Deferred | | |
| Federal | 139,000 | 116,000 |
| State | 34,000 | 29,000 |
| Total deferred | 173,000 | 145,000 |
| Total | $650,000 | $545,000 |

A reconciliation of the statutory 46-percent tax rate to the effective tax rate for the two years is done as follows.

| | Years Ended May 31, 19X2 | 19X1 |
|---|---|---|
| Statutory expected rate | 46.0% | 46.0% |
| Patronage refunds | (35.2) | (33.7) |
| Investment tax credit | ( 4.1) | ( 5.3) |
| State taxes, net of federal benefit | 1.3 | 1.5 |
| Other | 3.4 | 4.4 |
| Effective rate | 11.4% | 12.9% |

Deferred taxes arise primarily from the use of accelerated depreciation methods for tax purposes.

## E. COMMITMENT AND CONTINGENCIES

The cooperative has signed agreements to purchase machinery and equipment costing approximately $7 million to modernize its grain-handling facilities. These purchases are to be financed by additional long-term debt with the Bank for Cooperatives.

# Statement of Position 85-3

# Accounting by Agricultural Producers and Agricultural Cooperatives

April 30, 1985

Issued by
Accounting Standards Division

American Institute of
Certified Public Accountants

AICPA

# NOTE

Statements of position of the Accounting Standards Division present the conclusions of at least a majority of the Accounting Standards Executive Committee, which is the senior technical body of the Institute authorized to speak for the Institute in the areas of financial accounting and reporting. Statements of position do not establish standards enforceable under rule 203 of the Institute's Code of Professional Ethics. However, Statement on Auditing Standards (SAS) No. 5, *The Meaning of "Present Fairly in Conformity With Generally Accepted Accounting Principles" in the Independent Auditor's Report*, as amended by SAS No. 43, *Omnibus Statement on Auditing Standards*, identifies AICPA statements of position as another source of established accounting principles the auditor should consider. Accordingly, members should be prepared to justify departures from the recommendations in this statement of position.

# Accounting by Agricultural Producers and Agricultural Cooperatives

## Introduction

1. This statement discusses accounting by agricultural producers and agricultural cooperatives that intend to present financial statements in conformity with generally accepted accounting principles. The issues discussed are —

- Accounting for inventories by producers
- Accounting for development costs of land, trees and vines, intermediate-life plants, and animals
- Accounting by patrons for product deliveries to cooperatives
- Accounting by cooperatives for products received from patrons
- Accounting for investments in and income from cooperatives

This statement does not apply to personal financial statements of agricultural producers or statements prepared on a comprehensive basis of accounting other than generally accepted accounting principles, for example, the income tax or the cash basis of accounting. This statement also does not apply to growers of timber; growers of pineapple and sugarcane in tropical regions; raisers of animals for competitive sports; or merchants or noncooperative processors of agricultural products that purchase commodities from growers, contract harvesters, or others serving agricultural producers.

### *Definitions*

2. For purposes of this statement, the following definitions apply.

*Advances.* Generally used in marketing and pooling cooperatives to denote amounts paid to patrons prior to final settlement; for example, amounts paid to patrons on delivery of crops.

*Agricultural cooperatives.* See paragraphs 6 through 22.

*Agricultural producers.* See paragraphs 3 through 5.

*Assigned amounts.* Amounts used to record products delivered by patrons of a marketing cooperative operating on a pooling basis, and the related liability to patrons if the ultimate amounts to be paid to patrons are determined when the pool is closed. These amounts may be established on the basis of current prices paid by other buyers (sometimes referred to as "field prices"), or they may be established by the cooperative's board of directors. The assigned amounts are sometimes referred to as "established values."

*Cash advance method.* A method of accounting for inventories of a marketing cooperative operating on a pooling basis. Under this method, inventories are accounted for at the amount of cash advances made to patrons. (This is sometimes referred to as the "cost advance method.")

*Commercial production.* The point at which production from an orchard, vineyard, or grove first reaches a level that makes operations economically feasible, based on prices normally expected to prevail.

*Crop development costs.* Costs incurred up to the time crops are produced in commercial quantities, including the costs of land preparation, plants, planting, fertilization, grafting, pruning, equipment use, and irrigation.

*Crops.* Grains, vegetables, fruits, berries, nuts, and fibers grown by agricultural producers.

*Exempt and nonexempt cooperatives.* Cooperatives classified according to their federal income tax status. Both types are permitted to deduct from taxable income patronage distributed or allocated on a qualified basis to patrons to the extent that the distributions represent earnings of the cooperative derived from business done with or for the patrons. In addition, cooperatives meeting the requirements of Internal Revenue Code section 521 (exempt cooperatives) are permitted to deduct (1) limited amounts paid as dividends on capital stock and (2) distributions to patrons of income from business done with the U.S. government or its agencies and income from nonpatronage sources.

*Farm price method.* A method of accounting for inventories at the sales prices in the nearest local market for the quantities that the producer normally sells less the estimated costs of disposition.

*Futures contract.* A standard and transferable form of contract that binds the seller to deliver to the bearer a standard amount and grade of a commodity to a specific location at a specified time. It usually includes a schedule of premiums and discounts for quality variation.

*Growing crop.* A field, row, tree, bush, or vine crop before harvest.

*Grove.* Fruit or nut trees planted in geometric patterns to economically facilitate care of the trees and harvest of the fruit or nuts.

*Harvested crop.* An agricultural product, gathered but unsold.

*Livestock.* Registered and commercial cattle, sheep, hogs, horses, poultry, and small animals bred and raised by agricultural producers.

*Market order prices.* Prices for raw products established by federal or state agencies.

*Marketing cooperative.* A cooperative that markets the products (crops, livestock, and so on) produced by its patrons.

*Member and nonmember (of a cooperative).* A member is an owner-patron who is entitled to vote at corporate meetings of a cooperative. A nonmember patron is not entitled to voting privileges. A nonmember patron may or may not be entitled to share in patronage distributions, depending on the articles and bylaws of the cooperative or on other agreements.

*Net realizable value.* Valuation of inventories at estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation.

*Orchard.* Fruit trees planted in geometric patterns to economically facilitate care of the trees and harvest of the fruit.

*Patron.* Any individual, trust, estate, partnership, corporation, or cooperative with or for whom a cooperative does business on a cooperative basis, whether a member or nonmember of the cooperative association.

*Patronage.* The amount of business done with a cooperative by one of its patrons. Patronage is measured by either the quantity or value of commodities received from patrons by a marketing cooperative and the quantity or value of the goods and services sold to patrons by a supply cooperative.

*Patronage allocations.* Patronage earnings distributed, or allocated, to individual patrons on the basis of each patron's proportionate share of total patronage. Such allocations, which include notification to the patron, may be made on a qualified or nonqualified basis.

*Patronage earnings.* The excess of a cooperative's revenues over its costs arising from transactions done with or for its patrons. Generally a significant portion of those earnings is allocated to the cooperative's patrons in the form of cash, allocated equities, or both.

*Pools.* Accounting control centers used for determining earnings and patronage refunds due to particular patrons.

Open pools are accounting control centers that are not closed at the end of each accounting period. Open pools are sometimes used by marketing cooperatives for crops that may not be sold for two or more years after their receipt from patrons.

A single pool cooperative determines net proceeds or patronage refunds on the basis of overall operating results for all commodities marketed during an accounting period.

A multiple pool cooperative determines net proceeds or patronage refunds on the basis of separate commodities, departments, or accounting periods.

*Progeny.* Offspring of animals or plants.

*Raised animals.* Animals produced and raised from an owned herd, as opposed to purchased animals.

*Recurring land development costs.* Costs that do not result in permanent or long-term improvements to land, for example, maintenance costs that occur annually or periodically.

*Retains.* Amounts determined on a per-unit basis or as a percentage of patronage earnings that are withheld by cooperatives from distributions and allocated to patrons' capital accounts.

*Supply cooperative.* A cooperative that supplies to its patrons goods and services used by them in producing their products.

*Unit livestock method.* Accounting for livestock by using an arbitrary fixed periodic charge. For raised animals the amount is accumulated by periodic increments from birth to maturity or disposition. For purchased animals the arbitrary fixed periodic amount is added to the acquisition cost until maturity or disposition of the animal.

*Vineyards.* Grapevines planted in patterns for commercial cultivation and production.

*Written notice of allocation.* Any capital stock, revolving fund certificate, retain certificate, certificate of indebtedness, letter of advice, or other written notice to the recipient that states the dollar amount allocated to the patron by the cooperative and the portion that constitutes a patronage dividend.

