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Final Draft Report: Economic Policy Options for Utah Agriculture

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September 1985

Study Paper #85-27

FINAL DRAFT REPORT:
ECONOMIC POLICY OPTIONS FOR UTAH AGRICULTURE

By

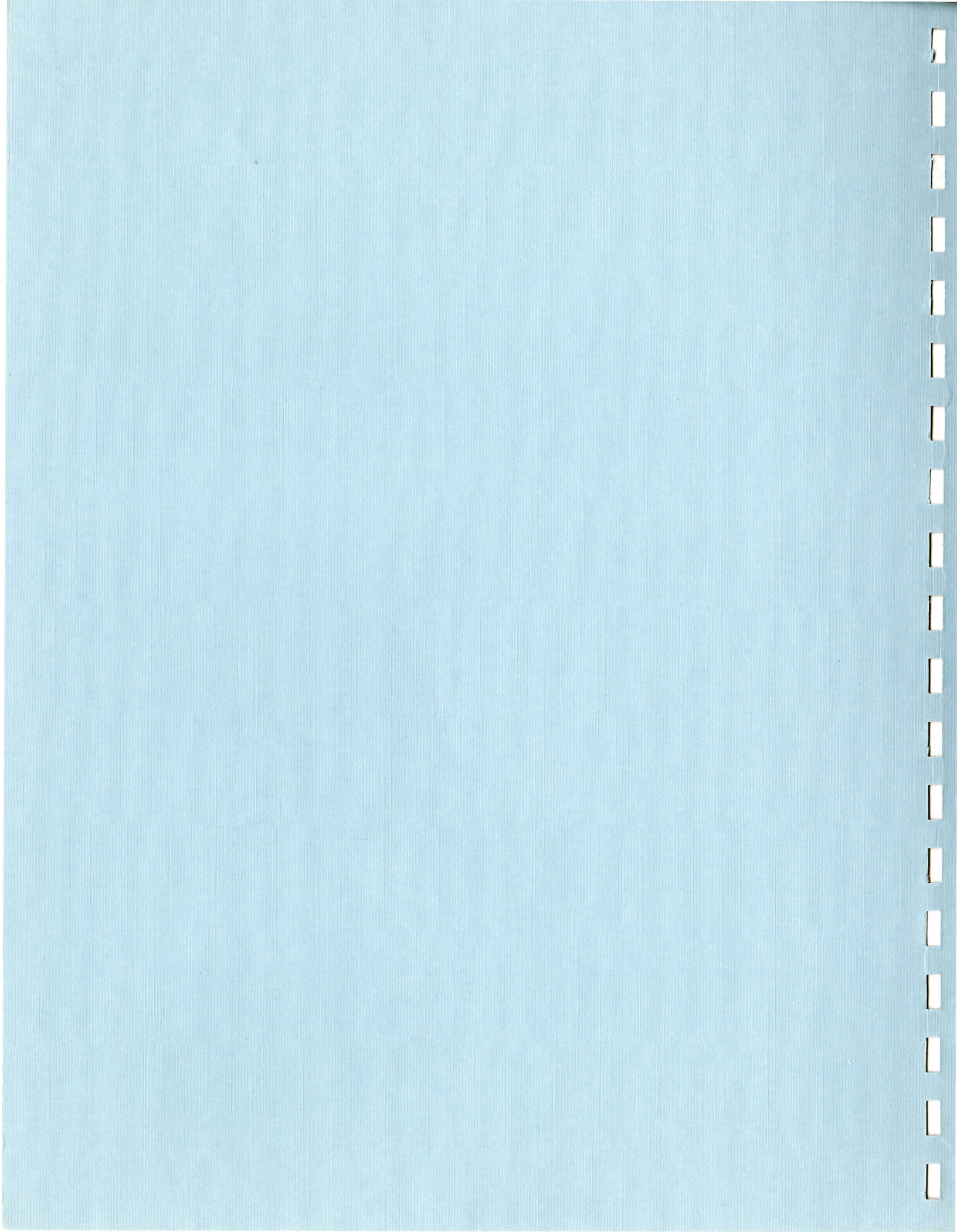
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ECONOMIC POLICY OPTIONS FOR UTAH AGRICULTURE

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August 1985

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CHAPTER I

THE APPROACH TO POLICY RECOMMENDATIONS

Preface

As a general rule, economists seldom advocate policy options. They prefer to discuss advantages and disadvantages. Primarily, this is because of an inherent belief that the market does provide for an efficient allocation of goods and services for those participating in that particular market. However, it is widely recognized that the market will not allocate efficiently if certain impediments exist. Furthermore, in situations where the market cannot reflect true social costs and benefits, some corrective actions may be required.

Beyond these recognized deviations, certain things may be done to influence local costs or benefits in such a manner that a region may gain an economic advantage, at least in the short run. To advocate a policy favorable to a particular region poses a serious dilemma for those trained to believe that the economic world operates best if left alone. It places them in the rather uncomfortable position of suggesting alternative policies that are not designed to correct a shortcoming of the market but, instead, are intended to circumvent the efficient operation of an otherwise efficiently operating system (to the extent that our economic system operates efficiently).

It is appropriate that economic policy options be provided to those responsible for making political decisions. The policy options included in this report are given not as recommendations but that those responsible for political decisions might be better informed regarding the benefits and costs of alternatives. This listing of alternative

policy options for possible consideration by the state are provided in this report as part of a larger effort to determine agriculture's role and potential in Utah.

Introduction

Economic policies can influence the competitiveness of production, processing, and marketing of agricultural products. In fact, agriculture presently is being buffeted about by economic policies which have been designed to impact on national problems such as inflation, but agriculture receives adverse side effects.

In a situation where the market system is able to accurately reflect the costs and benefits of alternative resource use patterns, the market will allocate resources efficiently, or in a manner to insure that resources are used in those uses which yield the highest return--private and social. In the event that the market is not able to accurately reflect the social and private costs and benefits of any economic activity, then there may be justification for market intervention. The term "may be" has been used because there is no assurance that such an activity will result in an improvement of social well-being precisely because each of these alternatives is costly in one sense or another. Besides, the implementation of a policy designed to correct a deficiency may inadvertantly impact another sector of the economy adversely.

Organization

This report contains a selection of available policy options grouped in a number of different ways. First, the options are placed into the "larger picture" of policy options appropriate to any business

situation. Note that the policies discussed herein are applicable to processing or value-adding industries as well as to production agriculture. Second, the options are then discussed with emphasis on two major categories: production and marketing. Third, the impact of federal policies relative to Utah's production situation are discussed. A summary is also provided.

Intention

This report is provided in an attempt to increase awareness of certain options and to acquaint policy makers with the nature and impacts of various economic policies. A brief description of the policy is provided as a review. Then, the benefits and costs or advantages and disadvantages of each policy are described.

This report is not intended as an endorsement of any particular policy. The specific benefits and costs associated with each option should be evaluated on a case-by-case basis in much greater detail. Only when such benefits and costs have been identified and quantified, where possible, should a policy be enacted. A disruption or disturbance in one segment of the market often leads to disruptions elsewhere. No policy should be undertaken without an in-depth analysis of impacts. The options discussed herein influence the structure (number, size, operating characteristics, profitability, and other characteristics) of farms engaged in agriculture in Utah. Many would also have an impact on agricultural markets elsewhere.

An example might be instructive at this point. Suppose that one of the policy options available to the Utah Department of Agriculture was to guarantee the price that producers were paid for their cattle.

This would, depending on the level of prices paid, influence the local market in the sense that producers would not be forced to function in what now appears to be a single-buyer (or few buyers) cattle market. However, the state must tax this state's consumers (or possibly consumers in other states) in order to have the revenue to carry out the program. Furthermore, once the producers are guaranteed a certain return, they may not adjust to consumer and market demands and preferences. The level of subsidy may change significantly over time as supply and demand conditions change elsewhere. Yet, Utah's producers would continue to produce at levels consistent with the subsidy without any regard for either local or regional supply or demand. In some cases, though possibly not all, the "cure" (in the form of a subsidy) may be worse than the "disease" (operating in an imperfect market.)

CHAPTER II

A GENERAL DISCUSSION OF ECONOMIC POLICY OPTIONS

Introduction

A set of policy options may be implemented to correct a deficiency in the market system or to circumvent a market's efficient operation. Regardless of the purpose, two general business factors may be impacted for any policy action. The first is production cost (or productivity, which is considered here with production cost). The second is price. Some policies have a direct and dramatic impact on costs or productivity but do not affect price. Others, will have a significant impact on price, but not affect costs of production or productivity. In some instances, policies can result in reduced costs and increased prices. Consequently, the discussion in this chapter will be limited to a general treatment of policies affecting either costs of production or the output price. A broad overview of policy options is provided in Figure 1.

While much will be said of the cost of the various policies and programs to the state, it is well to remember that the state may recapture some or all of the costs if the development results in either a net increase in the state's economic activity or if it prevents the state's economic base from declining (as might be the case should other parts of the economy fail and agriculture was able to compensate somewhat with added employment or income opportunities).

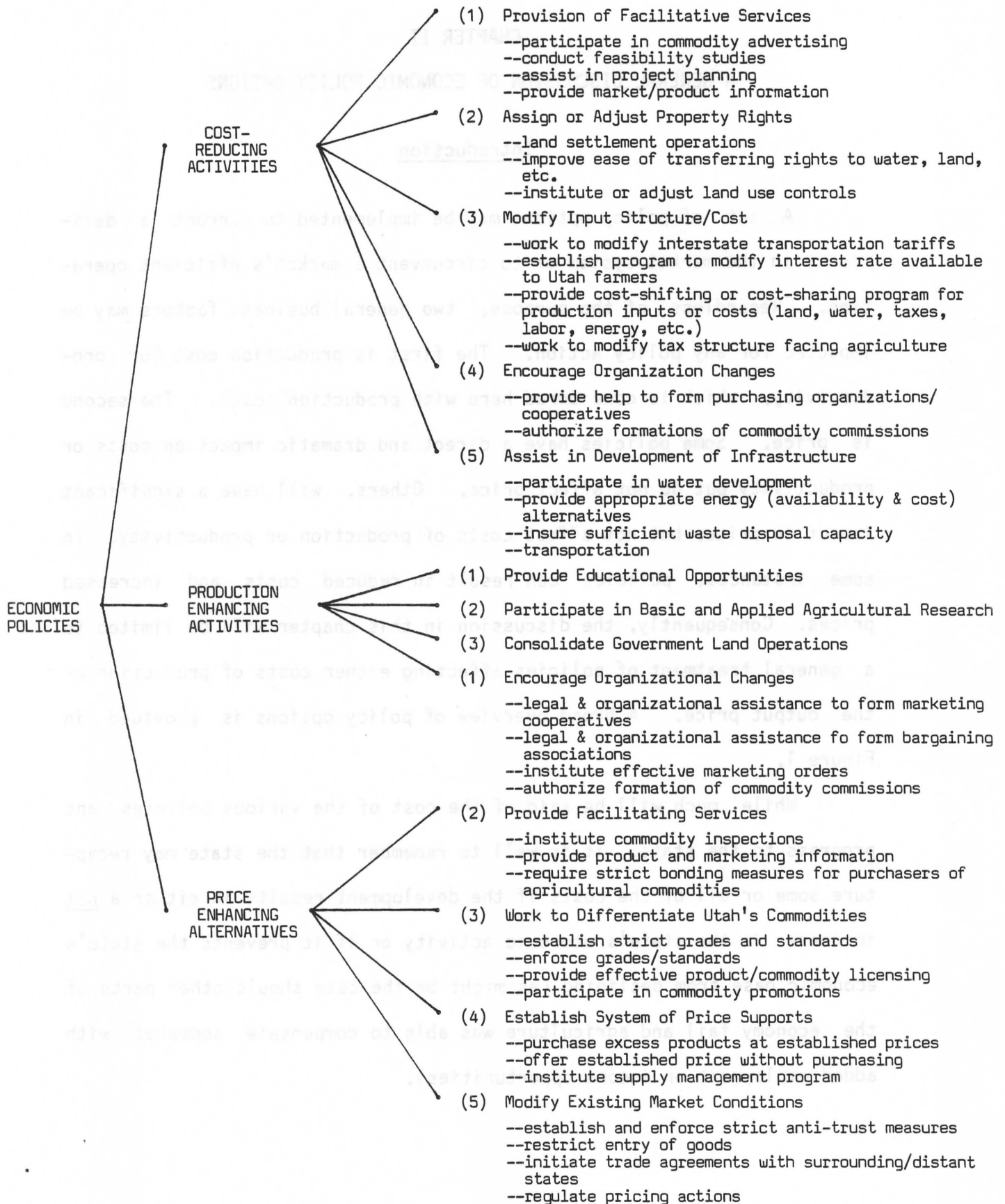


FIGURE 1. POLICY ALTERNATIVES

Table 1 provides a list of policies that may be expected to impact the cost of production either directly by reducing input prices or indirectly by improving or increasing yields or productivity. Note that these policies could be applied to either agricultural production, agricultural processing, or any other value-adding activity.

