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The Northern Alfalfa Seed Picture: Marketing

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*the northern
alfalfa seed picture*



marketing

ECONOMICS DEPARTMENT
AGRICULTURAL EXPERIMENT STATION
SOUTH DAKOTA STATE COLLEGE, BROOKINGS

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FOREWORD

South Dakota has long been one of the leading states in the production of alfalfa seed.

South Dakota alfalfa seed, along with that grown in neighboring states, has commanded premium prices in eastern markets because of its winter-hardy characteristics. This "Northern" alfalfa seed, predominately a non-certified seed, has recently come into competition with certified alfalfa seed grown in such western states as California and Washington. This competition has resulted in a continuing decline in the demand for Northern alfalfa seed in the eastern markets. Accordingly, lower prices have been received by the South Dakota grower for his seed crop.

This marketing problem has prompted research investigations in alfalfa seed production and marketing by the South Dakota Agricultural Experiment Station. This research has dealt with (1) production methods in South Dakota and other areas, (2) marketing methods and problems, and (3) the economics of alfalfa seed production in South Dakota. Each of these phases is treated in bulletin form under the following headings:

The Northern Alfalfa Seed Picture

Part I: Production

The Northern Alfalfa Seed Picture

Part II: Marketing

The Northern Alfalfa Seed Picture

Part III: South Dakota Costs of Production

The Northern Alfalfa Seed Picture

MARKETING

DALE C. DAHL and C. H. BENRUD¹

INTRODUCTION

The purpose of this research phase was to determine the present competitive status of the Northern alfalfa seed producers and dealers and to analyze alternative plans for improving their status. To meet this ultimate objective it was necessary to:

1. Describe the Northern alfalfa seed industry and analyze the factors responsible for the changes in its competitive status. This was accomplished by investigating the records and practices of 24 seed firms, members of the Northern Seedsmen Association, cooperators in this overall study.
2. Define and investigate the major markets for Northern alfalfa seed. The major market was defined by reviewing shipment data of the seed firms surveyed. The market was investigated by mail questionnaires sent to county agents and seed dealers located in the major market area.
3. Present some possible solutions for regaining and expanding these markets. Five solutions, as presented by Northern seed firm representatives, were analyzed and a proposed solution was drawn from these.

THE NORTHERN ALFALFA SEED INDUSTRY

Introduction

In an area where alfalfa seed is produced, the wholesaler-processor has a major marketing role. Because of this, the seed dealers that performed the functions of wholesaling and processing were chosen as the object of marketing research study. Twenty-four alfalfa seed wholesaler-processors in South Dakota, North Dakota, Montana, and Wyoming were contacted. Their collective buying and selling areas are shown in figure 1. The seedsmen interviewed were asked how, where, and by what method they procured their seed; the processing functions they performed; their distribution methods and problems; and some questions specifically concerning certified alfalfa seed.

The growers from whom these companies bought seed were mainly multi-enterprise farmers with alfalfa seed production as either a supplementary or complementary endeavor. Estimates of 6,500 growers were given as consistent producers—farmers that could generally be depended upon for a seed harvest.

¹Research Assistant and Associate Economist, respectively, South Dakota Agricultural Experiment Station.

This number constituted an average of 65% of the dealings made with growers each year. (Because some growers sold to two or more companies, these figures cannot be considered an accurate estimate of consistent producers.)

Procurement

Seed was obtained by the seed companies through at least six means: (1) traveling company buyers, (2) local elevators, (3) direct purchases, (4) contracts with growers, (5) farmer assemblers, and (6) other wholesalers.

Traveling company buyers represented the most common way seed is purchased. A company employee, who is an experienced seed buyer, travels throughout a buying area dealing with farmers for their seed, sometimes before it is harvested. This type of alfalfa seed buying was the most prevalent of the means used by the wholesalers interviewed.

Local elevators provided another means for the seed dealers to obtain alfalfa seed. Buying through local elevators took on three separate forms: (1) ownership of elevators, (2) contracts with independent local elevator operators, and (3) direct dealings with independent elevator operators.

Direct purchases from farmers at the main plants provided another means of procurement. These purchases were limited, generally, by the locational advantage of the farmer. Usually, only farmers living near the dealer were dealt with in

this manner. The most recurring problem in direct purchasing was in handling very small quantities of seed that the farmer brought to town with him in conjunction with other business activities. Dealers stated that the farmer could get from two to three cents more per pound if he sold his seed in lots exceeding 1,000 pounds in weight.

Contracts with growers provided another means of purchasing alfalfa seed. In 1957 no contracts were made for alfalfa seed with the producers by any of the reporting companies. Several companies reported having had contracts with farmers in prior years. These contracts were discontinued for three reasons:

- (1) The crops contracted for, because of weather uncertainties, were too unstable to satisfy the seed dealer's supply needs.
- (2) Some seed dealers felt that contracts became a source of conflict between the seed dealer and producer.
- (3) Some contracts were discontinued or not initiated because of the inability of the seedsmen and the farmer to agree on a price acceptable to both negotiators.