### *Agricultural Producers*

3. In this statement, farmers and ranchers are referred to as "agricultural producers," a term that includes, for example, those who raise crops from seeds or seedlings, breed livestock (whether registered or commercial), and feed livestock in preparation for slaughter. The term excludes, for example, merchants and processors of agricultural products who purchase commodities from growers, contract harvesters, or others serving agricultural producers, although they are covered by the term "agribusiness" as it is generally used. The term also excludes growers of timber and raisers of animals for competitive sports, although some of the accounting principles discussed in this statement may apply to such activities.

4. Agricultural producers use every form of business organization, from sole proprietorship to large publicly held corporation. They engage in numerous activities, for example:

- Growing wheat, milo, corn, and other grains
- Growing soybeans, vegetables, sugar beets, and sugarcane
- Growing citrus fruits, other fruits, grapes, berries, and nuts
- Growing cotton and other vegetable fibers
- Operating plant nurseries
- Breeding and feeding cattle, hogs, and sheep, including animals for wool production
- Operating dairies
- Operating poultry and egg production facilities
- Breeding horses
- Raising mink, chinchilla, and similar small animals

In addition, the operations of agricultural producers often involve various combinations of those activities. Agricultural practices and products may vary still further because of differences in temperature, soil, rainfall, and regional economics. Farm products may be used in related activities, such as the feeding of hay and grain to livestock, or they may be marketed directly by the producer. Producers often sell products in accordance with government programs or through agricultural cooperatives. Marketing strategies may include forward contracts or commodity futures contracts to reduce the risks of fluctuations in market prices.

5. Agricultural producers often borrow to finance crop development costs and the costs of acquiring facilities and equipment.

### *Agricultural Cooperatives*

6. About 7,500 agricultural cooperatives process, market, or purchase agricultural products or perform related services for producers. About 70 to 80 percent of the nation's farmers are patrons of one or more cooperatives.

7. Of the 7,500 cooperatives, about 1,700 have limited or sporadic operations. According to a 1976 study by the Cooperative Program of the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture, active cooperatives provide the following services.

| | |
|---|---|
| Supply | 2,164 |
| Marketing | 1,674 |
| Combined | 1,957 |
| Total | 5,795 |

8. In 1976 those cooperatives sold $51.8 billion of products, had total equity of $7.7 billion, and had total assets of $18.6 billion. The 1979 list of *Fortune*'s 1,000 largest industrial companies included fifteen cooperatives. Farmland Industries, Inc., the largest, was ninety-first on the list. At least fifty-five cooperatives not on the *Fortune* list had sufficient sales to be included.

9. Section 1141 (j) of the Agricultural Marketing Act of 1929, as amended, contains the following definition of a cooperative association:

> The term "cooperative association" means any association in which farmers act together in processing, preparing for market, handling, and/or marketing the farm products of persons so engaged, and also means any association in which farmers act together in purchasing, testing, grading, processing, distributing, and/or furnishing farm supplies and/or farm business services. Provided, however, that such associations are operated for producers or purchasers and conform to one or both of the following requirements:

First. That no member of the association is allowed more than one vote because of the amount of stock or membership capital he may own therein; and

Second. That the association does not pay dividends on stock or membership capital in excess of 8 per centum per annum.

And in any case to the following:

Third. That the association shall not deal in farm products, farm supplies, and farm business services with or for nonmembers in an amount greater in value than the total amount of such business transacted by it with or for members. All business transacted by any cooperative association for or on behalf of the United States or any agency or instrumentality thereof shall be disregarded in determining the volume of member and nonmember business transacted by such association.

10. A cooperative typically has the following characteristics:

*a.* Assets are distributed periodically to patrons on a patronage basis. In certain situations, however, assets in the amount of net-of-tax earnings may be accumulated by the cooperative and may or may not be allocated to patrons' accounts.

*b.* Members control the organization in their capacity as patrons and not as equity investors.

*c.* Membership is limited to patrons.

*d.* The return that can be paid on capital investment is limited.

*e.* At least 50 percent of the cooperative's business is done on a patronage basis.

11. Virtually all agricultural cooperatives meet the definition of cooperatives that is used to determine eligibility for borrowing from the banks for cooperatives and for exemption from the annual reporting requirements of the Securities and Exchange Act of 1934. Failure to meet the definition, however, does not necessarily prevent an entity from being considered as operating on a cooperative basis under subchapter T of the Internal Revenue Code.

12. The main difference between cooperatives and other business enterprises is that cooperatives and their patrons operate as single economic units to accomplish specific business purposes, such as the marketing of farm products, the purchase of supplies, or the performance of services for the benefit of the patrons. The aim is to reduce costs, increase sales proceeds, and share risks through the increased bargaining power that results from the patrons' combined resources and buying power.

13. The patron's role as an investor is secondary and incidental to his business relationship with the cooperative.

14. If certain requirements are met, the Internal Revenue Code permits cooperatives tax deductions for earnings allocated to their patrons. Earnings not so allocated are taxed at corporate income tax rates. Cooperatives may use other terms for earnings, such as "margins," "net proceeds," or "savings."

15. Another difference between cooperatives and other business corporations is that the cooperative's bylaws usually require it to distribute assets to patrons, or allocate to patrons' accounts amounts equal to its earnings, on the basis of their patronage. Distributions to patrons are different from dividend payments to stockholders in other corporations. The distribution of earnings on the basis of patronage has been termed the "price adjustment theory."

16. Under the price adjustment theory, a cooperative agrees to do business at cost. In a purchasing cooperative, for example, a patron may be charged more than cost at the time of purchase; however, the cooperative normally must return to the patron all amounts received in excess of cost, including costs of operation and processing.

17. Both exempt and nonexempt cooperatives are subject to federal income taxes on patronage earnings that are not distributed in cash or allocated on a qualified basis. Nonexempt cooperatives are subject to income taxes on earnings arising from sources other than patronage.

18. Cooperatives generally try to buy or sell at the current market price. Periodically, they determine total costs and make distributions to patrons in the form of cash, certificates, or other notices of allocation based on the excess of revenues over costs.

19. The two major types of cooperatives are supply cooperatives and marketing cooperatives. *Supply cooperatives* obtain or produce such items as building materials, equipment, feed, seeds, fertilizer, and petroleum products for their patrons. *Marketing cooperatives* provide means for agricultural producers to process and sell their products.

20. Services related to those functions are provided by some supply and marketing cooperatives; they are also provided by separate associations known as *service cooperatives*, which provide such

services as trucking, storage, accounting, and data processing. A special type of service cooperative is a *bargaining cooperative*, which serves its members by negotiating with processors on their behalf.

21. Many marketing cooperatives commingle patrons' fungible products in pools. The excess of revenues over costs for each pool is allocated to patrons on the basis of their pro rata contributions to the pool, which may be determined by the number of units delivered, the volume of product delivered, or another equitable method.

22. The members of *local cooperatives* are agricultural producers whose activities are generally centralized. The members of *federated cooperatives* are other cooperatives whose activities are regional. Some cooperatives have both individual producers and other cooperatives as members.

## Accounting for Inventories of Crops by Agricultural Producers

23. Previously existing accounting literature does not specifically cover accounting by agricultural producers, and available material is predominantly tax oriented. Accounting Research Bulletin (ARB) 43, chapter 4, provides the following information about accounting for inventories:

**STATEMENT 9**

Only in exceptional cases may inventories properly be stated above cost. For example, precious metals having a fixed monetary value with no substantial cost of marketing may be stated at such monetary value; any other exceptions must be justifiable by inability to determine appropriate approximate costs, immediate marketability at quoted market price, and the characteristic of unit interchangeability. Where goods are stated above cost this fact should be fully disclosed.

*Discussion*

It is generally recognized that income accrues only at the time of sale, and that gains may not be anticipated by reflecting assets at their current sales prices. For certain articles, however, exceptions are permissible. Inventories of gold and silver, when there is an effective government-controlled market at a fixed monetary value, are ordinarily reflected at selling prices. A similar treatment is not uncommon for inventories representing agricultural, mineral, and other products, units of which are interchangeable and have an immediate marketability at quoted prices and for which appropriate costs may be difficult to obtain. Where such inventories are stated at sales prices, they should of course be reduced by expenditures to be incurred in disposal, and the use of such basis should be fully disclosed in the financial statements.

24. Accounting Principles Board (APB) Statement 4, chapter 6, paragraph 16, states the following:

> Revenue is sometimes recognized on bases other than the realization rule. For example, on long-term construction contracts revenue may be recognized as construction progresses. This exception to the realization principle is based on the availability of evidence of the ultimate proceeds and the consensus that a better measure of periodic income results. Sometimes revenue is recognized at the completion of production and before a sale is made. Examples include certain precious metals and farm products with assured sales prices. The assured price, the difficulty in some situations of determining costs of products on hand, and the characteristic of unit interchangeability are reasons given to support this exception.