On the other hand, certain policies may be enacted which should positively impact the price received by producers or processors. A general overview of these policies is given in Table 2.

Cost Reducing Policies

Specific cost-reducing policies are discussed in more detail in Chapter III. However, a general discussion of the impacts of the major categories of policies impacting the costs of agriculture in Utah are given below. An important point in all of the discussion which follows is that the state must determine if expenditures on any or all of these policies are the most appropriate given competing needs.

Provision of Facilitative Services

In general, the state could participate in providing producers (and processors) with the necessary information or help so that production viability could be enhanced. This includes such actions as participating in advertising, feasibility studies, project development, and providing market/product information. In doing this, the state effectively reduces the cost of project development, construction, and/or operation. The costs of maintaining many of these services may be relatively inexpensive since little direct action is required of the state. However, some reallocation of resources will be required since

Table 1. Cost-Reducing or Production-Enhancing Policies

Policy	Expected Impact
Participate in commodity advertising	Differentiate Utah's product
Conduct feasibility studies	Reduce development costs
Assist in project packaging	Reduce development costs
Provide market/product information	Reduce development costs
Land settlement operations	Reduce land costs
Clarify ownership rights & transfer mechanisms for water, land, etc.	Reduce uncertainty of development/operation
Institute or adjust land-use controls	Reduce ownership costs
Modify interstate tariffs	Reduce operating costs
Modify interest rates	Reduce ownership and operating costs
Provide inputs cost-shifting/cost-sharing program	Reduce ownership and operating costs
Modify tax provisions	Reduce ownership and operating costs
Form purchasing organizations	Reduce operating costs
Form commodity commissions	Provide basis for commodity research
Develop water projects	Reduce ownership and operating costs
Insure adequate energy supplies	Reduce development/operating costs
Provide sufficient waste disposal	Reduce development/operating costs
Develop adequate transportation system(s)	Reduce costs
Provide educational system	Improve productivity/reduce costs
Participate in research program	Improve productivity/reduce costs
Consolidate government lands	Improve productivity/reduce costs

Table 2. Economic Policies Impacting Product Prices

Activity or Policy	Expected Result or Impact
Organize marketing cooperatives	Improve price
Form bargaining associations	Improve price
Institute marketing orders	Control/differentiate product
Form commodity commissions	Improve price
Institute commodity inspections	Differentiate product/improve price
Provide product/market information	Improve producer's information and bargaining position
Require strict bonding measures	Protect producers
Establish/enforce grades/standards	Differentiate product/improve price
Provide product licensing	Differentiate product/improve price
Participant in commodity promotions	Differentiate product/improve price
Purchase commodities	Restrict supply, improve price
Establish support price	Improve price
Restrict supply	Improve price
Enforce antitrust measures	Provide buyer competition to improve price
Restrict entry of goods	Restrict supply, improve price
Initiate trade agreements	Provide market outlets
Regulate pricing actions	Insure price based on value or contribution

the state is presently not funding many of these policies. In any event, funds in support of these policies would have to come from the general public, although some method may be devised to recover at least a portion of these expenditures.

Adjustment or Assignment of Property Rights

Many of the resources within the state are under public ownership or are not "owned" at all. This is particularly true of land, air, and water resources. These resources, of course, are basic to agricultural production. It may be in the state's interest to assign more of these rights to private interests such as those associated with public land use or with public holding of water rights for possible future development. While the potential gains from property rights adjustment or reassignment are significant for agriculture, the costs are also likely to be significant. Some of the costs associated with implementing many of these policies include a shift in wealth, a substantial expenditure for legal fees, and possible shifts in production/processing patterns.

Modify Input Costs

Basically, these policies are those which reduce the cost of inputs to the producers. The cost of any production/marketing input can be reduced through either a direct subsidy paid to participants or through a cost-shift approach, i.e., where the costs of the input(s) are paid for by other users. The benefits from such an approach for the typical producer (processor) is obvious--lower development and/or operating costs. Such a policy, if implemented, would require funds from the public sector. Also, from an economic perspective, subsidies result

in resource shifts which may not be the most efficient. That is, if one input is subsidized, more of it will be used than would have occurred otherwise, and other inputs will be used less. This can induce some "input-use" shifts that may not be optimal.

Encourage Organizational Changes

This policy allows producers to be represented by a single or smaller number of purchasing entities. Inputs could be purchased in bulk and costs reduced. This would require little by way of expenditures on the part of the state, although personnel time and travel could be a significant cost item depending on the level of involvement. This should counter some of the market power exercised by input-selling (fertilizers, fuels, etc.) firms where competition is limited. Smaller producers (processors) are likely to gain the most from such a policy. The major problem is an economic one in that two sources of market imperfections (one encouraged by the state and the other occurring naturally) do not necessarily result in an efficient distribution of goods.

Assist in Infrastructure Development

Most of today's industries, including agricultural production and processing, require an extensive infrastructure including such items as water, energy, transportation, and waste disposal. If the state was to provide some of that infrastructure as an ongoing part of a development process, the cost to potential industries would be reduced and industrial siting encouraged. The primary problem associated with infrastructure development is that most of the development must come prior to

the location of any industry and this often requires considerable resources. This means that the state's population must finance the improvements prior to actual siting or revenue generation. Furthermore, only the most specialized types of infrastructure can be developed given that the needs cannot be predicted beforehand.

Production-Enhancing Activities

Provision of Educational System

As producers and processors become better educated, development and operating efficiencies are likely enhanced. The educational system may be a formal system, such as presently found in technical colleges and universities, or a more informal system of production contacts. One example is the present Extension system, although it does not have enough resources at present to meet this need entirely. Local producer schools also might be supported as well as a whole range of other educational services, media, and tools. The cost of providing an education is very costly as evidenced by the present cost of the primary and secondary educational system found in the state. However, costs could be contained should the program be targeted to include those whose needs are greatest. Another problem is that the results of an educational system are seldom immediate. Such a system would likely have to be supported in part by the general population.

Participate in Basic and Applied Research

This has been one of the principle methods whereby the state and federal agencies have been able to influence agriculture. In order for producers and processors to compete with other regions they must use the

most efficient techniques. This might include new varieties, new production technologies, improved record systems, new pest control methods, alternative water and fertilizer application approaches, and new conservation policies. The benefits to agricultural research, in the aggregate, have historically been far greater than the costs of conducting that research. This is not meant to suggest that all such research yields positive results--the majority of it does, however. Besides that, the research can prove costly, it often catches on elsewhere, which implies that the benefits of improved productivity to a particular state or area is effective only so long as that same technology is not accepted and adopted elsewhere. Once it has been adopted elsewhere, then the only way that the initial region can maintain a competitive edge is to continue making investments in research. There is also the problem of allocating relatively scarce resources among alternative research areas as well as between other public needs. It has been suggested by some that a substantial research effort should now be directed at making production more profitable instead of just more productive. While there has been considerable discussion of this concept, a major shift in resource allocation has yet to occur in that direction.

Price-Enhancing Alternatives

Many policies may impact commodity prices. While specific policies are discussed in Chapter III, a brief overview is provided here. As is the case with most of the policies impacting production costs or productivity, price-enhancing policies can be implemented only if public funds are expended. Also, the beneficial impact of many of

these policies are contingent upon other states not implementing similar subsidies.

Encourage Organizational Changes

Organizational changes can impact the cost of production as well as the prices received. Organizational changes include the formation of marketing cooperatives or bargaining associations, regional or large group-selling actions, the institution of market orders, and the formation of commodity commissions, to mention only a few. The primary funding requirement for this general policy alternative is for personnel and travel. Change is likely to be quite slow since producers have been relatively slow to embrace such organizations. The effect could, however, be significant. Producers would need to realize that some of their independence would have to be given up in an attempt to attract more buyers for their products. Commodity commissions are in place elsewhere (i.e., Idaho and Washington). In Washington, the commissions are authorized by facilitating legislation. The commissions deal with marketing problems, conduct or contract basic research, and serve as a unified representative of the commodity producers in promotions and other forms of advertising. They can also establish and regulate grades and standards and other forms of product differentiation. Most of these organizations have become self-sustaining primarily through a charge on product sales. Most have had some support from public funds for at least a portion of their existence. The major strength of this approach is that the producers (processors) are in charge of the marketing and research programs for their commodities. They take an active role in program management. However, considerable effort often is required to

form such groups, both in terms of the legislative support and producer support. That would require some initial expenditures from public sources. It is not clear that the existence of commissions makes the market any more efficient than it would have been had no commission existed. Because of the nature of the commissions, membership is not voluntary in that a charge is assessed against all sales to fund the commission's operation. Consequently, some individual options or freedoms are foregone.

Provide Facilitative Services

The state might do any number of things to improve the efficiency of the market including instituting bonding requirements to reduce the risk faced by the producer or establish readily available sources of market information. The latter policy would allow all producers to become familiar with present market conditions. This should improve their bargaining position and result in better prices. However, these services or requirements are not costless. A decision must be made concerning the proportion of costs to be paid by agricultural producers. From a social sense, there probably is some justification in providing market information to all potential participants since inefficient markets also are costly to society.

Differentiate Commodities

Products can be differentiated through the establishment and enforcement of grades and standards, by providing effective product licensing, or by directly participating in commodity promotions. The purpose in following this policy is so that products may become

recognized or differentiated by the buyers such that the effective demand for the "special" product is strengthened. Even in the event that a higher price could be captured, present markets could be expanded so that sales might increase. There are several problems with this approach. Not all sellers would prefer that the product becomes differentiated. An example might prove helpful. Suppose that the market for Utah's apples could effectively be expanded if strict grades were well-established so that buyers knew exactly the type of apple that they were purchasing. This would reduce the uncertainty to the prospective buyer and should result in the producers of better apples being paid a better price. Furthermore, it should allow Utah's producers to expand their effective marketing area. However, for the smaller producer incapable of supplying sufficient quantities of apples for distant markets, the implementation of grades would be an added expense that likely would not be justified for local sales. Furthermore, the large producers would like the grades and standards if applied to distant markets but may not be in favor of implementing those grades within the state, particularly if the in-state market is used as a way of selling the lower quality fruit not accepted elsewhere. Another problem is the cost of enforcing the instituted grades and standards. Probably the most difficult issue to be resolved is to gain the support of the producers.

Establish Price Support System

In an effort to encourage production or support incomes, price supports are sometimes instituted by public agencies. The impact of price supports generally has been to encourage production for those commodities which are supported. The problems associated with price

support programs can be significant. First, resources will be committed to the production of the commodity supported and will not be as readily available to other production activities. Second, a policy of supporting the price of one or a few commodities can often result in serious problems for other commodities. As an example, if the price of grain was supported, the cost of feeding animals for slaughter would be increased and either (1) the number of animals fed for slaughter locally would decrease because of the feed cost or (2) the price paid for feeder calves will be reduced to compensate for a higher grain cost or (3) both will occur. In an economy that is as complex and interrelated as agriculture, a distortion in one sector will result in many other distortions. Third, price support programs can become very costly to the state.

Modify Existing Market Structure

If local agricultural markets are not competitive, then several actions might be taken by the state to correct the problems. First, some firms might need to be broken up and several smaller firms take their place. Second, the entry of certain goods might need to be taxed or restricted to facilitate local production. Third, trade agreements that lead to specialization might be negotiated with surrounding states or individual firms. Fourth, the pricing actions of some firms might need to be regulated. These policies will result in continued or increased production of the commodities thus protected. However, these protective actions will result in local distortions in the sense that producers will not be subject to the competitive influences which would

still exist elsewhere. The cost of regulating industries can be and is significant as would the cost of establishing a state negotiating board or commission.