When asked what type of contract would be acceptable to both the company and the grower, several types of contracts were suggested. The contracts recommended generally agreed on the following points:

- (1) The farmer should be granted a guaranteed minimum price.
- (2) The farmer could be furnished the seed he is to plant on

credit, to be paid back in kind at time of harvest, or he could have the option of purchasing his seed.

- (3) Some dealers suggested that the farmer be allowed a selling period in which the farmer could take advantage of any price fluctuations that might arise.

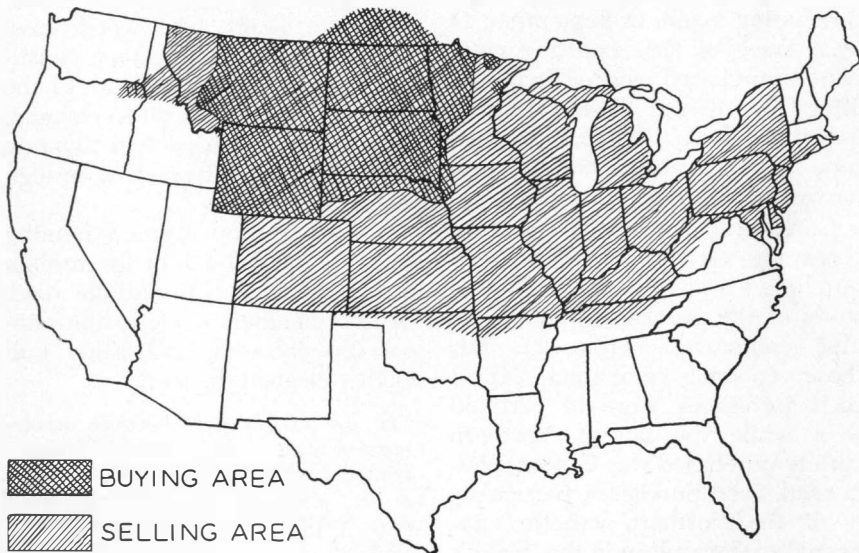
No comments were made as to the types of controls the seed dealers would be allowed to exercise over the farmer's crop.

Questioned about the future of contract growing for alfalfa seed, several dealers stated that contract buying will become necessary when and if the farmer starts producing certified alfalfa seed or "increasing"

new varieties. Most of the dealers, however, believed that contract alfalfa seed growing would not become a major method of procurement.

Farmer assemblers represented an active means of obtaining alfalfa seed by some companies. On the basis that larger lots will command higher prices, some farmers independently accumulated seed from neighboring farms and sold in large quantities to the seed dealers. Some seed dealers indicated that this activity was favored by the dealers because of its cost-saving features. It should be noted that this means of purchasing takes on the form of an unorganized farmer cooperative.

Figure 1. Buying and selling areas of 24 Northern alfalfa seed dealers, 1957.



Other wholesalers were cited as a constant source of their seed supply by the majority of the dealers interviewed. Most of these wholesalers' dealings were made for certified seed with California seed wholesalers. Unlike seed firms in the northeastern part of the United States, none of the firms purchased from other wholesalers on a contract basis.²

Most Northern alfalfa seed was purchased from the grower immediately after its harvest in October, although purchasing activity was strong through January of the next year. Purchases made from February to August were small in number. The purchases at this time were made primarily from other wholesalers, particularly of certified seed. Variation in the buying season is indicated in table 1. While some purchasing began in September, at least three of the reporting companies purchased most of their seed after December 1. These variations may have been due to individual procurement practices and different harvesting seasons.

Considerable variation in the types and varieties of alfalfa seed purchased was indicated through study of the purchasing records of nine companies (table 2). For those reporting companies, 24% of their purchases were of certified seed while the largest Northern variety purchased was Grimm alfalfa seed. Seed purchases, particularly of the Northern varieties, appeared to depend upon the dealer's location and type of distribution function, as well as the selling area that the dealer serviced.

Processing and Storage

Seed testing was a major processing function performed by the seed company either in its company laboratory, by a commercial seed testing firm, or by a state experiment station testing laboratory. This activity appeared to vary with the location of the seed company. If the company was in proximity to a state laboratory this testing agency was used. Five companies stated that they had used the experiment station laboratory for testing purposes, while twelve companies had maintained their own laboratories and technicians for the purpose. Four companies reported using commercial laboratory facilities, while the remaining three companies had used all of the testing agencies.³

Threshed or "in the dirt" alfalfa seed generally contains dirt, chaff, immature seeds, and weed seed. This foreign material may constitute from 10 to 30% or more of the threshed alfalfa. Various cleaning operations were used to separate the alfalfa seed from this foreign material.