25. Accounting Research Study (ARS) 13, chapter 9, page 156, states —

> *Market as the Accounting Basis of Inventories*
>
> Exceptional cases exist in which it is not practicable to determine an appropriate cost basis for products. A market basis is acceptable if the products (1) have immediate marketability at quoted market prices that cannot be influenced by the producer, (2) have characteristics of unit interchangeability, and (3) have relatively insignificant costs of disposal. The accounting basis of those kinds of inventories should be their realizable value, calculated on the basis of quoted market prices less estimated direct costs of disposal. Examples are precious metals produced as joint products or by-products of extractive processes and fresh dressed meats produced in meat packing operations.

### *Diversity in Practice*

26. Published financial statements reveal several ways that agricultural producers account for growing crops:

- Charging costs to operations when they are incurred
- Including crop development costs in deferred charges and amortizing them
- Stating costs on the balance sheet at unchanging amounts substantially less than the costs incurred and charging all current costs to operations when they are incurred
- Deferring all costs and writing them off at harvest or, for perennial crops, over the estimated productive life of the planting

Agricultural producers report harvested crops using the farm price method, at cost (LIFO, FIFO, or average cost), and at the lower of cost or market.

Some producers use the farm price method (market) to account for inventories of harvested crops. Other agricultural producers, particularly those whose securities are publicly held, account for harvested crops at the lower of cost or market.

***Pros and Cons***

27. A study of accounting for producers' inventories involves an examination of chapter 4, statement 9, of ARB 43, which has been used as authority for accounting for producers' inventories at market.

28. Some accountants believe that many producers cannot determine costs, and some believe that market is an appropriate valuation, whether or not cost data are available. Many accountants believe that users of producers' financial statements would find them less useful if inventories were valued at the lower of cost or market.

29. Other reasons for the preference for market value are its long established use and the need to identify separately the gains and losses attributable to the production cycle and the marketing function, which is discussed in paragraph 35.

30. For most business activities, the accounting literature requires an exchange of goods or services before income is recognized. That precludes accounting for inventories of unsold goods at market unless market value is less than cost. The principal exceptions to that rule are identified in chapter 9 of ARS 13 as "metals produced as joint products or by-products of extractive processes and fresh dressed meats produced in meat packing operations." Those products have unique cost identification problems. Chapter 9 of ARS 13 further states that carrying products at market is acceptable if those products "(1) have immediate marketability at quoted market prices that cannot be influenced by the producer, (2) have characteristics of unit interchangeability, and (3) have relatively insignificant costs of disposal."

31. The first of the three conditions in ARB 43, statement 9, is the inability to determine costs. While many producers may not keep detailed cost records, costs usually either are available or can be determined with acceptable accuracy.

32. Accountants who favor accounting for producers' inventories at market recognize that ARB 43 requires an *inability* to determine appropriate approximate costs. They point out, however, that the discussion interprets the statement to apply when "appropriate costs may be *difficult* to obtain" [emphasis added]. They also note that APB Statement 4, chapter 6, refers to the "difficulty in some situations of determining costs of products" as a partial justification for the use of market price. Thus, they interpret statement 9 as allowing the use of market if costs are difficult to determine, not only if they are impossible to determine.

33. A major argument for accounting for inventories at market is the availability of established markets that provide quoted market prices for most agricultural commodities. However, because variations in grade and quantity, distance from central markets, shipping hazards, and other restrictions may affect the ultimate realization of quoted market prices for agricultural products, there are often serious difficulties in determining the market price for a given product in a given place. Also, many products have no central market with established prices, and determination of their market prices may be subjective and incapable of verification.

34. While ARS 13 does not cover inventories of agricultural products, it questions the appropriateness of accounting for inventories at market even if an established market exists. The study notes that present principles appear to allow the use of market price in accounting for inventories of precious metals if there is a fixed selling price and insignificant marketing cost regardless of whether it is practicable to determine costs. The study states —

> The apparent preferential treatment may have originally been considered appropriate because metals having fixed monetary values clearly demonstrated the "immediate marketability at quoted market prices and the characteristic of interchangeability" required in the cases in which it is impracticable to determine costs. Further question as to why preferential treatment was originally accorded to precious metals might now be considered academic. Silver no longer has a fixed monetary price, and gold has a fluctuating free market price for nonmonetary purposes. That raises questions as to whether the inventory basis for gold and silver should now be considered the same as for other metals produced as by-products or joint products.

35. Some proponents of accounting for agricultural producers' inventories at market distinguish the production of a crop from its marketing; they believe that delays in the disposal of a harvested crop are due principally to the producer's desire to sell the commod-

ities later at a higher price. They contend that, in order to separate the results of the two functions, the inventories should be accounted for at market prices after they are harvested. They point out that both functions are likely to cause significant gains and losses. Some opponents counter that the same argument can be made for many nonagricultural enterprises that are not permitted to recognize income at the end of production.

36. The securities of most agricultural producers are not traded publicly, and their financial statements are prepared primarily for management and lenders. Advocates of the use of market prices contend that lenders are concerned with the market price of inventories to be used as collateral. Moreover, most producers are not required to use cost information for income tax purposes. Thus, some accountants argue that determining cost for financial statements is an unproductive additional burden to the producer. Conversely, cost advocates point out that both public and nonpublic producers require long-term financing, and cost-basis financial statements may provide better information for those purposes.

37. Some accountants believe that it is difficult to argue persuasively for charging the periodic costs of growing crops to expense as they are incurred since a valuable asset is being developed. Some contend that the use of a fixed amount less than cost violates existing principles of accounting for assets. Others believe it is acceptable and consistent with a market basis of accounting to account for growing crops at net realizable value or at no value.

### *Division Conclusions*

38. All direct and indirect costs of growing crops should be accumulated and growing crops should be reported at the lower of cost or market.

39. An agricultural producer should report inventories of harvested crops held for sale at (a) the lower of cost or market or (b) in accordance with established industry practice, at sales price less estimated costs of disposal, when all the following conditions exist:

- The product has a reliable, readily determinable and realizable market price.
- The product has relatively insignificant and predictable costs of disposal.
- The product is available for immediate delivery.

## Accounting for Development Costs of Land, Trees and Vines, Intermediate-Life Plants, and Animals

40. Development costs of land, trees and vines, intermediate-life plants, and animals are different from costs incurred in raising crops for harvest, which were discussed in the previous section, "Accounting for Inventories of Crops by Agricultural Producers."

41. Land development generally includes improvements to bring the land into a suitable condition for general agricultural use and to maintain its productive condition. Some improvements are permanent; some have a limited life. Permanent land developments include, for example, clearing, initial leveling, terracing, and construction of earthen dams; they involve changes to the grade and contour of the ground and generally have an indefinite life if they are properly maintained. Limited-life developments usually include such items as water distribution systems and fencing and may also include the costs of wells, levees, ponds, drain tile, and ditches, depending on the climate, topography, soil conditions, and farming practices in the area.

42. Orchards, vineyards, and groves generally develop over several years before they reach commercial production. Production continues for varying numbers of years, depending on such influences as type of plant, soil, and climate. During development, the plants normally require grafting, pruning, spraying, cultivation, or other care.

43. Intermediate-life plants have growth and production cycles of more than one year but less than those of trees and vines. They include, for example, artichokes, various types of berries, asparagus, alfalfa, and grazing grasses. Development costs of intermediate-life plants include the cost of land preparation, plants, and cultural care until the plant, bush, or vine begins to produce in commercial quantities.

44. The terms *livestock* and *animals* are used interchangeably and are meant to include cattle, sheep, hogs, horses, poultry, and other small animals. The development of animals requires care and maintenance of the breeding stock and their progeny until their transfer from the brood herd. Animals purchased before maturity also require care and maintenance to ready them for productive use or sale. The animals are ultimately identified for transfer to breeding

herds, dairy herds, or other productive functions, are selected for sale, or are transferred to a feeding or other marketing operation.

### *Diversity in Practice*

45. Development costs of land, trees and vines, intermediate-life plants, and animals are accounted for in the following ways:

- Charged to operations when they are incurred
- Included in deferred charges
- Included on the balance sheet at fixed amounts substantially less than the costs incurred, with all or a majority of the current costs charged to operations as they are incurred
- Capitalized and amortized over the estimated productive life of the animal, tree, vine, or plant
- Carried at market values

46. In the case of annual field crops that are planted and harvested in the same accounting period, producers generally match costs with revenues. When the growing cycle continues beyond the accounting period, costs often are not matched with revenues.

47. Few significant diversities of practice are apparent in the financial statements primarily because of lack of disclosure. However, some agricultural producers charge land development costs to expense based on provisions of the income tax laws.

48. In accounting for development costs of trees and vines, some producers agree that the costs should be capitalized and depreciated over the expected productive life, but the costs to be capitalized and those to be charged to expense are not identified uniformly. Income tax concepts have had a strong influence on accounting practices for those development costs.