Modify Existing Market Structure

If local agricultural markets are not competitive, the following actions might be taken by the state to correct the problem. First, some firms might need to be broken up and several smaller firms take their place. Second, the entry of certain goods might need to be taxed or restricted to facilitate local production. Third, trade agreements that lead to specialization might be negotiated with surrounding states or individual firms. Fourth, the pricing actions of some firms might need to be regulated. These policies will result in increased or increased production of the commodities thus protected. However, these protective actions will result in local distortions in the sense that producers will not be subject to the competitive forces which would

CHAPTER III

AGRICULTURAL POLICY OPTIONS FOR THE STATE OF UTAH

Introduction

The options available for the state are quite extensive. These alternatives are grouped in this section of the report into three main categories. First is the set of items that would impact directly on agricultural production. Natural resource use conditions, such as new areas, new products, land-use controls and incentives, and water policy are important areas of concern. Labor use and development and management skills are addressed. Capital cost and availability and tax policies in farm production are key items in farm viability. The second major category relates to marketing of agricultural products. Market organization, grades and standards, promotion activities, and transportation availability and costs are all important aspects, along with various processing options and the possibilities for vertical integration. The relationship to national farm and other policies is the other major category of concern. National monetary, fiscal, and tax policies are increasingly important to farmers everywhere, along with trade policy and the reaction and implications of a national move towards a "free market" approach to agricultural policy.

Production Agriculture

There are two areas wherein agricultural development might be affected by state policy or programs. First, new or additional agricultural lands might be brought into production. Second, changes might be made with crops and livestock to intensify agricultural production.

This latter option might be considered as the development of "new products."

New Area Development

There may be a policy instituted by the state to develop additional irrigable acreage within the state. In Utah, this would most likely mean the development of additional land and water resources. Numerous policy options might serve to encourage or promote this development.

Policy #1: Provision of technical help in land and water resource development planning

Description.--This policy would provide that the state would materially assist in the development planning process. Areas would be identified, with or without input from actual or prospective producers, potential crops identified, and necessary infrastructure identified. A blueprint of the development process for a specific site would need to be prepared. Actual development would be accomplished outside of the state government. This could be done either in cooperation with or independent of actual or prospective producers. Such a development blueprint could be prepared by the Utah Department of Agriculture, university specialists, or private consultants (or any combination of the above). Such a policy could be undertaken on a regular basis as long as there was some justification for a particular development scheme. It also might serve as an integral part of a long-term agricultural development plan (similar to a water development plan).

Advantages.--Such a policy, if pursued on a regular or periodic basis, would provide information necessary to attract potential pro-

ducers, investors, and related industries. That is, if a development plan were available, it reduces the cost of information associated with any new development project.

Disadvantages.--Several objections to such a plan would be raised. First, most likely general tax revenues must be used to prepare such a plan. Second, there may be a problem with the proprietary nature of some of the information thus acquired. It is difficult to insure that all potentially interested parties could have equal access to the information. Third, many of the potential developments might prove to be infeasible from an agronomic or economic sense, thus, many would argue that waste has occurred.

Policy #2: State acts as the contractor on land and water development projects

Description.--Under this policy option, the state would examine potential development scenarios and then actually participate in the construction/development process. That is, the state would serve as the contractor for the project. The actual projects thus chosen could be a result of the state's own development planning activity or a plan organized by private individuals. One option would be to undertake the development without the direct support and involvement of potentially interested parties. A variation of this policy would allow the state to act on behalf of those individuals interested in the development. Once the development had taken place, the state could then "sell" the development to interested parties. Or, if acting as an agent for one or more parties, the state could then relinquish the operation of the project to those others involved.

Advantages.--A major benefit of such a policy is that the risk to private individuals may be substantially reduced. That is, the up-front risk associated with the actual development and construction activity would be reduced.

Disadvantages.--The difficulties associated with such a policy are, first, that the state (hence, the state's population) would be responsible for the actual development process and could be held liable should problems develop in the "construction" phase. Second, there might be some uncertainty associated with the interested parties in the sense that it is possible that such an organization or group of organizations might determine that they were not interested in the project once development had begun. Other parties would then need to be identified and contractual arrangements made.

Policy #3: Assist in land and water projects on a "cost-share" basis

Description.--This policy would require the greatest commitment on the part of the state from a financial perspective. Such a policy might be implemented following a previously determined course of action by a group or the state. That is, the state would assist in the development scheme on a cost-share basis for its own project with a project identified and planned by some other group. This policy definitely lowers the cost associated with the development process. In effect, the state would pay for some of the development activity. The amount might be large or small. It could be on a "grant" basis or a "loan" basis.

Advantages.--The justification for such a policy would be that the development will encourage development in this and other sectors sufficient to justify the state's role maintaining employment opportunities, income, etc. Furthermore, producers may be able to

"compete" with other producing areas where no such cost-sharing has occurred.

Disadvantages.--The "costs" associated with such a policy are often very substantial. First, general tax money must be used in the cost-sharing approach. Second, even such an effort may not allow producers to be competitive with other producing regions. Third, some may resent having to pay for a policy which benefits some within the state at the expense of others. Any time one industry is encouraged through a cost or pricing policy, someone else will be required to pay for it. This approach is often viewed differently if someone outside of the state can be "required" to pay for such a policy. Fourth, this introduces some inefficiencies into the economic system of the national economy. Other areas might institute similar policies which would, in effect, remove the competitive advantage enjoyed by the state's population.

Policy #4: Reduce the effective interest rate for existing farmers in land and water projects

Description.--Operating and land debt payments constitute a major share of the expenses faced by agricultural producers. Any policy which would lower that effective rate of interest would improve the financial position of agricultural producers and others in the food chain. The effective rate of interest could be reduced by either implementing a state interest rate ceiling law or by guaranteeing agricultural loans. This could be done through commercial lending institutions or through a revolving loan fund instituted and funded by the state. Since interest charged by lending agencies is comprised of a basic rate of return on money, an inflation factor, and a risk factor, a loan guarantee often

reduces the risk associated with such loans and lowers the effective rate of interest charged by commercial lenders. A revolving loan fund, similar to that already instituted for rangeland improvement, also would offer a reduced interest rate.

Advantages.--The major benefit is rather obvious. Operating costs could be reduced. This should improve the competitive stance of in-state operators.

Disadvantages.--The risk to the state is substantial. The ability of the state to assume such risk depends on the general economic climate prevalent in the state and the level of state indebtedness. There also is a limit to the extent of funds which can be guaranteed or allowed to be included in a revolving fund account.

New Crops/Commodities

Policies which are intended to promote the production of new crops or commodities are likely to be less costly than policies intended to open new areas to development. The state can play a major role in this policy option.

Policy #5: Sponsor technical, economic, and financial feasibility studies

Description.--Through in-house resources, university personnel, or consultants, the state could implement a policy whereby new commodities or products could be examined relative to their technical, economic, and financial viability. This would involve contracting for actual feasibility studies. This information could then be made available to interested parties. Such a policy would result in lower costs to producers since the cost of such studies would be borne by the

population as a whole. There would likely be some difficulty in determining just which commodities should be examined in greater detail. This would seem to be an integral part of a state's long-term agricultural development plan.

Advantages.--The justification for such a policy would be that the many others within the state would benefit if such development actually occurred. This is not an unreasonable assumption given the complex nature of today's economy where sectors of the economy thrive on success elsewhere.

Disadvantages.--The costs of such a program would have to be borne by the general population. Some, or even most, products may not be shown to be feasible. Consequently, some investigative expenditures may seem wasteful or unnecessary.

Policy #6: State sponsorship of investigation and introduction of new and intensive crops or livestock items

Description.--The state has already done some of this in investigating grapes, wine production, and other items. Since the loss of the sugar industry and the loss of most truck farm production, the state has become specialized in livestock production and support of livestock enterprises. In contrast to many states where high-value specialty crops and many livestock specialties occur, there are few enterprises in Utah outside of traditional livestock feed and livestock growing. The state or some government entity has an opportunity not generally open to individuals because of very high start-up costs, high risks, and a general need for a group of producers to realize some input purchasing power and market power. It is generally true in all but very localized

markets that large quantities of standardized products are needed to break into new or existing markets.

Advantages.--The state produces primarily low-value crops and livestock. There are limited returns to primary producers or to secondary processors and markets. New items could benefit farmers and the remainder of the population.

Disadvantages.--Risks and costs to the state tend to be substantial. A big payoff may occur only very rarely, if at all. Such prospects are politically difficult.

Policy #7: Institute state-wide price supports for new crops and products

Description.--Often, the markets for new crops are not well-developed. Consequently, producers cannot realize potential prices. In what might be termed an "infant industry" argument, the state might guarantee certain returns for new crops in order to stimulate production to the point that other necessary infrastructure would develop. Such price supports could be phased out as the infrastructure developed.

Advantages.--The benefits of such a policy would be that producers would have some incentive to produce new commodities even though markets may not be fully developed initially. This would allow some time for the related industry expansion to take place such that processing or distribution economies might be achieved. Producers, in the meantime, could be encouraged to become proficient in cultural and marketing practices.

Disadvantages.--The problems with such an approach are that the size of the state's expenditure may be unpredictable; the price-support may be difficult to eliminate or phase out; and there is no guarantee

that the necessary infrastructure will develop as needed, unless financial stimulus also be provided in those sectors.

Land Use and Controls

There are many land-use and other resource-use policies that impact on agriculture. Private and public land-use policies impact on agriculture through the impairments that are often placed on private property rights usually because of government controls and groups interested in new agricultural uses of public land and water resources.

Policy #8: State control of zoning laws

Description.--Zoning is a form of regulation. It remains the most widely used technique for controlling land use and development. Usually zoning regulations are designed to prevent change. Along with cities, many rural areas have adapted zoning to "preserve" agricultural industry. To be effective, zoning must be less piecemeal and more of a comprehensive development guide. There are great differences in the rules among cities, communities, and counties in the way zoning enhances or detracts from agriculture. Consistency and a positive agricultural stance would be helpful if zoning is to be used.

Advantages.--The justification for zoning requirements is the achievement of legitimate public benefits. Courts have upheld zoning if a landowner is allowed to receive a reasonable return from his property. In general, the method is favored because of its low cost to government. States might be able to provide a more farsighted approach than individual jurisdictions.

Disadvantages.--Since there are many restrictive controls imposed with zoning, constitutional problems quickly arise. It is often argued

that zoning is confiscatory and violates property rights. Difficulties are extreme when there is different treatment of landowners. The basic conflict is that "protection" of agricultural property by zoning often impinges on the property rights of owners.

Transfer or purchase of development rights

A "bundle of rights" is generally conveyed with fee simple ownership of land. In the West, mineral rights are sometimes held separately, but dividing the "bundle" into other specific rights is not common. Development rights are generally defined as a right to construct permanent structures. This concept can be implemented by five different schemes. The first three transfer development rights to a public entity, while in the last two, development rights are retained in the private sector.

Policy #9: Government purchase and lease back of farmland

Description.--A local or state government purchases farmland and leases it back to the original owner or another farmer with the provision that the land be used for agricultural purposes only.

Advantages.--A major advantage is that ordinarily no new laws are required. If farmers are undercapitalized, this may be a great advantage.

Disadvantages.--The major disadvantage like other schemes, where government buys the development rights, is the large amount of tax money required.

Policy #10: Government acquisition of easements controlling use of property

Description.--An easement restricts the manner in which an owner

may develop or use property. Easements can require maintenance and preservation of existing or desired uses and can prevent construction. An open space easement can be useful in preserving agricultural use if the appropriate lands can be identified prior to urban pressure inflation of costs of development rights. However, where lands are already prime candidates for development. The value of these rights will represent a very high proportion of the value of the land. The easement can provide for permanent use of land according to desired use rather than a short-term use.

Advantages.--Cost may be much less than purchase of full title. The land may stay partially on tax rolls.

Disadvantages.--High costs and possible inflation on adjacent lands as developable land declines are major deterrents.