As an initial operation, a fanning mill separated much of the foreign material from the alfalfa seed. Other machinery such as the clipper, gravity mill, and Eddy mill further cleaned the seed.

²The use of contracts between wholesalers of alfalfa seed is cited in "Usage of Seed of Improved Forage Crop Varieties in the Northeast," Pennsylvania Experiment Station Progress Report 152, July 1956.

³Seed tests are required by law to determine purity and germination of seeds. All seed must be tagged with this information.

Table 1. Seasonal Distribution of Purchases of Alfalfa Seed by Seven Companies, 1956-57*

Month	Company (Code)							Average
	A	B	C	D	E	F	G	
	(Percent)							
July	8.4	11.9	—	—	—	—	.8	3.0
August	7.4	—	—	12.2	3.5	—	—	3.3
September	13.7	7.1	2.4	9.3	6.8	—	—	5.6
October	51.6	11.3	23.7	17.7	19.2	14.3	28.7	23.8
November	7.2	2.8	50.1	25.4	33.1	6.9	38.0	23.4
December	11.0	47.0	16.8	10.2	37.3	14.9	16.7	22.0
January	8.3	20.0	6.6	6.9	—	21.1	15.8	11.2
February	6.5	—	0.4	—	—	14.9	—	3.1
March	9.9	—	—	—	—	12.4	—	3.2
April	1.9	—	—	—	—	—	—	0.2
May	0.2	—	—	18.3	—	8.8	—	3.9
June	0.3	—	—	—	—	6.6	—	1.0

*Seed purchases total 3,638,082 pounds.

Upon completion of the cleaning operation, the seeds were tested to determine purity and germination. The analysis from this test was placed on the tag attached to each bag of seed.

Regardless of the machinery used, if the seed contained many noxious weed seeds, the cleaning process was considered incomplete. Some dealers stated that the weed

seed content of the alfalfa seed grown in this area is high.

All companies reporting stated that the bagging of seed was a major processing function performed by them. Bagging took on two forms. The seed was either packaged in brand name bags or in an unbranded white bag. The unbranded bags, used in wholesale and jobbing shipments, normally

Table 2. Distribution of Purchases by Variety by Nine Reporting Companies, 1957*

Variety	Company (Code)									Average
	A	B	C	D	E	F	G	H	I	
	(Percent)									
Common	30.3	17.7	34.3	10.7	35.7	72.3	16.4	25.0	31.2	30.4
Cossack	13.2	12.7	24.8	2.1	4.5	1.5	2.1	—	2.1	7.0
Grimm	11.6	17.2	12.9	35.9	22.3	—	49.1	—	18.7	18.6
Ladak	1.5	10.5	—	20.1	26.8	1.4	30.7	8.2	3.3	11.4
Ranger	4.3	15.4	8.1	13.5	—	1.7	3.4	11.8	7.9	6.2
cRanger	39.1	25.3	19.2	12.1	8.9	18.9	—	54.2	25.7	22.6
cVernal	—	1.0	—	5.6	1.8	1.7	2.1	—	—	1.4
Other	—	—	0.7	—	—	2.4	—	0.8	11.0	1.7

*Seed purchases total 4,647,757 pounds.

contained 150 pounds of seed. The branded bag, on the other hand, appeared to vary considerably in size. Larger bags were used in wholesale shipping, while smaller merchandising bags were used for retail sales. The most common bag used was the bushel container. Fifty to 100 pound bags were reported used for ease in handling.

Another processing function was mixing alfalfa seeds with other field seeds. Special alfalfa-clover combinations, for example, were desired by some farmers.

Still another processing function reported was blending, where different varieties and types of alfalfa seed were mixed together in an attempt to combine the qualities of different alfalfa seeds. Alfalfa blends are not recognized by state experiment stations for all the characteristics attributed to them by some seed dealers. Blends, however, perform the economic function of product differentiation.

The cost of processing, including testing, cleaning, and bagging, varied with the companies. The processing capabilities of all the companies combined were practically unlimited. A 47 million pound capacity was estimated by the dealers interviewed.

Most firms stated that speculation was a common practice with them. They believed, however, that speculation had been greatly curtailed by the continuous production patterns of California producers. Most dealers believed that speculation is good for the seed industry. Through speculation they felt that they performed the function of

holding open a steady market for the farmer. Some seedsmen stated that it is a necessary function which must be performed by someone.

Storage of alfalfa seed was a minor problem to most dealers. Adequate storage space could easily be rented, thereby extending their storage capabilities considerably. The amount of seed that could be stored in their present warehouses exceeded 42 million pounds.