49. Crops from intermediate-life plants have generally been accounted for in the same way as annual crops, with no distinctions for variations in the periods of development and productivity.

50. Many livestock producers charge the costs of developing animals to expense without regard to their productive lives or future use or sales value. Animals are sometimes reported at cost and other times at market values. Some producers use the unit livestock method, and in many instances, the annual unit cost increments are below market and probably below cost.

### *Pros and Cons*

51. Some accountants believe that large-scale improvements that transform the land to new and better uses are permanent land improvements to be capitalized and that subsequent modifications and improvements are necessary and should be classified as period expenses.

52. Others believe that it is difficult, or nearly impossible, to distinguish between permanent, limited-life, and recurring land development costs. Land improvements that an owner has made over many years tend to lose their original characteristics. Such improvements are usually accompanied by increasingly intensive land use over relatively long periods. Prior improvements are modified, improved on, or eliminated, and the resulting land configuration and use are noticeably changed. The characteristics of continuing land improvements accomplished over long periods are given as justification for classifying those costs as recurring.

53. Many accountants believe that all direct and related indirect costs of land development, such as leveling, clearing of brush, terracing, and installation of drain tile, should be capitalized. They further believe that land development costs that waste away or diminish in efficiency through use, such as drainage tile, should be depreciated or amortized over the number of seasons that the land can reasonably be expected to produce without renovation or renewal of the particular development.

54. It is generally agreed that development costs of orchards, vineyards, and groves should be capitalized, but there is no agreement on the specific costs that should be capitalized. Many believe it necessary to capitalize only those costs that the income tax laws require to be capitalized.

55. Some accountants believe that all direct and indirect costs for orchards, vineyards, and groves incurred during the development period should be capitalized until commercial production is achieved. Others believe all such costs, except annual maintenance costs, should be capitalized. All agree that capitalized costs should be depreciated or amortized over the useful life of the plantings.

56. Accounting practices for development costs of intermediate-life plants are inconsistent. Producers who deduct expenses before revenues are realized for intermediate-life plants and orchardists and vineyardists who do not want to capitalize develop-

ment costs and depreciate them over the estimated productive life of the developed asset are motivated by the same reasons. The question of capitalization and depreciation is similar for producers of intermediate-life plants and for producers of trees and vines. The principal distinctions are in development period and productive life. For example, orchard trees may require four to seven years before nominal production, while limited production may occur during the first year of such crops as alfalfa, some berries, and asparagus.

57. Some accountants have resisted accumulating development costs for growing animals, based on the difficulty and expense of accumulating such information and, in some instances, the problem of identifying individual animals or groups and categories of animals. Instead of cost, the unit livestock method or a market value has been used for assigning amounts to the animals at each level of maturity in the belief that such accounting methods, if consistently applied, would not adversely affect income recognition.

58. Others believe that all direct and indirect development costs of raising livestock should be accumulated and capitalized until the livestock have reached maturity and have been selected for breeding or other productive purposes. Many believe that income-producing livestock should be depreciated on the basis of their expected productive lives.

### Division Conclusions

59. Permanent land development costs should be capitalized and should not be depreciated or amortized, since they have, by definition, an indefinite useful life.

60. Limited-life land development costs and direct and indirect development costs of orchards, groves, vineyards, and intermediate-life plants should be capitalized during the development period and depreciated over the estimated useful life of the land development or that of the tree, vine or plant.

61. All direct and indirect costs of developing animals should be accumulated until the animals reach maturity and are transferred to a productive function. At that point the accumulated development costs, less any estimated salvage value, should be depreciated over the animals' estimated productive lives.

62. All direct and indirect development costs of animals raised for sale should be accumulated, and the animals should be

accounted for at the lower of cost or market until they are available for sale. Agricultural producers should report animals available and held for sale (*a*) at the lower of cost or market or (*b*) in accordance with established industry practice at sales price, less estimated costs of disposal, when all of the following conditions exist:

- There are reliable, readily determinable and realizable market prices for the animals.
- The costs of disposal are relatively insignificant and predictable.
- The animals are available for immediate delivery.

## Accounting for Patrons' Product Deliveries to Marketing Cooperatives Operating on a Pooling Basis

63. Agricultural marketing cooperatives process and market their patrons' products. There are frequently good bases for recording transfers of products between cooperatives and their patrons. For example, dairy cooperatives record transfers of products on the basis of market order prices, and grain cooperatives record transfers of products on the basis of readily determined cash prices. Many cooperatives, therefore, transfer patrons' products at market prices, and the transactions are treated as purchases by the cooperatives and as sales by the patrons.

64. However, cooperatives operating on a pooling basis may receive products from their patrons without paying a fixed price to the patrons. A cooperative may assign amounts to products based on current prices paid by other buyers or on amounts established by the cooperative's board of directors, or it may assign no amount. The cooperative estimates a liability to patrons equal to the assigned amount for the delivered product, and it usually pays this liability on a short-term basis. The excess of revenues over the assigned amounts and operating costs at the end of a pool period, which may be a week, a month, a year, or longer, is paid or allocated to patrons. Assets equal to that excess may be distributed to the patrons or retained by the cooperative.

65. The different accounting methods used by pooling cooperatives have been developed to satisfy provisions of their bylaws and

contractual arrangements with patrons and to provide equitable methods of settlement from pool period to pool period, as well as among the various classes of patrons. For pooling cooperatives, accounting methods have been developed to allow the use of the single-pool or multiple-pool methods of accounting.

### *Diversity in Practice*

66. Significant information about the accounting practices of patrons in recording the delivery of raw products to marketing cooperatives is scarce. Among the practices used are recognition (1) at the estimated net return, presumably at the time of delivery, and (2) at the time of sale by the cooperative to an outside party. Those two examples provide the extremes, one recognizing the delivery to the cooperative as a sale and the other continuing to carry the product as inventory of the producer until it is sold by the cooperative. Transfer prices for products delivered to cooperatives are established in diverse ways:

- At market order price or governmental support price
- At market price
- At an assigned amount determined by the cooperative's board of directors to approximate market price
- At the amount of advances
- At cost to the producer
- At no amount until the cooperative advises the producer of the expected proceeds from the ultimate disposition of the product

67. Cooperatives that receive products from patrons and pay their patrons a firm market price, at or shortly after delivery, treat the payments as purchases. In those situations the prices are paid regardless of the amount of the cooperatives' earnings. Those cooperatives normally report inventories at the lower of cost or market. However, pooling cooperatives estimate amounts due to patrons at the time of delivery, and those amounts are later adjusted on the basis of the pool's earnings. This presents a significant accounting problem. The following paragraphs discuss only the accounting issues that result from deliveries of products by patrons to cooperatives operating on a pooling basis.

68. In cooperatives operating on a pooling basis, products delivered by patrons are commingled with other patrons' products, processed, and marketed. Earnings from the sale of finished products are returned to patrons, either in cash or in some form of equity, whether or not those earnings were determined on the basis of current market prices at the time of delivery. Many cooperatives value patrons' products at assigned amounts (usually current market prices) set by the board of directors at delivery. A corresponding estimated liability is accrued for amounts due to patrons. At the end of the pool period, the pool's net earnings are credited to amounts due patrons on a patronage basis.

69. Some cooperatives cannot determine the market prices of patrons' products when they receive them because of limited cash purchases by other processors. They are usually cooperatives that process and market a high percentage of limited specialty crops. Many of those cooperatives account for inventories of goods in process and finished goods at net realizable value, determined by deducting estimated completion and disposition costs from the estimated sales value of the processed inventory, because a reliable price for the unprocessed product is not available to account for inventories at the lower of cost or market. Furthermore, many cooperatives must determine net realizable value to comply with bylaw provisions and contractual obligations and to facilitate equitable pool settlements from pool period to pool period and among various classes of patrons.

70. A 1973 survey by the National Council of Farmer Cooperatives indicated that many marketing cooperatives use net realizable value to account for inventories. An excerpt from an article on this subject prepared for the council's legal, tax, and accounting committee appears below.

> The National Council of Farmer Cooperatives made a survey of the inventory valuation methods used by its marketing cooperatives. The results of this survey confirm what has been the private belief of most cooperative accountants, that the net realizable market value method is perhaps the most widely used and accepted method of inventory valuation by marketing cooperatives. This survey reflects the responses of 49 cooperatives and, in summary, indicates that the following inventory methods are in use.

| Method | Cooper-atives | Sales (In Thousands) | % of Total Sales |
|---|---|---|---|
| Net realizable market value | 24 | $2,310,938 | 48% |
| Lower of cost or market, using field price as the established value of raw product | 8 | 630,898 | 13 |
| Net realizable market value and lower of cost or market, using field price as the established value of raw product | 5 | 802,867 | 17 |
| Cost | 2 | 53,400 | 1 |
| Rev. Rul. 69-67* | 7 | 367,469 | 8 |
| Other | 3 | 621,925 | 13 |
| | 49 | $4,787,497 | 100% |

*Note: Rev. Rul. 69-67 refers to the cash advance method.