Policy #11: Government acquisition of development rights

Description.--This policy can be accomplished by police power where rights are acquired without compensation; but since a great public benefit must be shown, this is rare except indirectly through enforcement of zoning regulations. Rights also can be obtained by eminent domain where compensation is paid for loss of the right to develop. This use of eminent domain would allow farmers to continue to farm without interference. A third generally more acceptable method is by voluntary transactions between government and individual property owners. Development rights could be purchased outright or an owner might give development rights to a local government for philanthropic reasons or personal tax benefits.

Advantages.--The advantages of this approach are that the public has made full acquisition of the portion of property rights and they have full control over their use.

Disadvantages.--The disadvantages are that involuntary transactions infringe on individual property rights and voluntary transactions have the potential to expend vast sums of money.

Policy #12: Providing encouragement for and laws promoting planned unit developments

Description.--This method where property rights are maintained privately could be used for agricultural continuation by way of giving a density bonus to developers if public recreational or agricultural open space is included. An example, a group of homeowners might have a common interest in preserving an area with an interest in agricultural land. Homeowners, thus, could purchase a homesite with an undivided interest in adjacent agricultural property that could not be developed.

Advantages.--Government costs are low. The appeal may be great to homeowners since they have substantial control.

Disadvantages.--Again, costs (to the individuals in this case) are the major deterrents.

Policy #13: Encourage and facilitate transferable development rights

Description.--The concept allows for exchanges of development rights among property holders. As an example, assume a forty-acre plot of agricultural land facing development in an area zoned for five-acre ranchettes. One possibility is to consolidate the eight houses allowed into one portion of the area and to maintain permanent agriculture on the remainder. Another possibility is for the owner of the forty-acre

piece to sell the right to build eight houses to someone else facing zoning restrictions.

Advantages.--A real advantage of the method is the functioning of a market to allow farming to continue.

Disadvantages.--A disadvantage is lack of selection and tight control.

Public Lands

Policy #14: State encouragement of public lands suitability determinations to favor agricultural use

Description.--The state land board in findings of public hearings may be able to encourage livestock grazing or other agricultural uses. Sometimes findings favor recreational allocations on the public land hearings. Multiple use is usually appropriate from the standpoint of agriculture and other interests. There are many cases where land may be suitable for exchange of use to private lands or to agricultural uses when it is fairly close to other lands similarly used.

Advantages.--Efficiency of use and support for the agricultural sector is usually possible without substantial loss to other interests.

Disadvantages.--Since the vast political majority is not aligned with agriculture, agricultural uses are usually unpopular in allocation of public lands.

Policy #15: Project BOLD to consolidate land holdings

Description.--Project BOLD involves exchange of scattered parcels of state lands throughout the state for public lands. The goal is to make ownership units contiguous. In many cases, state sections particularly are so isolated that the units cannot be managed to provide for

appropriate use. Some scaling back from original proposals may be necessary to provide for political acceptance. Some way must be found to provide for equity among gainers and losers.

Advantages.--Only by owning and managing reasonably sized parcels can maximum benefits be derived from state or federal lands. The present arrangement provides no reasonable way for developing and making the best use of the resources.

Disadvantages.--Some farmers and ranchers may be hurt by this proposal and others may greatly benefit. Those harmed may be able to forestall the procedure until adequate compensation is provided.

Policy #16: Special land-use designations on public lands

Description.--Designation of wilderness areas, special recreation sites, and so forth impacts primarily on grazing interests. It also may impact on other agricultural enterprises. Wilderness designation may, for instance, restrict irrigation development and acquisition of water rights downstream. The federal government may file for the water claims. The state could take positive action to influence special use designations not to be adverse to agriculture.

Advantages.--Often the voice of agriculture is not heard in these proceedings. Other interests have ample lobbying power. Multiple use is ordinarily in the best public interest.

Disadvantages.--Political power is on the other side. Small gains may come at high cost.

Policy #17: Encourage BLM/FS exchange as far as it favors agriculture

Description.--Current proposals call for exchange of jurisdiction for some lands administered by the Bureau of Land Management and the

Forest Service. The goal is to make administration more efficient by consolidating the agencies' holdings. Numerous examples can be given where access to BLM lands is blocked by private land, private land is surrounded by Forest Service land, and Forest Service land is surrounded by BLM land. The land swap now being considered may consolidate scattered areas into larger jurisdictions where better management can prevail. Some correlation of blocking of state and private lands may be desirable in connection with consideration of public lands.

Advantages.--The productivity and usability of all lands should increase. Efficiency of administrative management as well as access and range improvement practices should become more feasible.

Disadvantages.--Long-standing management and grazing rights may be disrupted to some extent. Investments have often been made based on present alignments. Anticipated short-run administrative savings may be overestimated.

Policy #18: State selects "in lieu of" lands favorable to agriculture

Description.--When national parks, national monuments, and recreation areas are established, state land sections often are taken and designated as part of the federal unit. The state has the option to select units of federal lands "in lieu of" those taken into federal ownership. The state should vigorously pursue obtaining the lands due the state in trade. Revenue generation and other goals such as promoting agriculture are possible guides that can be used as the selection criteria.

Advantages.--The state may be suffering considerable loss in delaying selection of lands. Agricultural goals are a worthy selection criterion if an agricultural plan has been formulated.

Disadvantages.--Some other criteria for selection (e.g., potential mineral revenues) may provide more payoff.

Policy #19: Formulation of grazing associations to promote efficiency in public range use

Description.--The state might promote education and possibly legal facilitation for cooperative grazing associations. In many places, there are joint use allotments that involve twenty or thirty or more permittees. Only one or two of these operators may be commercial ranchers. Often the small permittees can outvote the large ones because decisions are made on the basis of one person/one vote. Range improvements, running of bulls, number of bulls, etc., are issues that are decided in this manner. A more equitable basis often is needed.

Advantages.--Range improvements, higher gains, herd improvement, and potential for better marketing are all possible in this option. Overcoming of adverse decisions by a minority is a distinct advantage.

Disadvantages.--There are few disadvantages except for curtailment of individual freedoms. These freedoms, however, often adversely affect others.

Natural Resource Use

Use of natural resources in an efficient way is critical to the well-being of Utah's agriculture. Waste and lack of application in ways favorable to agriculture harm the farm sector.

Water policy

In states like Utah, where the appropriative doctrine governs water rights, the right to a certain amount of water is established and maintained through use. If there is a lapse in use or a change in use,

the right to the water can be lost. Inefficiencies may arise if the right is not used or if an when an individual diverts more water than can be used profitably. Owners of water rights may find it difficult to keep the water employed the most profitable or efficient way. It is difficult to determine waste to enforce rules requiring beneficial use.

Policy #20: Study and provide legal framework to avoid unwarranted blaming of agriculture for nonpoint source water pollution

Description.--Pollution of water originates either from a single identifiable source such as a pipe carrying waste or as diverse nonpoint sources where pollutants enter from multiple surface areas or as ground-water. Deterioration of water quality due to increasing salinity of the water is the most frequent type of nonpoint source pollutant. Fertilizer and other chemical additives used in agriculture also may create problems. Blaming agriculture and attempting to force costly treatment or abatement measures on farmers may be inappropriate if the sources of pollutants are unknown. Much more study of sources is required. For instance, some studies have shown a much higher proportion of the salinity arising from the channel flushing action of thunderstorms on wildlands than from irrigation in Colorado River drainages.

It may be appropriate for public bodies to give cost-sharing help and provide technical consultation to aid farmers in reducing agricultural pollution. If it is socially desirable to maintain agriculture, then some help may be needed. There is evidence that the public has a social interest in agriculture.

Excessive and nonuniform irrigation of crops is a major contributor to leaching and washing of salts and other pollutants from the soil into water courses. Several solutions are available for this. One is

to charge higher prices for water. In some cases this might help, but farmers are in such poor financial condition that this is a questionable solution. Education on the use of water, cost-savings, and nutrient savings may be useful. Many farmers still lack understanding of actual water use by crops and of methods to achieve efficient water application.

A method that often helps in even water distribution and avoidance of excessive application is to irrigate by sprinkling. Unfortunately, the rise in electrical power rates and other energy costs have sharply cut back on installation of irrigation systems that promote water use efficiency. Extension activities and means to provide less expensive energy for pumping would contribute to curbing pollution. Since it is impossible to isolate and treat nonpoint source pollution, the available method is to promote management practices that treat underlying causes.

Advantages.--Pollution from unidentified sources is a major contributor to water quality deterioration in many water courses. Solutions to this can solve major problems. In the absence of positive attribution to sources, agriculture is charged with residual amounts. Efficiency and equity would be served in determining sources and attempting to correct the problems.

Disadvantages.--In some areas, agriculture may indeed be responsible and corrections can only be accomplished at a very high cost.

Policy #21: Refine water markets

Description.--Most of the problems of inefficient use of water

are eliminated when water rights are freely bought and sold. A precondition for the establishment of a workable water rights markets is that the rights to water use are clearly defined and transferable, and the holders of water rights and those wanting to use them face a simple process to make transfers. There are limits on transfer and sale of water rights, especially impinging on change of use or on diversion location in order to protect third parties who may be affected. These rigidities in the system, designed to protect other users in the system, discourage transfer of rights which would otherwise benefit both irrigators and other classes of water users. A program to provide compensation to probable third parties losers in a transfer may be helpful.

Policy makers have the opportunity to provide a more flexible system of water rights that will provide equity for future users. Water banking is one alternative which might be used. Water agencies could be authorized to facilitate either rental or sale transfers by facilitating transactions as an intermediary between those who need the water (borrowers and buyers) and those who have surplus (lenders or sellers).

Competition for water between agriculture and other uses will intensify. As the economic and social values of water grow, the historic dominance of agricultural water allocation may be tested. The outcome and welfare of agriculture may be very interesting in the coming years. Water rights policy may have a big part in the future of agriculture. Though agriculture may be diminished, irrigators may be greatly benefitted by increased ease of transfer.

Advantages.--It will often be the case that irrigators will be better served by making the water rights transferable. Many of them can

receive the proceeds from the sale and still, by changes in cropping pattern, by reductions in marginal land irrigation, and by deficit irrigation of forage and grain crops, continue to farm with only marginal reductions in the value of agricultural production. The policy would provide for more efficient water use.

Disadvantages.--The expense and trouble of facilitating water right transfers have deterred transfer of water rights in the past and may be expected to continue to do so in the future. Also, from a strictly fundamentalist point of view, agricultural production may decline, even though the welfare of farmers would likely be enhanced.

Policy #22: Provide for private water rights on public lands

Description.--This is an issue that particularly affects the southern part of the state, but it has the potential to affect almost all portions. Public land agencies have filed on water on lands they control. In many cases the agencies have not acted promptly to develop the water. Users of the range can do nothing to provide for water to make the range productive. In Nevada and Arizona, water base permits are given to an operator on public lands because the operator files for and has the right to the use of a stock watering pond. In Utah, prompt development, some leasing arrangements, or sale requirements may facilitate achievement of productive potential.

Advantages.--Prompt development requirements, leasing, or sale of water rights held by federal agencies would enhance productivity of public ranges.

Disadvantages.--Federal interests have become firmly entrenched and other public land users would group with the government to form a formidable obstacle to change.

Policy #23: Early settlement of Indian water rights claims

Description.--Very large amounts of water are being claimed by Indians in the western states under the title of federal reserved rights. The Indians' claim and court actions have upheld the principle that the federal government, in setting aside Indian reservations, also set aside or reserved sufficient water to make the reservations productive. Actions are pending in most western states to rescind water rights appropriated by present users under state law to grant these rights to Indians. The federal government under its trusteeship responsibilities is seeking to define these rights for Indians. States individually and collectively have a substantial stake in seeking to maintain rights of present users on intrastate and interstate streams.

Advantages.--Legislation and judicial action to quantify and limit Indian claims may be appropriate since the capital losses to current owners of water rights are potentially vast. Early adjudication to define the rights will help prevent losses from further investments made under uncertainty.

Disadvantages.--The costs for potential legal action are very high. Litigation has been very extensive.

Policy #24: Provide for reduction in irrigators' pumping costs

Description.--In the decade of the 1970s, crop prices and energy costs were favorable to development of new pump irrigation projects on agricultural land, especially in the western tier of counties of Utah. Between the 1974 and the 1978 Census of Agriculture, there was an increase of agricultural land of over 20 percent. Contributing to the adoption of electrical power sources was a program by the major electric utility to provide incentives for electric pumps. Building of power

lines and low energy rates were given to even up the power load which was higher for the utility system in winter than it was in summer. With the advent of air conditioning and other changes, summer has become the peak time so that the utility now seeks to charge summer peak users highest prices.

Since 1974, electric power rates to pumpers have increased by more than 20 percent per year. Many of the farms where climate and soil limitations dictate limits on type and amount of crops that can be grown are no longer profitable. Between the 1984 and 1985 irrigation seasons, the cost of electricity has risen by about 20 percent.

Reasons for the large increases in power costs are numerous. Certainly the general rise in energy costs, the increased dependence on fossil fuel power, and the decline of proportion of hydropower are factors. The methods of assigning costs to classes of power users are also contributory. The cost-of-service calculations are complex and somewhat arbitrary. Agricultural pumpers may now be treated unfairly because of lack of attention to past inducements and promises and also mistakes in the elaborate cost-of-service computer models.

The state could provide help in this situation. First, there could be state funding (as there is for some other groups) to pay for representation by counsel and consultants at the Public Service Commission hearings. Second, there is an opportunity to provide legislative direction on reduction of cost-of-service responsibility to the irrigation pumpers. Third, much can yet be done to develop extension programs to aid farmers in efficient use of water and to provide for efficient pump operation.

Advantages.--Without some relief, many pumpers are sure to fail. Pumpers are especially vulnerable since investments are high and

interest rates are high. Their plight is even more serious than most farmers because of the recent time period in which they made investments when land, improvement, machinery, and interest prices were very high. The need is acute.

Disadvantages.--There may be concerns that unfair favoritism is shown to farmers. This approach also has costs in that legal and other expertise is needed.

Soil conservation

Policy #25: Promoting conservation tillage

Description.--Conservation tillage is alleged to provide higher yields at lower cost to the farmer and social benefits to the rest of society by curbing erosion and sedimentation. Whether the claims are true needs to be substantiated for particular crops in particular physical environments. These feasibility studies need to be done by physical testing and by economic and financial budgeting. One of the great concerns is not only the great amount of knowledge and testing that is needed, but also the very large and expensive equipment required to obtain best results. Small- and medium-size farmers especially are limited in making expensive equipment purchases at this time, even though advanced practices may be appropriate in the long run. Additional resources for testing various practices and evaluation of these practices are badly needed. The future of Utah's agriculture depends on maintaining productivity and in being able to produce at competitive costs.

Advantages.--Conservation tillage has the potential to greatly benefit individual farmers where it is adapted by reducing production

costs. It has, in addition, potential for substantial social benefits by curbing erosion and pollution and also, by increasing production, has the advantage of providing additional benefits to sectors linked to agriculture.

Disadvantages.--Additional resources are needed for feasibility tests and for equipment that might be leased or used on a cooperative basis to stimulate conservation tillage for the benefit of farmers and the public.

Labor Use and Development of Skills of On-Farm Labor

Policy #26: Conduct manpower needs study for agriculture as a basis for training and counseling

Description.--There are frequent swings in the demand for and supply of workers in particular fields. In order to provide the technical training, a study of the needs and opportunities in agriculture would be appropriate. As agriculture changes to a more technical diverse operation, it may become increasingly difficult to meet the manpower needs. It is unfair to train people in a multiyear program for jobs not likely to exist.

Advantages.--The human and social cost of failing to prepare for jobs in fields of opportunity are immense. Avoiding mistakes by even one or two people could pay for the study.

Disadvantages.--The future can be forecast only with limited accuracy. No study of this type can be completely accurate.

Off-Farm Employment

Policy #27: Counseling on leaving the farm

Description.--In many cases, the trend on farms is such that the

farmer may be well-advised to consolidate his situation by disposing of part or all of his farm assets. He may now have some chance of departing with some net worth while a continuation may be seen to be harmful both to the farmer and creditors. In some cases, the real problem is excessive captialization in machinery and improvements. It is likely wise to seriously consider the options if the equity position is under 50 percent of the current value of assets.

Advantages.--Farmers, creditors, and the remainder of the farm sector may benefit from early removal of unsuccessful farmers.

Disadvantages.--This may be so unpopular a topic that a program could be met with great resistance.

Farm Loans

Policy #28: Establish an agricultural and small business development act

Description.--This act would establish a public corporation to promote development of agriculture and small businesses in rural Utah through the use of tax-exempt bonds. Funds are provided for capital improvement. Management assistance could be provided. Missouri has a law that may serve as a model.

Advantages.--Funds are available at interest rates lower than are obtainable elsewhere. The act should prove beneficial to young farmers and others as they seek to find capitalization for their operations.

Disadvantages.--There is considerable risk in this kind of operation. Great care will be needed to maintain the capital base and to maintain high ratings on the bonds.

Policy #29: State bonding for farm expansion purchase loans

Description.--Some of the potential for a surviving and viable

agriculture is dependent on expansion of many farms. Under this policy, the state would actually sell the bonds that would then be used to undertake actual farm purchases. The process is relatively simple in that the state would make available to the public "bonds" that would be purchased by individuals, companies, or counties. The money from the sale of those bonds would then be used to finance farm purchases.

Advantages.--The benefits from such an approach would be that the rates that would have to be repaid on the bonds would likely be significantly lower than those rates obtained through commercial lending agencies.

Disadvantages.--The problems are that the state essentially assumes the risk associated with the new land purchases. Furthermore, there is likely to be a strong negative response from the "commercial" lenders. Finally, such an action would not represent the true cost (risk) associated with farming.

Policy #30: Farm loan guarantees

Description.--Under this policy, the state would not actually issue the funds for farm purchase or operation but would, instead, guarantee that the commercial lender would be paid should the farmowner default on the land or operating debt thus incurred.

Advantages.--The most obvious benefit is that the state is not in the business of generating funds for farms that would directly compete with the commercial lending sector. Furthermore, it may enhance that lending activity as the risk to the commercial lender is reduced.

Disadvantages.--The state must be reasonably certain (or provide other means) whereby payments can be made in the event of default for either operating or purchase loans.

Policy #31: State regulation of the lending sector

Description.--This can be done by imposing interest rate ceiling restrictions or subsidies on the lenders. If interest rate ceilings are imposed, funds for agriculture will be scarce. That is, if the rate of return allowed is specified (as measured by the rate of interest payable) without also specifying that certain funds must be available for farming activities, then the funds will go to the most profitable business ventures and it is unlikely that those most profitable business ventures will be agriculture.

Advantages.--Increased credit at a lower price should be available if a subsidy to the lending sector is allowed, then funds should flow from the lenders into agriculture.

Disadvantages.--The cost to the state of such an action could be quite significant. That subsidy would have to be paid from general tax revenues. If the political body determined that it were important enough to the state to provide those sort of incentives in order to maintain employment or for some other reason, then it will have determined that the benefits from such a program are greater than the costs of maintaining the program--at least from the perspective of the political body.

Taxes**Policy #32: Continuation or expansion of the Farmland Assessment Act**

Description.--Rising property taxes have a negative effect, especially on the midsize family farm. While property values may rise on the fringe of urban development, those who wish to remain on the land incur a higher tax burden. There have been cases where those who want to continue farming are forced to capitulate to development pressures to

meet tax payments. Many programs are available to states to encourage owners to keep land in agricultural use. The current program of the Farmland Assessment Act (Greenbelt) provides help on this point.

Other similar programs are available besides the preferential assessment alternative. Some states use a deferred taxation program which imposes penalties if a farmer converts to nonagricultural use when the land is under agricultural assessment. Though Utah's law provides for maintaining land in agriculture to some extent, the period of time for agricultural use could be lengthened and the penalty could be increased to an amount greater than the payment of taxes that would have been paid if the land had been assessed at its market value. One state provides for double the extra tax due, for instance.

Restrictive agreements are also a method of differential assessment. These are formal agreements between farmers and local governments in which the farmer agrees to keep the land in production for a set period of time in return for an assessment based on agricultural use. Stiff penalties may be imposed for breaking the agreement.

Advantages.--The preferential assessment program is helpful in a longer run and is useful in cutting costs when farmers are so tightly constrained in the cost-price squeeze.

Disadvantages.--The effectiveness of these programs continues to be debated. In general, the impact seems to be a minor change in the conversion of farmland in the long run. There may be some delays in change in a shorter run. There is a fairly significant positive impact on farm income.

Policy #33: Reduction in estate taxes

Description.--One of the most difficult problems in agriculture

is the need to refinance the capital of each generation. High levels of estate and inheritance taxes exacerbate the problem. The downward adjustments in estate and inheritance taxes have tended to keep farms operating. Federal estate taxes have been changed so that assessments are based on use. Also, exemptions have been raised to provide for keeping taxes low enough to avoid forced sales to pay taxes. Utah has been a leader in providing for credits and exemptions in estate taxes.

Advantages.--A favorable tax climate serves to make enterprises such as farming more attractive to potential investors. This brings about efficiency in agriculture.

Disadvantages.--There is loss of a potential source of revenue in the short run, although in the long run other economic benefits to the state may overshadow this problem.

Policy #34: State income tax credits

Description.--State income tax credits can be used to entice farmers to participate in many desired programs. Land preservation, land conservation and erosion control, and water management and pollution abatement are examples. These could work very similarly to investment tax credit and depletion allowances in the tax system to bring about incentives to accomplish particular objectives. The policy can be adopted by establishing certain criteria such as maintaining land in farming or adoption of certain erosion control or fertilizing practices in order to qualify for the credit. These programs are designed to provide sufficient private incentives to accomplish social goals. In many instances, the private incentive is lacking due to lack of profitability. Other program have been accomplished with similar motives. Energy tax credits for energy-saving home improvements is an example.

Advantages.--In many cases, desired social objectives are not accomplished because of lack of private profitability. Sometimes capital and labor shortages are also contributory. If a desired goal is almost, but not quite, profitable to the individual, then a tax incentive may be highly appropriate to cause private and social interests to coincide.

Disadvantages.--A drawback is that a present lack of farm profitability reduces taxable income to a point where many farmers find little incentive in an income tax credit.

Policy #35: Lower business taxes

Description.--The tax structure could be altered to effectively lower the cost of doing business in the state of Utah. Tax changes which may be beneficial would include adjustments in tax rates, allowing certain types of tax write-offs, or allowing tax-free activities such as bonding.

Advantages.--The benefits should be rather obvious. The costs of production may be lowered. Theoretically, industries supporting agriculture should locate where the full costs of production are lower.

Disadvantages.--Changes in the tax structure have not proven overly effective in bringing about plant relocation. Taxes generally are considered to be a secondary inducement as opposed to a primary or principle location inducement.

Extension Training Programs

Policy #36: Provide additional extension activities in farm management and recordkeeping

Description.--Perhaps the most serious problems faced by farmers are in the management area. Very few are trained to use the

recordkeeping management information to enhance their profitability. Mistakes in capital purchases and resource combinations are especially troublesome. The Extension Service has very few people who are trained to provide the needed assistance. Additional resources are badly needed to assist and train farmers in sound management and decision-making practices.

Advantages.--The advantage of education of this type is that efforts are multiplied. Training has the effect of bringing several others to increased competence so that many are benefitted. This is superior to providing a service without training.

Disadvantages.--Many mistakes have already been made. All that can be done is make the best of the current situation. Cost is always a consideration and concern.

Policy #37: Formation of farm management associations

Description.--In a number of states, quasipublic groups have gotten together to form farm management associations. These associations provide an opportunity for farm extension personnel and other farm specialists to work closely with an association rather than with individuals. It also allows the group to buy computer software as a group and use it together as a group. There are other cooperative kinds of things that may be done. They also provide something like other user groups--some help one another in terms of solving problems. Some pooling of resources may be accomplished such as in Wayne County. It was not called a farm management association, but some ranchers got together and bought feed in a semiload at substantial savings to all of them. This is somewhat of an Extension Service function but the

Department of Agriculture might seriously consider encouraging the development of associations.

Advantages.--The formation of these kinds of farm management associations have the potential to reduce costs and improve the management of many areas.