71. The net realizable value method of accounting for inventories permits the recognition of the pool's estimated net earnings at the end of the fiscal period in which the patrons supply their crops to the cooperative or when pools are closed. Inventories are stated at net realizable value, and the amounts due to patrons are credited with the earnings. The net realizable value method of accounting for inventories permits the closing of the pools and provides equitable treatment to patrons if the cooperative transfers the inventories forward to the next period's pool at estimated market value.

72. Some marketing cooperatives receive products from patrons without assigning amounts to them. During the year, cash is advanced to patrons on the basis of anticipated earnings. Inventories are recorded at amounts advanced plus costs of processing, and patrons' products are valued at the amount of advances made to the date of the financial statements. This is commonly called the "cash advance method."

### Authoritative Literature

73. The primary source of authoritative guidance for accounting for inventories that result from deliveries of products by patrons to cooperatives has been ARB 43.

### *Pros and Cons*

74. A transaction is usually completed when a patron delivers his product to a cooperative. The patron's product is commingled with that of other patrons, and title and individual risk of loss have passed. Some accountants believe that no accounting is necessary at the time of delivery because the transfer price is frequently not known until some later date. Nevertheless, accrual basis accounting calls for reporting the transaction according to the best information available at the time. While greater accuracy may be achieved by waiting for the cooperative to advise the patron of the net proceeds, the handicap of not having current financial information could outweigh the benefit of greater accuracy, and the lack of consistency in reporting could be confusing to the users of the financial statements.

75. Some accountants argue that pooling cooperatives should not use an assigned amount for products received from patrons for financial accounting and reporting purposes because the amounts may not be reliable and the patrons may be paid more or less than that amount at the end of the pool period. Others argue that the use of an assigned amount permits the establishment of a tentative liability due patrons and allows inventories to be stated at the lower of cost or market. The method also facilitates allocation of pool proceeds to patrons.

76. Some accountants believe that the net realizable value method of accounting for inventories is unacceptable because it anticipates cooperative earnings. Further, they believe that future selling prices and disposition costs are too uncertain to base accounting on them. Alternatively, those who favor the use of the net realizable value method believe that the problems of determining net realizable value do not differ from those of determining market under the lower of cost or market method. They also consider the method to be acceptable in accounting for pools because it enables the cooperative to settle pools annually and to comply with bylaw provisions and contractual obligations. In essence, they claim, the inventory is transferred to the next period's pool on an equitable basis.

77. Some accountants believe that cooperatives may record products received from patrons at assigned amounts and then account for the inventories at net realizable value. That method permits the closing of pools at least annually on an equitable basis. Others believe that, if assigned amounts are used on receipt of the

product, the inventories should be accounted for at the lower of cost or market.

78. Some accountants favor the cash advance method of accounting for inventories. They believe that the only product cost that should be accounted for is the total of cash advanced to patrons to the date of the financial statements, because the cooperative has no liability to pay more unless more is earned. Others favor the cash advance method because the Internal Revenue Service has held in several rulings that pooling cooperatives should use that method in tax computations. Others reject the cash advance method because advances to patrons are primarily determined on availability of cash, the percentage of the pool production sold to the date of the financial statements, and short-term inventory loan restrictions rather than on the value of products received. Further, they reject the method because the amount and timing of advances are generally subject to the board of directors' action and may vary from period to period.

### *Division Conclusions*

#### *Accounting by Patrons for Products Delivered to Pooling Cooperatives*

79. If control over the future economic benefits relating to the product has passed, which ordinarily is evidenced by the transfer of title, and if a price is available by reference to contemporaneous transactions in the market, or if the cooperative establishes an assigned amount, a delivery to the cooperative should be recorded as a sale by the patron at that amount on the date of delivery. If there is a reasonable indication that the proceeds from the cooperative will be less than the market price or the assigned amount, the lower amount should be used.

80. If control over the future economic benefits relating to the product has passed, which ordinarily is evidenced by the transfer of title, and there are neither prices determined by other market buyers nor amounts assigned by the cooperative, or if such amounts are erratic, unstable, or volatile, the patron should record the delivery to the cooperative as a sale at the recorded amount of the inventory and should record an unbilled receivable. If there is a reasonable indication that the proceeds from the cooperative will be less than the receivable, the lower amount should be used.

81. If title has not passed, the identity of the individual patron's product is maintained by the cooperative, and the price to the

patron is to be based on the identified product's sale, the transaction is not complete, and the product should be included in the patron's inventory until it is sold by the cooperative, at which time the patron should record the sale.

82. Advances are financing devices and should be treated as reductions in the unbilled receivable and should not be used as amounts for recording sales.

### *Accounting by Pooling Cooperatives for Products Received From Patrons*

83. If the boards of directors of agricultural marketing cooperatives operating on a pooling basis with no obligation to pay patrons fixed prices (pooling cooperatives) assign amounts that approximate estimated market to unprocessed products received from patrons, the assigned amounts are cost and should be charged to cost of goods sold and credited to amounts due patrons. The inventories should be accounted for at the lower of cost or market or, as described more fully in paragraph 84, at net realizable value. When assigned amounts are used, they should approximate estimated market of unprocessed products delivered by patrons (an example of inventories at lower of cost or market is provided in the Appendix, column A). The method used and the dollar amounts assigned to members' products should be disclosed.

84. If the boards of directors of pooling cooperatives assign amounts to products received from patrons, the cooperatives should use those assigned amounts in determining the estimated amounts due patrons. Such cooperatives may use net realizable value for determining pool proceeds, transferring inventory amounts to subsequent pools, or for other purposes (an example is provided in the Appendix, column B). The method used and the dollar amounts assigned to members' products should be disclosed.

85. If the boards of directors of pooling cooperatives do not assign amounts that approximate market to unprocessed products received from patrons, the cooperatives should account for inventories at net realizable value (an example is provided in the Appendix, column C). Because amounts that approximate estimated market are not assigned to products received from patrons, cost of goods sold will not include a charge for unprocessed products under this method.

86. Pooling cooperatives should not use the cash advance method to account for inventories.

## Accounting for Investments in and Income From Cooperatives

87. Member patrons of cooperatives can be producers or other cooperatives. Member patrons provide most of the capital required by cooperatives. The capital usually represents long-term investments acquired through initial cash investments, retains, or noncash patronage allocations. Voting rights for those investments are usually based on one-member-one-vote or limited weighted voting rather than on the number or amount of securities or other evidence of equity ownership held. The investments are made primarily to obtain an economical source of supply or marketing services and not on the expectation of a return on investment. The sale of such investments, other than back to the issuing cooperative, is usually restricted or prohibited.

### *Diversity in Practice*

88. Investments in cooperatives are generally carried by producers at cost, at cost plus declared retains, at cost plus estimated retains, or at an amount less than cost.

89. Most cooperatives carry their investments in other cooperatives at cost if they are purchased or at face amount if they are received in other than purchase transactions (retains or noncash patronage allocations). However, they usually write the investments down to estimated net realizable value if evidence indicates they will be unable to recover the full carrying amount of the investments. That practice has been endorsed in Accounting Research Bulletin 2, issued by the National Society of Accountants for Cooperatives, which states —

> Investments in cooperatives made by user patrons for the purpose of providing capital for operations of the investee cooperative should be carried at cost, if purchased, or at face value if received in transactions other than purchases such as non-cash patronage dividends. Such investments should be written down to an appropriate amount if reliable evidence indicates that their value has been permanently impaired.
>
> It should be noted that in most instances accounting for investments in other cooperatives (including banks for cooperatives and other

cooperative financing organizations, such as the National Rural Utilities Cooperative Finance Corporation) on the basis outlined above results in investment carrying values equal to the equity values of the investing cooperative's interest in the investee cooperatives; therefore, it would appear that the basis outlined complies with APB Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock," to the extent that the intent of the opinion is applicable to investments of cooperatives. In the infrequent instances where the investor's share of unallocated retained earnings of an investee cooperative is material to the investor, the principles set forth in APB Opinion No. 18 should be applied.

90. Cooperatives that invest in other cooperatives usually recognize allocated equities in the cooperative investor's fiscal year within which written notice of allocation is received, and the investment is carried at cost plus allocated equities. That method of revenue recognition conforms with federal income tax requirements. It is the most practical method of reporting because many investee cooperatives issue financial statements and determine patronage allocations only at the close of their accounting years. Many cooperatives do that because they find determination of patronage allocations to be complex and time consuming, since their operations may include both marketing and supply functions, as well as several departments under each function.

91. Diversity in practice has developed in accounting for unallocated equities. Some patrons who hold at least a 20 percent ownership interest recognize their interest in unallocated equities in accordance with APB Opinion No. 18. Others do not recognize unallocated equities, primarily because the equity ownership percentage changes according to patronage and because voting is usually based on the one-member-one-vote principle, which does not necessarily provide significant influence. Interpretation and application of APB Opinion No. 18 may become more significant in financial reporting for cooperatives because 1978 changes in the Internal Revenue Code, relating to the investment tax credit, may encourage cooperatives to reduce distributions of assets to patrons and increase unallocated net after-tax earnings for the purchase of assets.

92. Most patrons recognize their patronage allocations when they are notified, which conforms with federal income tax reporting requirements. Other patrons accrue patronage allocations on the basis of the cooperatives' interim financial statements.

93. Presentation of patronage allocations in patrons' financial statements is also diverse. Some patrons recognize patronage allocations as reductions of purchase or interest costs on purchases from supply or financing cooperatives or as increases in sales for deliveries to marketing cooperatives. Other patrons recognize all patronage allocations as nonoperating income.

### Authoritative Literature

94. Authoritative literature on marketable investments — Statement of Financial Accounting Standards No. 12, *Accounting for Certain Marketable Securities,* and FASB Interpretation No. 16, *Clarification of Definitions and Accounting for Marketable Equity Securities That Become Nonmarketable* — has little applicability to investments in cooperatives. Investments in cooperatives are not equity securities and usually are not readily marketable, and transfer or sale, other than back to the issuing cooperative, is usually restricted or prohibited. Current accounting literature supports the carrying of long-term investments, such as nonmarketable investments in agricultural cooperatives, at cost if the value of the investments is not impaired. Carrying amounts are reduced when the investor becomes unable to recover the full carrying amounts. APB Opinion No. 18 requires the equity method of accounting for investments in which the investor has significant influence over an investee's operating and financial policies.

95. The significance of investments by patrons results primarily from the purchasing or marketing rights and participation in the operating earnings. As such, the operations of cooperatives have many of the attributes of corporate joint ventures or partnerships.

### Pros and Cons

96. Some accountants argue that the investment in a cooperative is in substance a long-term investment and, as such, should be carried at cost or at cost plus allocated equities. Others believe that the investments should be discounted to their present value. The carrying amounts would be adjusted downward as required by generally accepted accounting principles when the patron becomes unable to recover the full carrying amounts.

97. Those that support discounting of investments in cooperatives to present value believe that it results in satisfactory presentation in the financial statements because allocated equities are usually not redeemed or are redeemed over a long period. However, others believe that patrons contribute amounts to cooperatives not as investments but to obtain supply or marketing sources, and the allocated equities represent a proportionate share of the cooperative's earnings for the period of patronage. That is similar to accounting for equities in partnerships or corporate joint ventures, in which undistributed earnings are recognized for accounting purposes on the same basis as for federal income tax reporting. Proponents of the stated amount method also believe that it produces symmetry, since the investee records the issuance of securities or book credits at par or face amounts rather than on the basis of discounted values. They argue further that the method conforms with the underlying price-adjustment theory of cooperatives, which holds that such allocated equities are merely reductions of the cost of supply purchases or increases in the proceeds of products marketed through the cooperative and that they should therefore be reflected in the patrons' results of operations.

98. Accountants who believe that a cooperative's unallocated losses should not be recognized by the patrons base their contention on the premise that operating losses may indicate temporary rather than permanent declines in value because they may result from identifiable, isolated, or nonrecurring events. Accordingly, they should not be recognized. Furthermore, because many investor cooperatives determine patronage allocations on the basis of financial statement reporting rather than federal income tax reporting, some accountants argue that financial statement recognition by investor cooperatives of unallocated losses will cause the payment of federal income taxes by the investor cooperative that would not otherwise be payable and such taxes will not be recoverable if the losses are later allocated. That adverse effect is the result of federal income tax regulations that limit the patronage refund deduction to the lesser of the patronage refund "paid" and the patronage refund "allowable," as determined in accordance with federal income tax rules and regulations.

99. Those who believe that unallocated losses should be recognized argue that patrons must recognize allocated losses for consistent reporting, much as if the investment were in a corporate joint

venture or partnership rather than a cooperative. They further contend that failure to recognize unallocated losses permits manipulation of earnings because patrons often serve on the cooperative's board of directors or can influence the board of directors, which has the authority to determine the portions, if any, of the losses that will be allocated to patrons.

100. Accountants who believe that unallocated equities should not be recognized by the patrons generally contend that APB Opinion No. 18 does not apply because equity ownership generally does not convey voting control and because ownership interests in unallocated equities may be temporary, being subject to changes in patronage participation and the redemption of equities. However, others argue that APB Opinion No. 18 should apply to all investments in cooperatives in which the patrons hold at least 20 percent of the equity securities, regardless of the one-member-one-vote requirement and the fact that ownership interests may change. They believe that the patron frequently has significant influence due to patronage volume, assured representation on the board of directors, or other means.

101. Some accountants believe that patronage allocations should be recognized in the accounting period in which the supply is purchased or the product is marketed, since those transactions are the source of the patronage allocations and are adjustments of the price at which the supply is purchased or the product marketed. Others believe that the accrual of estimated patronage allocations is impractical because many cooperatives do not determine patronage allocations during interim periods and the amount of the allocations usually cannot be determined from the cooperatives' interim financial statements. Further, existing federal income tax rules and regulations, as well as the bylaws of most investee cooperatives, require the investee's patronage allocations to be included in taxable income in the period the investor is notified of the patronage allocation. This requirement may cause adverse tax effects for investors.

102. Some accountants argue that allocated and unallocated equities should be reflected in the statement of operations as reductions of costs or increases in proceeds because such amounts result from the transactions by which supplies are purchased, interest is paid, or products are sold. Accordingly, the proponents believe that the equities should be reported in the same manner as the original

transactions to report sales, cost of sales, and operating expenses. Other accountants believe that the allocations should be reported as other income rather than as increases or decreases in sales, cost of sales, or operating expenses; they argue that including the allocations in sales, cost of sales, or operating expenses could misstate gross profit or expenses.

***Division Conclusions***

103. Investments in cooperatives should be accounted for at cost, including allocated equities and retains. The carrying amount of an investment in a cooperative should be reduced if the patron is unable to recover the full carrying value of the investment. Losses unallocated by the investee may indicate such an inability, and, at a minimum, the excess of unallocated losses over unallocated equities should be recognized by the patron based on the patron's proportionate share of the total equity of the investee cooperative, or any other appropriate method, unless the patron demonstrates that it is probable that the carrying amount of the investment in the cooperative can be fully recovered.

104. Patrons should recognize patronage refunds either —

*a.* When the related patronage occurs if it is then probable that (1) a patronage refund applicable to the period will be declared, (2) one or more future events confirming the receipt of a patronage refund are expected to occur, (3) the amount of the refund can be reasonably estimated, and (4) the accrual can be consistently made from year to year or

*b.* On notification by the distributing cooperative.

The accrual should be based on the latest available reliable information and should be adjusted on notification of allocation.

105. Either (1) the classification of the allocations in the financial statements should follow the recording of the costs or proceeds or (2) the allocations should be presented separately.

## Effective Date and Transition

106. The Accounting Standards Division recommends application of this statement to financial statements prepared for fiscal years, and interim periods in such fiscal years, beginning after June 15, 1985. Accounting changes to conform to the recommendations of this statement should be made prospectively for transactions or activities occurring on or after the effective date of this statement. Application for earlier years, including retroactive application, is encouraged for all transactions or activities regardless of when they occurred. Disclosures should be made in the financial statements in the period of change in accordance with APB Opinion No. 20.