Disadvantages.--There is always a cost to group action. Some may be unwilling or even unable to participate in common approaches.

Farm Structure Adjustments

Policy #38: Organizing small and part-time farming units into cooperatives

Description.--Cooperatives are business entities owned and operated mainly by those using the goods and/or services. Cooperatives generally possess some type of capital (buildings, land, etc.) and usually employ a manager to run the day-to-day operations of the business under the guidance of a board of directors elected by the owners. Other possibilities are simply to jointly own productive assets such as machinery or breeding stock. Examples of large successful cooperatives in the state include Western General Dairies, Norbest, and Producers Livestock Association. Other small cooperatives exist in local areas in the state, most of which are production-oriented. Examples of these include Green River Melon Growers and Canyonland Fruit Growers.

Of Utah farms in 1982, 77 percent had sales of less than \$30,000. These small- and part-time operators represent a good share of the farmers in Utah and obviously represent the largest agricultural clientele in the state. These farmers present special problems for state and federal agencies attempting to serve their needs since these farm operations are generally too small in size to capture full benefits of the

economies of size associated with adoption of new technology. Many of these farms may be overcapitalized from an efficiency viewpoint. These farmers are also unable to take full advantage of risk management tools, i.e., forward contracting, futures contracting, options, volume shipments out-of-state for sale, etc. These several factors force these farm operators in many cases to heavily subsidize their farm operation with off-farm income or to leave agriculture entirely.

Advantages.--It is possible that greater cooperation (both formal and informal) will aid small farm operators in staying in agriculture. Farmers are able to pool resources to purchase new or more efficient technology. This may take many forms from purchase of equipment for use among several farmers (e.g., combines, no-till drills, etc.) to purchase of plant and equipment for further processing of the product. Bulk purchases of fertilizer, pesticide, herbicide, etc., are also possibilities.

Marketing may be one of the greatest advantages of cooperation to small farm operators. This may be accomplished through existing formal cooperatives or creation of new formal or informal cooperatives in outlying areas or where commodities other than milk and grain are concerned.

Disadvantages.--Several problems exist in bringing small production units into cooperative organizations. First, producers must perceive the need to cooperate and be willing to trust and work with their local peers. This may be difficult unless economic conditions force people to cooperate together. Second, financing may be difficult if the farmers want to maintain local control of the cooperative but need outside investment to meet minimum equity borrowing requirements. Third, long-term legal (contractual) agreements between the cooperative

and farmers may be difficult to obtain. These agreements are a must to ensure volume if any amount of plant and equipment are to be purchased by the cooperative(s). Fourth, quality control and grading must be rigid for the group to build a reputation. The individual investment in time and capital necessary to develop the capacity to produce a top quality product may be more than is economically feasible for some small operators. However, good markets may sometimes be developed for less than top quality products if quality is consistent and specific markets are pinpointed.

Marketing of Agricultural Products

Utah is in an isolated market for virtually all of its agricultural commodities. Out-of-state shipments are critical needs of producers to maintain market efficiency and competition. Shipments to alternative markets are most efficient in bulk. The required volume may only be obtainable through pooling production. Generally, negotiations with buyers yield greater prices if relatively large quantities (and quality) can be guaranteed. Farmers acting in concert could also enter contractual agreements to reduce price risk that could not be entered individually.

Market Institution Changes

In an earlier report relating to this research effort, much was said regarding the characteristics of the market for Utah's agricultural sector. In general, the conclusion was that the market is not particularly competitive, and, in some cases, it is almost monopolistic or monopsonistic. At least part of the problem is that Utah's market for most, if not all, commodities is quite thin. That is, there is simply

not enough volume traded to justify one of the major conditions of competition--a large number of buyers and sellers must be in the market together so that neither can influence any control on the price. Consequently, from a public policy perspective, it would be well to examine some policy options that might be implemented to correct the inefficiencies found in these markets. The following policy options will be discussed in further detail: improved flow of market information, participant control or regulation, guaranteed or mandated rates of return, and public ownership of certain industry segments.

Market information

Policy #39: Improve the availability, accuracy, and timeliness of market information to all market participants

Description.--Utah agricultural producers operate in an isolated market. Besides the Wasatch Front, no major population centers exist for 500 to 700 miles. No major vegetable processing plant exists in the state, only a handful of grain mills and one major meatpacking plant. In this type of situation, market outlets become critical.

Processors understand this situation and have been able to establish price differentials based on transportation and other costs between markets. The result is lower prices for Utah commodities than surrounding areas.

State and federal agencies can and have played a significant role in offsetting this imbalance through the dissemination of timely and accurate information to the public by various information systems. These systems include outlook information, long-term weather, etc. The newest information system available to Utah agriculturalists is the Computerized Information System (CIS). CIS provides daily reports of

cash and future prices for agricultural commodities together with other important information.

Extension and the Department of Agriculture should play a critical role in the future in paving the way for adopting new technologies in both production and marketing. Information systems will be an important vehicle in this educational process.

Advantages.--Economic theory tells us that the price discovery process is most efficient (beneficial to society) when traders on both sides of the marketplace have access to as much information as possible. Economies of size exist in information gathering and dissemination. Thus, processors tend to have informational advantages over producers due simply to their size and methods of operation. This offsets the balance of power in trading and may lead to losses in overall societal utility. It is availability of such information to all participants that allows the market to operate efficiently. If information is not available to all, then some participants will take advantage of others. The social cost of that action may be much greater than the cost of providing the information to all participants at public expense and insuring that the market operates efficiently. This can be done through state and national crop and livestock reporting services, commodity groups, university extension services, and other collection, analysis, and dissemination activities. The benefits are that the market participants are informed and should, therefore, make those decisions in the marketplace that will insure an efficient flow of products from the producer to the consumer.

Disadvantages.--An obstacle to more efficient use of information is simply the nonuse of information that currently exists. A major need for education programs exists to teach the public concerning the

importance and use of information. Many old habits (especially in the area of marketing) need to be scrutinized by producers to determine if the optimal amount of information is being used to make decisions. Information acquisition is not costless. It often is not economically feasible for each individual to collect and analyze all available information. Consequently, those participants with the greatest wealth, most profitable operations, or largest size are able to access available information. Other producers and processors who also need to have that information in order to operate efficiently in the marketplace can often not afford to pay for it. There are substantial costs to maintaining the information system.

Policy #40: Distribute educational materials dealing with marketing principles

Description.--The management emphasis in agriculture has usually been heavily weighted toward production strategies. This is understandable considering the great strides in technological development that have been accomplished, especially in this century. Farmers have, of necessity, adopted production technology at an accelerated rate to remain competitive.

Marketing considerations have received limited attention when compared to production considerations. This may be attributed to a number of factors including a slower rate of technological development in the marketing area due, in large part, to fewer research funds in the private and public sectors being devoted to marketing technology. A slow acceptance rate by farmers of alternative marketing strategies is also evident. Generally, market access and outlets are becoming an increasingly difficult problem at the farm level.

Much of the price risk in the marketing channel is being shared unevenly with the farmer bearing a disproportionate share. This is due to the nature of the marketplace. Since the demand for farm goods is, in many cases, less elastic than demand for processed products, changes in price at the retail level are not shared equally.

Many processors are developing or have developed formula pricing strategies (basis contracting, etc.) which greatly reduce the price risk associated with inputs. Conversely, producers, for the most part, have been slow in adapting to this new environment and in developing strategies to either enhance prices received and/or reduce price risks.

Advantages.--Education materials developed by various agencies and groups can aid farmers to become more efficient marketers. This would include materials and workshops dealing with overall risk management, cash and futures market strategies, options, forward contracting, etc. A major thrust of any education program in this area should be to emphasize that financial, production, and marketing decisions should be undertaken in some type of overall management framework and not considered as being mutually exclusive.

Disadvantages.--Not all producers will respond to educational efforts. Many, perhaps those most in need, lack preparation for this approach. Also, problems with many producers are in lacking sufficient volume either to provide for adequate income or cash flow or to warrant special marketing procedures.

Changing Market Structure

Policy 41: Establishment of marketing pools

Description.--Marketing pools are organizations which gather production from several sources into a single group or number of groups

for marketing purposes. Pooling can be done through a cooperative or through producers acting as a group.

Pooling allows small and intermediate size producers to sell in quantities that attract larger buyers and often higher premiums. Pools operate most effectively if subpools are formed on a quality or type basis. This allows for separation of markets through grading and generally will yield greater revenues than if no sorting by grade is done. It also encourages producers to produce high quality if premiums are paid for products that grade high. Examples of pooling include wool pools, turkey pools, etc.

Advantages.--Pooling may be an effective way for small producers in the state to offer large enough lots of the right qualities to larger buyers. Wool pools have been an important method for helping small producers to sell their wool at market prices rather than taking large discounts for small amounts of wool.

Most commodities can be pooled. For example, livestock (especially for shipment), fruit, hay, etc., could all be pooled. Pools would allow for shipment out-of-state at reduced rates and would assure better market access through adding additional market outlets for producers.

Disadvantages.--Pooling may present some challenges. Maintaining the identity of products in the pool is difficult unless rigid grading and identification takes place upon delivery to the pool. Pools also tend to be "passive marketers." For instance, aggressive marketing strategies may not be undertaken by pools, i.e., market expansion, contracting, etc., unless full-time staff (as is the case with cooperatives) are attempting to improve markets.

Pooling also may lack support during periods of high prices unless marketing agreements between the pool and producers are signed. This maintains loyalty and allows the pool to gain a reputation as a dependable supplier. Many producers prefer to make their own marketing decisions and may be unwilling to enter marketing agreements.

Policy #42: Marketing channel participant control or regulation

Description.--Under this policy option, the state would regulate what business practices could or could not be followed. They might go as far as to regulate those who are allowed to participate in the market. Participants might be bonded or licensed. This would allow only those meeting certain criteria to participate. Basically, this policy suggests that while the buyer (or seller) may still need to be aware, some problem participants have already been excluded from participation. Other forms of control or regulation might dictate who can be involved in certain connecting business (such as suggested in the Packers and Stockyards Act). That is, if a person owns a processing facility, they may be barred from owning a production operation.

Advantages.--This has the effect of preventing the concentration of too much market power in the hands of a few individuals and reduces the amount of control exercised by those individuals. This type of policy option is frequently used by public agencies in order to prevent the abuse of market power. Virtually all of the antitrust legislation is based on this form of public policy.

Disadvantages.--In some cases, there may be loss of participants in the marketing channel because of the increased bother and control of the industry. This would lessen the efficiency of the system.

Policy #43: Guaranteed or mandated rates of return

Description.--As a policy option, the state may want to suggest that returns of not more than nor less than a given percentage may be earned by market participants. That way, if excessive market power was being exercised in a particular market and rents were being extracted, the state could direct that particular participant to adjust his/her business practices. In the event that the rate of return was not up to that suggested, then some form of help could be provided.

Advantages.--This policy could assure that monopsonistic (one buyer) profits would not occur.

Disadvantages.--The major problem with this latter type of regulation is that there would then be no market pressures for changes resulting from shifting demands or other factors. This would be extremely difficult to enforce. Furthermore, since everyone's cost structure is not the same (level of indebtedness, management ability, etc.), it would be virtually impossible to determine a "normal" rate of return on investment.

Policy #44: Public control of various industrial sectors

Description.--In rare instances, mostly in the case of natural or legal monopolies, there is a need for actual public control of a particular industry. For instance, utilities are often either owned or controlled by the public sector. The control occurs because there is little, if any, opportunity for new firms to enter an industry. Consequently, in order to eliminate the possibility of market manipulation, the existing firm(s) are regulated so that rates of return may not exceed certain agreed upon levels.

Advantages.--Again, producers could be protected from private firms taking unfair advantage and making excess profits because of market position.

Disadvantages.--While this does reduce the possibility of misuse of market power, it also suggests that the firm may be slow to respond to changes in demand or supply considerations. Consequently, even publicly regulated firms often remain very inefficient.

Policy #45: Direct market intervention

Description.--In the event that excessive power is being used by one or more participants, the state may choose to assume a role of an enforcer. Essentially, a firm would not be allowed to operate unless or until it could show that it was operating efficiently. That is, the burden of proof could be placed on the part of the offending party to show that efficiency was being maintained. The state may have to act as a marketing agent and represent smaller producers. It is possible that the state could act on behalf of the smaller producers, charge a reasonable fee for that representation, and no money would be required from general tax revenues.