# APPENDIX

## Accounting by Pooling Cooperatives for Products Received From Patrons

The following illustrates the statement of net earnings prepared under each of two possible methods of accounting for inventories (columns A and B), the statement of net proceeds prepared under the net realizable value method (column C), and the respective statements of amounts due patrons, if such latter statement is included in the financial statements. (See paragraphs 83, 84, and 85.) Column A demonstrates the lower of cost or market method with patrons' raw product being charged to cost of production at assigned amounts. Column B demonstrates the net realizable value method with patrons' raw product being charged to cost of production at assigned amounts. Column C demonstrates the net realizable value method when no amounts are assigned to patrons' raw product; therefore, there is no charge to cost of production for patrons' raw product. The assumed facts are as follows:

| | |
|---|---|
| Sales | $129,630 |
| Beginning inventory | |
| Net realizable value | 31,128 |
| Lower of cost or market | 28,380 |
| Assigned value of patrons' raw product received | 56,500 |
| Ending inventory | |
| Net realizable value | 35,596 |
| Lower of cost or market | 32,360 |
| Income taxes | 1,250 |
| Other costs and expenses | 56,580 |
| Amounts paid to patrons, retains, and non-patronage earnings | 74,430 |
| Amounts due patrons at beginning of year | |
| Lower of cost or market method | 8,910 |
| Net realizable value method | 11,748 |

## Statements of Net Earnings (columns A and B)
## Statement of Net Proceeds (column C)

| | Inventories Valued At | | |
|---|---|---|---|
| | Lower of Cost or Market—A | Net Realizable Value—B | Net Realizable Value—C |
| Sales | $129,630 | $129,630 | $129,630 |
| Costs and expenses (I) | 109,100 | 108,702 | 52,202 |
| Earnings before income taxes | 20,530 | 20,928 | — |
| Proceeds before income taxes | — | — | 77,428 |
| Income taxes | 1,250 | 1,250 | 1,250 |
| Net earnings | $ 19,280 | $ 19,678 | |
| Net proceeds | | | $ 76,178 |

| | | | |
|---|---|---|---|
| I. Beginning inventory | $ 28,380 | $ 31,218 | $ 31,218 |
| Assigned value of patrons' raw product received | 56,500 | 56,500 | — |
| Ending inventory | (32,360) | (35,596) | (35,596) |
| Other costs and expenses | 56,580 | 56,580 | 56,580 |
| | $109,100 | $108,702 | $ 52,202 |

## Statements of Amounts Due Patrons

| | Inventories Valued At | | |
|---|---|---|---|
| | Lower of Cost or Market—A | Net Realizable Value—B | Net Realizable Value—C |
| Amounts due patrons at beginning of year | $ 8,910 | $ 11,748 | $ 11,748 |
| Net earnings | 19,280 | 19,678 | — |
| Net proceeds | — | — | 76,178 |
| Assigned value of patrons' raw product received | 56,500 | 56,500 | — |
| | 84,690 | 87,926 | 87,926 |
| Less amounts paid to patrons, retains, and non-patronage earnings | 74,430 | 74,430 | 74,430 |
| Amounts due patrons at end of year | $ 10,260 | $ 13,496 | $ 13,496 |

Under the two inventory methods presented, the difference in amounts due patrons at the end of the year results from the difference in the ending inventory valuations, illustrated as follows:

| | |
|---|---|
| Inventories of finished goods and goods in process at: | |
| Net realizable value | $35,596 |
| Lower of cost or market | (32,360) |
| | 3,236 |
| Amounts due patrons at end of year on lower of cost or market basis | 10,260 |
| Amounts due patrons at end of year on net realizable value basis | $13,496 |

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## GLOSSARY

**Abnormal costs.** Those costs above normal costs (which can be defined as an acceptable standard of achievement under ordinary operating conditions).

**Advances.** Generally used in marketing cooperatives to denote amounts paid to patrons prior to final settlement. For example, amounts paid to patrons on delivery of crops.

**Agricultural cooperatives, exempt and nonexempt.** Cooperatives classified according to their federal income tax status. Both types are permitted to deduct from taxable income the patronage earnings distributed or allocated on a qualified basis to patrons to the extent that the distributions represent earnings of the cooperative derived from business done with or for the patrons. In addition, cooperatives meeting the requirements of IRC section 521 (exempt cooperatives) are permitted to deduct (1) limited amounts paid as dividends on capital stock and (2) distributions to patrons of income from business done with the U.S. government or its agencies as well as income from nonpatronage sources.

**Annual.** A crop that completes its life cycle, from seed to mature plant, in one growing season.

**Anticipatory hedge.** The use of commodity futures contracts to minimize risk from price fluctuations for an expected transaction. For example, a producer who is committed to growing a crop or raising livestock and wishes to fix the sales price may use an anticipatory hedge.

**Assigned amounts.** Amounts used to record products delivered by patrons of a marketing cooperative operating on a pooling basis, and the related liability to patrons, if the ultimate amounts to be paid patrons are determined when the pool is closed. These amounts may be established on the basis of current prices paid by other buyers (sometimes referred to as <u>field prices</u>), or they may be assigned by the cooperative's board of directors. The assigned amounts are sometimes referred to as <u>established values</u>.

**Base capital plan, revolving capital plan.** Plans designed to require capital investment by cooperative members in proportion to each member's current use of the cooperative. A base capital plan is usually funded over a specific period of time with an established amount of investment required each year. Capital investment is evidenced by the issuance of capital certificates (qualified or nonqualified written notices of allocation) in lieu of cash payments to members. These certificates are typically redeemed in series according to year of issue, with the earliest years first. The revolving cycle is determined by the board of directors on the basis of current capital requirements.

**Bed.** An area of ground prepared for seeding or planting.

**Breeding herd.** A group of animals used for breeding purposes.

**Broiler chickens.** Chickens produced for slaughter.

**Capital certificates (revolving fund certificates, capital-retain certificates).** Amounts withheld by cooperatives from distributions of net earnings, credited to the patron's account, and usually revolved over a specific number of years.

**Cash advance method (cost advance method).** A method of accounting for inventories of a marketing cooperative operating on a pool basis. Under this method, inventories are accounted for at the amount of cash advances made to patrons.

**Cash or spot price.** The price at which commodities available for immediate delivery are currently selling.

**Commercial herd.** A breeding herd used to produce standard quality animals without emphasis on any particular breed or bloodlines.

**Commercial production.** The point at which production from an orchard, vineyard, or grove first reaches a level that makes operations economically feasible based on prices normally expected to prevail.

**Commodity.** An agricultural product, such as wheat or sugar.

**Consent.** Refers to the patron's agreement to report cash and noncash distributions from cooperatives for income tax purposes. Consents are required in order for the cooperative to deduct patronage distributions for income tax purposes.

**Cover.** The purchase (or sale) of a futures contract for a particular commodity to offset a previously established short (or long) position.

**Crop(s).** Grains, vegetables, fruits, berries, nuts, and fibers grown by agricultural producers. The term is also used to refer to a calf crop.

**Crop development costs.** Costs incurred up to the time crops begin to be produced in commercial quantities, including the costs of land preparation, plants, planting, fertilization, grafting, pruning, equipment use, and irrigation.

**Crop year.** Generally the period from the harvest of a crop to the corresponding period in the following year. When used in connection with commodity markets, the term assumes a more specific meaning. For example, the U.S. crop year for wheat begins on July 1 and for cotton it begins on August 1.

**Crossbreed.** An animal that is the product of two different breeds. Sometimes used to denote generations, as in first cross, second cross, and so on.

**Cross hedge.** The use of a commodity traded on a commodity futures market to hedge a commodity for which there is no such market. The practice is acceptable if there is a clear economic relationship between the two commodities, such as when the futures price of the substitute commodity moves in tandem with the cash price of the commodity being hedged.

**Deep-ripping.** To split open the ground in a field at a depth greater than normal plowing so that air, water, and chemicals can penetrate.

**Earmark (eartag).** A mark put on any animal as a means of identification. Traditionally accomplished by cutting away portions of the ear in a predetermined pattern. More recently, earmarking consists of attaching a numbered metal or plastic tag.

**Feeder.** A young animal cared for and fed for a period of time and ultimately destined for slaughter.

**Feedlot.** The enclosed area in which animals are cared for and fed until fattened and ready for slaughter.

**Forward purchase contract.** An agreement to buy production from a specified acreage or to buy a specified quantity of a commodity at a set or determinable price for delivery at a specified future date.

**Forward sales contract.** An agreement to sell production from a specified acreage or to sell a specified quantity of a commodity at a set or determinable price for delivery at a specified future date.

**Fumigation.** To destroy insects by application of smoke, a chemical, or gas vapor. It can be applied to produce in storage. It also includes treatment of soil, often to considerable depth, to kill diseases, nematodes, or viruses.

**Futures contract.** A standard and transferable form of contract that binds the seller to deliver to the bearer a standard amount and grade of a commodity at a specific location at a specified time. It usually includes a schedule of premiums and discounts for quality variation.

**Futures market.** A federally designated commodity exchange organized to provide the facilities and rules for trading certain commodities swiftly and economically, by using uniform contracts for delivery or receipt of commodities of a specified grade at a specified time.

**Grade.** The classification of a commodity or an animal by quality, size, or ripeness. Standards of uniformity are usually designated by a governing group, such as the U.S. Department of Agriculture or a recognized trade association.

**Grafting.** Inserting a living portion of a plant into the limb or trunk of another tree or vine to change the variety or species.

**Grove.** Fruit or nut trees planted in geometric patterns to economically facilitate care of the trees and harvest of the fruit or nuts.

**Growing crop.** A field, row, tree, bush, or vine crop before harvest.

**Harvested crop.** An agricultural product, gathered but unsold.

**Hatching eggs.** Eggs used for production of poultry. The eggs must be fertile, as distinguished from market eggs which usually are not fertile.