Advantages.--If the inefficiencies resulting from a thin market are significant enough, then the intrusion may be justified. The smaller producers would likely gain if such a policy were enacted.

Disadvantages.--Some of the existing brokers would be harmed. The cost of enforcement could be significant and would likely have to be paid from general tax revenues. This sort of direct market intervention would not be viewed favorably by those already earning their living buying and selling various commodities. They would likely view this as an unwarranted intrusion into the private sector.

-d Policy #46: Establishment of grades and standards

Description.--The state may choose to take an active role in the establishment and enforcement of grades and standards for various commodities. One thing that has become increasingly clear is that the out-of-state market expansion possibilities for most fresh fruits and vegetables are tied directly to the nature of grades and standards implemented and enforced by the state from where the products originate. It is important that all producers be subject to the grades and standards in some form or another. Otherwise, those not subject to the stricter grades may function as a "free rider" on the grades enforced on others.

If such a policy is implemented, some thought must be given to how the poorer quality fruit is to be disposed of without causing substantial harm to the smaller producers. One option would be to allow locally sold produce not to be designated according to the implemented grades. Another option is to provide another marketing avenue for that lower quality product, such as further processing.

Advantages.--The primary benefit of enforcing strong grades and standards is that the product can become differentiated in outside markets. As discussed earlier, as a product becomes more differentiated, the price that the producer is able to capture also is higher. It does send a clear signal to potential buyers regarding the type and quality of fruit that will be available. As the risk associated with fruit purchases is reduced, the price would be expected to be improved.

Disadvantages.--The primary problems associated with such a policy are that the prices received in local markets are likely to be somewhat less than received previously. Significant administrative costs also can be incurred if such a policy was implemented. Some, if not all, of those costs can be captured through an inspection fee

charge. If such standards are implemented, there likely would be problems for that portion of the commodity which is sold in-state. Most of that would be inferior quality since it is almost as costly to ship a product of inferior quality as of superior quality. Therefore, the best products would likely be exported. Most of the large commercial operators, those exporting, will be supportive of strong grades and/or standards. However, the smaller producers, those marketing the products locally, will generally not be in favor of the strong grades and standards since they must identify their locally sold produce as an "inferior" product.

If poorer quality fruit were allowed to be associated with those grades and standards, the entire industry could suffer. The implementation of such a policy obviously reduces some of the property rights (freedom to sell) traditionally associated with agricultural production.

Policy #47: Providing grading and/or marketing services without cost to producers to improve Utah's quality and marketing position

Description.--The state could provide a subsidy in the grading or marketing of certain commodities with some export potential. That subsidy could be provided during an expansion phase or on an ongoing basis. Grading and marketing subsidies both effectively lower the cost of producing a commodity. Such a policy could provide a benefit to those producers and processors of commodities for which there is at least some possibility that a market share may be gained. However, care must be taken not to extend such a policy to those products for which there is little likelihood that Utah would eventually be able to capture at least a portion of the market.

Advantages.--Some subsidies may serve to improve the quality of the product marketed. This is particularly true of grading subsidies.

As the product becomes distinguishable from others on the market, the price paid should improve accordingly.

Disadvantages.--The disadvantages are mainly those associated with the establishment of grades and standards and the costs of providing such services.

Policy #48: Promotion of further processing of raw products

Description.--Further processing of raw farm products in the state can take on two forms, i.e., processing by private corporation or by forward integration by farmers into processing, distribution, etc. Many products are shipped in raw form from the state, raising possibilities for further processing. Except for milk, where large processing plants do exist, these plants are few in number which raises questions pertaining to competitive prices being paid for inputs. As long as raw commodities are being produced in the state and prices being paid are lower than surrounding states and regions, questions about further processing will exist.

Studies regarding possibilities of further processing will need to deal with questions of size, volume needed to be competitive, willingness of producers to sign marketing agreements, whether further processing should be undertaken primarily by private concerns or agricultural cooperatives, and what forms or degrees of further processing are economically feasible.

Advantages.--If further processing plants are economically feasible, then increased competition between processing plants should increase prices paid to farmers and an active recruitment program should be undertaken to develop this industry. If further processing in any particular commodity is not economically feasible in the state, the

producers should be told why, e.g., lack of producer support, lack of needed volume, unable to finance, transportation costs to consuming areas too high, etc. This would help producers understand what action, if any, can be taken to change the current situation. They could then attempt to influence policy makers if necessary to make changes that would enhance the ability of the processing industry to grow in the state.

Disadvantages.--As in most new enterprises, there are costs and risks. In Utah, great care should be taken that the competitive conditions associated with small and diverse production units do not cause a fundamental lack of profitability.

Product Promotion

Policy #49: National and regional promotions on specialty items

Description.--Interest in the state regarding the development of specialty products has increased. Examples of specialty items in the state presently being produced or being considered to be produced include canned trout, cherry raisins, wine for wine "coolers," etc.

Other items may be promoted as specialty crops. For example, high quality cherries (both tart and sweet) are grown in the state. However, little is currently being done to promote name recognition for Utah cherries or other fruits. Some individuals also see Utah as developing a regional or national reputation for its apples, such as the state of Washington has done. This type of recognition for quality requires several things. For instance, a rigid grading system to ensure high quality and to separate produce into different markets. A large enough volume to supply demand for particular qualities of produce is needed to establish markets.

Advantages.--Utah produces few high-value crops. Most livestock production requires extensive use of land for feed crops. A market for high-value crops presents additional income opportunities for farmers and for processors and marketing firms.

Disadvantages.--Commitments (both legal and monetary) are required of producers to promote the products. If these things are lacking, difficulty may arise in maintaining current markets and also developing larger markets for these products.

Policy #50: International promotion of exportable Utah products

Description.--Much interest has been generated regarding developing export markets for Utah products. It should be noted that some Utah products are currently being exported, including turkey and alfalfa hay (both products are mostly being exported to the Far East).

Generally, crops or products where Utah holds some type of comparative advantage over West Coast states (i.e., alfalfa hay, turkey, etc.) may hold the greatest export and market expansion possibilities. Market development for these types of products should be pursued. However, developing export markets are unlikely the best major goal in a well-rounded policy approach to help Utah agriculture. Maintaining the perspective that agriculture must first be successful at home with export markets providing an extra premium in the marketplace for producers is essential if policy decisions are to be considered in a practical framework.

Advantages.--Expansion of export markets could help Utah agriculture if reliable outlets are developed. This is usually a long and difficult process as relationships must be established with foreign contacts or with domestic businesses that already export the same or

related products or who are willing to market new products overseas. Competition for these outlets is usually keen as other groups also attempt to expand their markets.

Disadvantages.--Export markets have been fickle in recent years with the fluctuations of strength and weakness of the U. S. dollar. Competition in livestock and grains from producers in other countries also has been a significant factor in international trade.

Policy #51: Establishment of an agricultural trade cooperative

Description.--Numerous small- to moderate-sized agricultural and agribusiness interests are provided with an opportunity to join together to develop a mechanism to gain access to export markets. The cooperative could offer the expertise and technical assistance to allow firms to realize benefits now accruing only to major corporations. The Utah Department of Agriculture has an emphasis in export activity that could be brought to fruition for the agricultural and agribusiness communities of the state.

Advantages.--It seems likely that a coordinated effort will enhance the success of the multiplicity of backgrounds and interests in this field.

Disadvantages.--Some costs will be incurred. Time will be required. The success will depend on patience, persistence, and time.

Policy #52: Sponsor special product promotions

Description.--The policy might be as broad as to actually direct and finance particular product promotions or as narrow as to coordinate such an activity. Recent examples of such an effort are the Rocky Mountain lamb promotion efforts initiated by several western states and the Utah lamb promotion. The effect of such a promotion may be to

increase the awareness of consumers (and sales) regarding the availability or quality of a particular product. Essentially, an attempt is made to differentiate a state's products from products produced in other areas. This can be successful if the product can somehow be "differentiated" from similar commodities produced elsewhere. "Name" or "brand" identification is the essence of this policy.

One set of criteria for determining possible candidate products would be financial position, willingness to work on a cost-share basis, or potential for differentiation or expansion. It should be noted that some states have been very effective in organizing "commodity commissions" which initially receive some funds from the state but later become largely self-sufficient. This provides a way of bringing producers of similar products together; something that rarely occurs without this or a similar organizing framework.

Advantages.--If such a differentiation can take place, the effective market and demand is increased for a particular commodity. This should either improve sales, increase price, or both.

Disadvantages.--For many agricultural commodities, required differentiation is almost impossible to attain. Many agricultural products are so similar that little product differentiation is possible. Difficulties often arise in deciding which products to promote.

Transportation

Policy #53: Reduction in interstate transportation regulations

Description.--The move towards deregulation in the transportation industry affects agriculture in the areas of trucking and railroad transportation. Two pieces of legislation have had an effect on the transportation of agricultural products in recent years.

The Motor Carrier Act of 1980 reduced the restriction of transportation of agricultural products by motor carriers. However, this did not affect grain and livestock which were already exempt. However, products such as feed concentrates and other blended feeds were affected.

The Staggers Rail Act of 1980 increased the ability of railroads to determine rail rates. It also allows shippers to contract with railroads on an individual basis which was not allowed previously. This act may have an effect on the long-term price movement of grain. Since an impact on transportation costs will be felt, it is possible that the current competitive advantage of markets (local and terminal) may be affected.

Advantages.--The net effect of deregulation should be a reduction in overall transportation costs for agricultural products. This may enhance Utah's competitive position to some markets (especially the West Coast). Decreased transportation rate should reduce the costs of feed concentrates and other products shipped into the state. However, little data exists to document the possible effects of deregulation on the state.

Disadvantages.--Deregulation may hurt Utah's markets in other places (especially to the east) due to increased competition from mid-west sources.

Processing

Policy #54: Tax breaks, interest subsidies for transportation systems, etc.

Description.--Transportation outlets must be considered a critical part of the marketing channel in Utah. Perhaps even more so than other regions due to the isolation of Utah from major markets.

As market outlets for farm producers in the state are reduced in number, it becomes increasingly important to maintain good transportation systems to out-of-state markets. This maintains competitive prices in the state. Processors have been able to establish price based on transportation differentials between markets since little competition exists among buyers for many of the crop and livestock products raised in Utah.

One method to decrease the price differentials between Utah and other regions for agricultural products is to reduce transportation costs between Utah and other markets. This could be done through some type of export subsidy directly to the producer, tax breaks to transportation firms, etc.

Advantages.--The cost of placing any product into a market is comprised of the production cost plus processing and transportation. Reduction in cost in any phase makes the product more competitive in the market.

Disadvantages.--Any subsidization has some problems. Subsidies tend to increase production. Increased production in a market already at some comparative disadvantage may be unwise unless some long-term plans built around practical goals is developed. Costs and benefits would need to be clearly outlined since a reduction in the costs of out-of-state shipments will have adverse effects upon the processing community in the state.

Policy #55: State conducts feasibility studies for processing plants

Description.--A number of proposals are always forthcoming each year regarding new industries or expansion of existing industries. These proposals usually emanate from local or community interests, or

even the interest of a private party. In many cases, the proposals are not seriously considered, because a detailed feasibility study is needed to test their merit. Few individuals or local communities have the expertise or financial base to conduct these studies. An "expert" panel for screening and some funding for promising development projects may be the appropriate course of action.

Advantages.--A growth in new business generally spreads benefits throughout the economy. The wage rate of labor within Utah is substantially lower than that found in many of the competing regions, the work ethic is very strong in the state, and land for facility siting generally will not pose a significant problem. New enterprises would increase wages and other earnings.

Disadvantages.--The principal problems with such an approach would be that the cost of undertaking such studies can range from a few thousand to several hundred thousand dollars. That money must be obtained from general tax revenues unless a policy also was implemented which allowed some of the funds from a severance tax, or other use tax, to be allocated to the development of more "renewable" type industries. Wyoming has instituted a similar policy with a portion of their severance tax revenue but has directed it towards water development. A second problem is that some sectors of the economy would be benefitted more than others. A third problem is that many such studies might have to be done before such an industry could be attracted to Utah. Evidence does suggest, however, that Utah does have several advantages in such an industry.