**Hay (alfalfa).** A legume type of plant used extensively as forage for livestock. The plant has a production cycle of three to seven years, with an average of four to seven cuttings per year, depending on the geographic area. It is baled or processed into concentrated cubes, wafers, or pellets.

**Hedge.** Any action taken to reduce the risk of loss from price fluctuations of products to be sold or materials to be purchased. A hedge may be accomplished by the use of forward or commodity futures contracts. As used in this guide, the words hedge and hedging pertain to the use of commodity futures contracts bought and sold on established commodity markets.

**Hedging-procedures method.** A method of accounting for inventory, commonly used by grain merchants, in which the approximate cost of hedged inventories is determined by pricing quantities on hand at market and by adjusting for gains and losses on related open futures and forward contracts.

**Hybrid.** Any new or different variety of animal, plant, tree, or vine produced by crossbreeding or pollinizing of two or more varieties within a general species.

**Livestock.** Registered and commercial cattle, sheep, hogs, horses, poultry, and small animals bred and raised by agricultural producers.

**Mark-to-market.** A method of accounting for inventories, forward contracts, and futures contracts at current market prices and of recognizing changes in market prices as gains and losses.

**Market-order prices.** Prices for raw products established by federal or state agencies.

**Marketing cooperative.** A cooperative that markets the products (crops, livestock, and so on) produced by its patrons.

**Marketing pool.** A method of accounting for business done between patrons and their marketing cooperative whereby the cooperative usually takes title to the raw product on delivery, commingles products of like kind and quality, performs whatever processing and packaging are required, sells the finished product, and maintains records of sales and payments for product and expenses. When the pool is closed, the cooperative distributes net earnings, less previous advances, to the pool patrons on the basis of the amount or value of product delivered.

**Member and nonmember (of a cooperative).** A member is an owner patron of a cooperative who is entitled to vote at corporate meetings. A nonmember patron is not entitled to voting privileges. A nonmember patron may or may not be entitled to share in patronage distributions, depending on the articles and bylaws of the cooperative or on other agreements.

**Net earnings, net margins, net proceeds, net savings.** Used to denote the excess of marketing or sales proceeds over costs of operations and income taxes. They normally represent the amount available for distribution to patrons on a patronage basis.

**Net inventory position.** The quantity of a specified commodity on hand that is adjusted for the quantities on open forward and futures contracts.

**Net realizable value.** Valuation of inventories at estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation.

**Nonpatronage income.** Earnings other than those from business done with or for patrons on a patronage basis. It sometimes includes earnings from business done with or for other patrons to whom no patronage is distributed.

**Nonqualified written notice of allocation.** A nonqualified written notice of allocation is similar to a qualified written notice of allocation, except that no portion of the nonqualified notice is paid in cash at the time of notification and that the patron is not required to report it for income tax purposes until redemption.

**Normal costs.** Those costs that conform to an acceptable standard of achievement under ordinary operating conditions.

**Open contract.** An unliquidated (or open) futures contract.

**Orchard** (see **grove**). Fruit trees planted in geometric patterns to economically facilitate care of the trees and harvest of the fruit.

**Patron.** Any individual, trust, estate, partnership, corporation, or cooperative with whom or for whom a cooperative does business on a cooperative basis, whether a member or nonmember of the cooperative association.

**Patronage.** The amount of business done with a cooperative by one of its patrons. Patronage is measured by either the quantity or value of commodities received from patrons by a marketing cooperative and the quantity or value of the goods and services sold to patrons by a supply cooperative.

**Patronage allocations.** Patronage earnings distributed, or allocated, to individual patrons on the basis of each patron's proportionate share of total patronage. Such allocations, which include notification to the patron, may be made on a qualified or nonqualified basis.

**Patronage earnings.** The excess of a cooperative's revenues over its costs arising from transactions done with or for its patrons. Generally, a significant portion of those earnings is allocated to the cooperative's patrons in the form of cash, allocated equities, or both.

**Patron equities.** Funds invested by the members of a cooperative, in the form of either cash or reinvested noncash patronage distributions, that represent ownership in the cooperative rather than debt. These investments may be represented by capital stock, membership certificates, capital certificates, patronage certificates, revolving-fund certificates, or other similar instruments.

**Per-unit retain.** A form of financing used by marketing cooperatives and usually based on tonnage or quantities of product delivered by patrons. Typically it involves withholding cash from the amounts advanced to patrons at time of delivery. These withheld amounts are ultimately distributed in the form of written notices of allocation, and they differ from patronage refunds because they are not determined on the basis of net earnings. There is no 20-percent cash payment requirement in order for written notices of allocation to be tax deductible.

**Per-unit retain certificate.** A written notice of allocation to the recipient that states the dollar amount of a per-unit allocation.

**Pooling cooperative.** A marketing cooperative that receives its members' agricultural products without obligation to pay a fixed price and commingles those products into single or multiple pools for processing and marketing purposes. Pool periods may vary from a week to a year or longer, depending on the product involved. Generally profits or losses are allocated to patrons upon closing of the pool.

**Pools.** Accounting control centers used for determining earnings and patronage refunds due to particular patrons.

Open pools are accounting control centers that are not closed at the end of each accounting period. Open pools are sometimes used by marketing cooperatives for crops that may not be sold for two or more years after their receipt from patrons.

A single-pool cooperative determines net proceeds or patronage refunds on the basis of overall operating results for all commodities marketed during an accounting period.

A multiple-pool cooperative determines net proceeds or patronage refunds on the basis of separate commodities departments.

**Progeny.** Offspring of animals or plants.

**Pruning.** Cutting away unwanted portions of trees or vines to shape them and to encourage forms of growth that will enhance production and harvest.

**Pullet.** A hen less than one year old.

**Qualified check.** A check or other instrument redeemable in money that is paid as part of a patronage dividend or other payment to a distributee who has not given consent with respect to such patronage dividend or payment. Imprinted on the check is a statement explaining that endorsing and cashing the check within ninety days constitutes consent by the payee to include in gross income the dollar amount of the written notice of allocation.

**Qualified per-unit-retain certificate.** Any per-unit-retain certificate that the distributee has agreed to recognize for income tax purposes.

**Qualified written notice of allocation.** A written notice of allocation of a patronage distribution from a cooperative to a patron when the distributee has consented to report the distribution for income tax purposes and the cooperative also distributes a cash payment, or a qualified check, equal to 20 percent or more of the total patronage distribution. The term also includes a written notice of allocation that may be redeemed in full for cash within ninety days of its issuance.

**Raised animals.** Animals produced and raised from an owned herd, as opposed to purchased animals.

**Recurring land development costs.** Costs that do not result in permanent or long-term improvements to land (for example, maintenance costs that occur annually or periodically).

**Registered herd.** Animals with characteristics and genealogical information that make them an established breed, with records maintained for each successive generation.

**Retained earnings (retained margins, earned surplus, unallocated capital reserves, undistributed margins).** These terms refer to unallocated earnings of cooperatives on which income taxes have been paid.

**Retains.** Amounts determined on a per-unit basis or as a percentage of patronage earnings that are withheld by cooperatives from distributions and allocated to patrons' capital accounts.

**Revolvement.** A colloquial term indicating that retains or patronage dividends have been, or will be, paid out to the cooperative patrons. It sometimes indicates the shifting of capital equities among patrons of cooperatives.

**Rootstock.** A variety or type of root used to develop trees, vines, or plants by grafting the rootstock onto a different species or variety to produce a tree or vine with the best attributes of the combined varieties. Different rootstocks are usually used to obtain disease or virus-resistant trees or vines.

**Speculative contracts.** Commodity futures contracts entered into without offsetting actual or anticipated ownership of or commitments to purchase or sell the commodity.

**Stated value.** The value assigned to a commodity delivered by patrons that approximates the amount the commodity would have sold for on the open market.

**Summer fallow.** The practice of plowing soil so that it will lay open to air and water without the need to support growth for a season.

**Supply cooperative.** A cooperative that supplies to its patrons goods and services used by them in producing their products.

**Unit-livestock method.** Accounting for livestock by using an arbitrary fixed periodic charge. For raised animals the amount is accumulated by periodic increments from birth to maturity or disposition. For purchased animals the arbitrary fixed periodic amount is added to the acquisition cost until maturity or disposition of the animal.

**Vineyard.** Grape vines planted in patterns for commercial cultivation and production.

**Warehouse receipt.** A warehouse-issued certificate that lists goods and produce stored and that must be surrendered to receive delivery of the goods. It may be negotiable or nonnegotiable.

**Written notices of allocation.** Any capital stock, revolving-fund certificate, retain certificate, certificate of indebtedness, letter of advice, or other written notice to the recipient that states the dollar amount allocated to the patron by the cooperative and the portion that constitutes a patronage dividend.