Policy #56: The state would undertake a policy of acting as the contractor for a processing industry or facility

Description.--Under this policy option, the state would become

involved in the actual construction and development process. Obviously, this requires a greater commitment than does the previous policy. The plans to be implemented could be developed by private firms or organizations or the state might actually combine a policy of undertaking feasibility studies along with serving as the principle contractor of such facilities. The state should only be concerned with those types and sizes of operations which can compete in the marketplace. Some industries require such large investments in capital equipment and facilities or the size of those facilities are so large that it would be nearly impossible for Utah to furnish or provide enough commodities to actually maintain efficient operating capacities.

Advantages.--Once again, local or area economies would be the primary beneficiaries. The state would, in effect, take some of the risk that normally would have to be carried by others. This should reduce the cost of development and operation to those interested in the development of such facilities.

Disadvantages.--The primary costs or problems with such an approach would be that it would require significant funds from the state's population. There is no guarantee that such a facility would, in fact, become operational. Considerable work would be required in developing and maintaining appropriate industry contacts. The state's population would also carry some risk since the state would be responsible should the project never be finished or not become viable.

Policy #57: The state participate in processing facilities on a cost-share basis

Description.--Under this policy option, the state would actually participate with potential or prospective participants in developing the

industry on a cost-share basis. That cost-share basis could be on a grant or loan basis. The loans could be provided at a less-than-market rate through a loan guarantee program or a revolving fund set-up. A careful analysis would be required to determine if the anticipated benefits could outweigh the costs of such a program. To the extent that the products were exported from the state, it is possible that the gains would be greater than the costs.

Advantages.--The effective cost to potential participants would be reduced; in some cases, substantially reduced if the risk were likewise reduced. Local and area economies would likely benefit assuming that proper effort was put into the development process.

Disadvantages.--The major problems with such an approach are that the state would become liable for its share of the financial obligations of the project. Furthermore, this would reduce the amount of state funds that would be available to conduct other necessary state business activity.

Policy #58: The state would provide funds for processing plants at less-than-market interest rates

Description.--This could be accomplished through a revolving loan fund, legislation restricting loan rates, loan guarantees through commercial sources, or direct loans from the state.

Advantages.--This, once again, has the potential of lowering the effective developing and operating costs. The benefits from such a program are that the risks to the state are fairly small (given that a proper development plan has been conceived) and costs to potential industries could be substantially reduced.

Disadvantages.--It is well to note that any form of subsidy must be accounted for or paid for in some manner. Some might also suggest

that the allocation of funds for such a purpose is inappropriate and that other industries should be provided equal access to those funds or rates. The state must be careful not to jeopardize its financial solvency with an extended use of such funds.

Direct State Incentives for Agriculture

Policy #59: Establish a research assistance act

Description.--This would be a legislative initiative for the purpose of promoting and funding research projects particularly in the university system which would enhance employment opportunities, stimulate economic development, and encourage private investments. The act could allow but not require matching funds from the private sector. To qualify, research projects must be in the area of agriculture, natural resource management, industrial processes particularly relating to agriculture, or related topics. The act could provide for solicitation of proposals for research activity which would enhance employment opportunities in the state. The state of Missouri has enacted such a law.

Advantages.--This act could play a significant role in encouraging research activity to provide the basis for desired economic growth. In connection with a long-term development program, very handsome payoffs can be expected.

Disadvantages.--As always, funding will be difficult and somewhat limiting.

Policy #60: State-sponsored commodity price supports

Description.--Under this policy option, the state would institute a policy such that the price of various products would be guaranteed at certain levels. Only certain new or high-value crops would be

considered. If such a policy were instituted for a relatively short-term period, eventually, an adjustment of market pressures would have to be made.

Advantages.--Producers and processors could be protected while an industry is developing. Start-up costs and uncertainties that inhibit development of new industries could be offset as mitigated.

Disadvantages.--There is no assurance that benefits would go to both producers and processors. It is possible that the state could be helping to formulate a market that would not be very competitive in that a single processor might emerge with significant market power and extract some "economic rents." A significant problem with this policy approach is that there is no incentive (market pressure) to force the industry or facility to operate efficiently.

Policy #61: The state could participate in the development of necessary infrastructure or services

Description.--In this case, infrastructure is considered to be any of the services that are capable of bringing about substantial reductions in operation or investment costs. Necessary infrastructure could include education for the development of human capital, roads and other transportation modes, sewer and waste treatment facilities, water supplies, communications, etc. Much of these are required for the general population. However, some would require additional investments.

Advantages.--In many of the food processing industries, transportation is critical. Consequently, an investment in roads or related items by the state might serve to attract agriculturally related industries.

Disadvantages.--The problems with such a policy are that such developments generally must occur prior to the development of any

industries. Consequently, the investments often must be made without the necessary tax base to support such investments. Furthermore, except for the most general services, a particular investment in sewage treatment may not necessarily meet all industry needs.

State Supported Commissions

Policy #62: Formation of commodity marketing boards

Description.--The formation of a commodity marketing board, or just a commodity board, allows the producer and processor to work together to expand product identification and effective demand. The state could act primarily as a facilitator, providing perhaps organizational help and encouragement.

Advantages.--Such a formation is relatively costless to the state and would provide a commodity or industry focus for particular commodities which can be produced locally.

Disadvantages.--The effectiveness of such organizations depend, to a large degree, on the activity of the participants. The state can exercise little control beyond attempts to organize.

National Policy Impacts

A number of national policies have and are impacting on agriculture. Appropriate analysis and lobbying or other means to continue, change, or discontinue certain policies may be in order.

Policy #63: State stance on federal income tax policies

Description.--The policies of the last several decades have clearly induced large investments in agriculture. Hruborcak and LeBlanc

(1985)¹ indicate that tax policies between 1956 and 1978 stimulated net investment in agricultural equipment by more than \$5 billion and net investment in agricultural structures by more than \$1 billion (1977 dollars). The investment tax credit has probably been the most effective investment stimulant. However, depreciation allowances and other provisions have induced farmers and many with off-farm income to invest in farm assets. State government may impact on continuation or changes in these tax provisions.

Advantages.--Nonfarm capital has driven up the value of farm assets making sales of property more profitable. Certainly, tax savings by farmers have benefitted farmers.

Disadvantages.--The tax provisions have made entry into farming difficult and have caused some instability.

Policy #64: State stance on federal policies impacting on interest rates

Description.--Federal Reserve policies to curb inflation and the very large federal budget deficits contribute heavily to the high interest rates of the past few years. Farmers have been severely damaged by these rates. First, their operating costs have been greatly increased; second, the costs of carrying debt on their productive assets are very high; and third, the value of their real estate and other assets has fallen drastically. Many attribute much of the present farm problem to interest rates. The state, again, may marshal some influence to restrain interest rates to benefit agriculture and many other sectors of the Utah economy.

¹James Hrubovcak and Michael LeBlanc, 1985, Tax Policy and Agricultural Investment, Technical Bulletin No. 1699, Washington, D.C.: U. S. Department of Agriculture, National Economics Division, June.

Advantages.--Nearly all state citizens would benefit from lower interest rates. A consensus would be fairly easy to obtain.

Disadvantages.--One small state may make little difference, but only by amaking a strong statement can anything be expected.

Policy #65: State stance on value of the dollar

Description.--Because of high interest rates and confidence in the U. S. system, there have been large capital inflows which have pushed up the value of the dollar making it impossible for farmers and others to continue a high level of agricultural exports. Foreign consumers find U. S. goods to be very expensive. Commodity prices have fallen sharply because of the glut caused in U. S. markets. State influence would be in order to bring about a more realistic currency valuation. Farmers and others would benefit.

Advantages.--Most people in the state would be benefitted by a lower value of the dollar. A strong stance on this would be consistent with a stand on lower interest rates.

Disadvantages.--Those who buy from and travel in countries where the dollar is high compared to local currency benefit from the high dollar.

Policy #66: State position on national farm policy legislation

Description.--One of the concepts that has become increasingly clear in the past few years is that the farm bill, which has been pushed through the administrative and legislative branches of federal government has become less important in the well-being of Utah agriculture. Other aspects of federal policy, such as the high interest rates and the high value of the dollar, are very much more important to Utah farmers as are embargoes and trade policies which restrict export possibilities.

The state, therefore, in whatever lobbying and policy actions it cares to assume in regard to federal farm legislation, is faced with conflicting interests and questions about whether farm legislation is of enough importance to exert effort. It is clear that the general economic climate for investment and competitive selling in international markets is important to agriculture as well as to the rest of the state's economic sectors.

As a start then, state policy regarding federal legislation may be more appropriately focused on the general economic climate than on the 1985 Farm Bill or other specific farm legislation. Two areas in which specific farm legislation could have a strong impact are in dairy price supports and in grain price supports. But even these areas lack strong support from all farmers. In general, Utah farmers would be at more advantage with free trade and open markets rather than output-reducing farm programs.

Advantages.--There is in Utah a lack of unanimity about farm programs. In general, a grain price support is detrimental to livestock producers. Since 75 percent of cash receipts in Utah agriculture come from livestock sectors, there is antagonism for feed grain supports. Even wheat price supports are suspect since some wheat is fed and wheat and feed grain prices tend to move together. Dairy price supports are less disruptive but cause artificial conditions that may harm some other livestock producers.

Disadvantages.--It is difficult in the short run to receive support from the farm community for lack of active campaigning for specific farm programs. Therefore, following the above approach may be deemed a failure by state government.

Policy #67: State response to movement to the free market in agriculture

Description.--Early in 1985, Secretary of Agriculture, John Block, hosted a televised conference that included four former secretaries of agriculture. This group discussed policies related to farm programs. There seemed to be general agreement that farm programs should be more market-oriented and that conservation and exports should be stressed in any new farm legislation.

Partly because of frustration with excessive costs of various kinds of price support programs and partly because of their lack of providing solutions for long-term problems in agriculture, there is lack of enthusiasm in government for renewing traditional farm programs.

In Utah, because of emphasis in livestock and livestock product sales, traditional farm programs are not universally popular. The state may, therefore, wish to take a position that Utah favors the free market approach.

With the free market approach there is need for opportunism in the kinds of products produced and in the marketing attempts made. Both domestic and foreign opportunities where Utah can compete effectively are important. As an example, the recent Dairy Division Program was harmful to Utah milk producers. More than adequate markets from manufactured products were available. With the diversion, the Utah capacity to produce was reduced so that markets were lost. Some will be hard to regain. On the other side, as open competition is emphasized, expansion opportunities need to be carefully monitored.

Advantages.--With a free market approach (almost a certainty for several years of farm programs) it will be prudent for Utah to be

prepared in appropriate ways to meet this challenge or opportunity as the case may be. A strategy is needed.

Disadvantages.--Some producers will be harmed by a free market approach. It will be difficult to generate support from some places to prepare for an absence of traditional farm programs.

Summary and Conclusions

The state has an excellent opportunity to shape the future of agriculture in the state. There are many policies available in addition to the extensive listing contained in this report. Further work needs to be done in refining ideas and proposals. Thus, the final policy and summary is to develop a state agricultural plan.

Policy #68: Prepare an agricultural development plan

Description.--Utah must provide a variety of incentives to return the agricultural industry to economic vitality. There are many and diverse problems throughout the state. A coordinated plan and set of specific actions that are consistent with appropriate natural resource use and with economic incentives is required. Basically, an improved quality of life is required. A task force appointed by the governor would be most helpful. Representation from agriculture, industry, state government, farm groups, and the academic community would be appropriate. The task force should prepare an inventory of assets, a review of factors impeding progress, and an itemization of incentives that would encourage the best use of assets available. The task force could be charged with considering opportunities having the greatest potential in production agriculture and in agribusiness. They also could be asked

to prepare legislative initiatives required to promote a healthy agriculture.

Advantages.--To fail to plan is to plan to fail. We have no consistent directives, policies, or program. The state needs to enter into consideration of the serious decline in the agricultural and rural sectors if these sectors are to succeed and be viable.

Disadvantages.--Even with the best of plans and state programs, there is danger of lack of success in rural Utah. That possibility must be accepted in making plans.