Distribution

Alfalfa seed traveled primarily through three different market channels. Alfalfa seed was distributed (1) through retail outlets, (2) through wholesalers who in turn distribute to retailers, and (3) through jobbers (figure 2).⁴

Alfalfa seed moved through those channels in two separate forms, as branded and unbranded seed. Branded seed traveled through retail and wholesale outlets while unbranded seed generally went to jobbers and wholesalers.

One of the most frequently mentioned changes in sales methods was increased use of advertising. Of the 24 companies reporting, 16 reported they advertised by radio, 13 through direct mail with price lists, 12 used newspaper advertising, 11 companies reported advertising in trade papers, and 4 companies used television to acquaint the consumer with their product. Percentages of the sales dollar devoted to advertising varied from 0

⁴A more specific marketing "flow-chart" for all grass and small seeded legumes resulted from a study of some 59 seed firms located in the North Central states in 1954 and 1955 (figure 3).

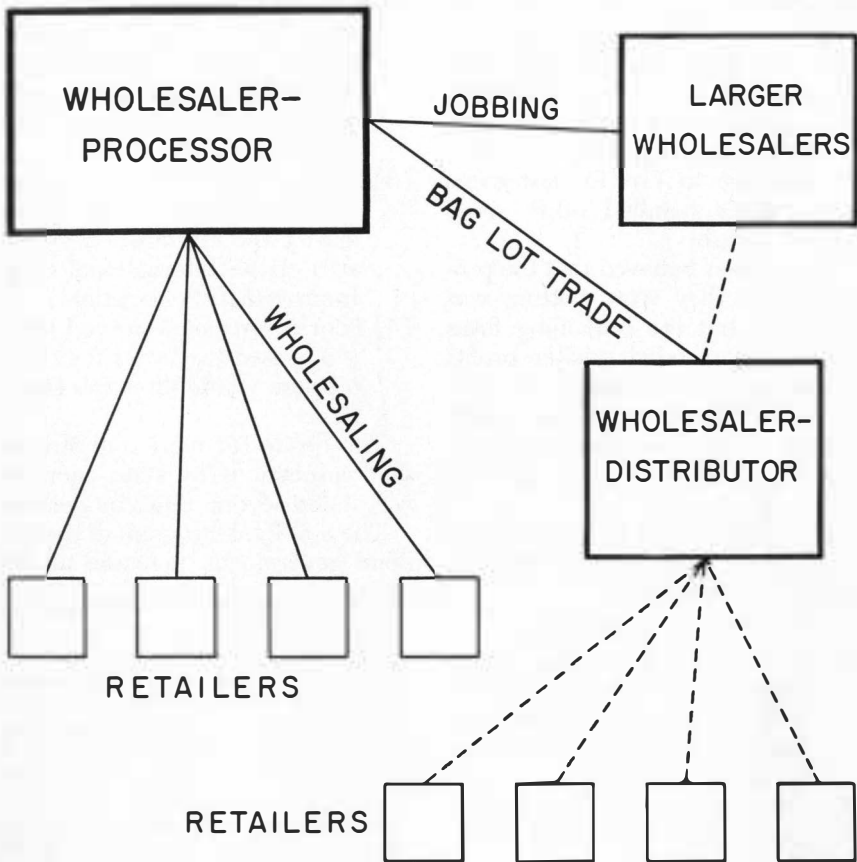
to 11%. The average amount spent on advertising was 2.07% of the sales dollar. Only two firms reported no advertising activity at all.

Another notable change in sales methods was an increase in "consignment selling." This sales method was involved in wholesaling activities where the seed firm retained ownership of the seed or allowed retailers "return privileges." Four firms reported selling by this

method, one saying it was being done only on a temporary basis. Nine firms believed that such activity would tend to induce very small operators into the seed business.

Pricing policies were primarily based on local competition, but the prices set on California seed influenced the price of alfalfa seed in the northern four-state area. Only one firm reported that they made a

Figure 2. Major sales channels for the Northern alfalfa seed wholesaler-processor.



flat charge above purchase price regardless of competition.

The recurring statement by seed dealers that California price heavily influenced Northern alfalfa seed price prompted a statistical analysis which revealed the relative effects of California price and Northern supply on Northern price.⁵ It was found that these two independent variables accounted for about 74% of the variance in the price of Northern alfalfa seed.

Profit figures given included gross profits ranging from 15 to 25% and net profits ranging from 0 to 10%. Two firms indicated that they were losing money on alfalfa in 1957 and normally made very little, handling the commodity only as a convenience to their customers. These firms handled other seeds and chemicals.

Eight firms believed that the profit margin they were getting was sufficient, but the remaining firms stated they needed greater profits to get an adequate return on their capital investment and labor. Twenty-five percent gross profit and 10% net profit were given as ideal profit figures.

Seed dealers felt that hindrances to their trade within the state included the following:

- (1) Uncertainty of production.
- (2) Farmer-neighbor selling. It was estimated by one seed dealer that only 20% of the seed produced went through regular marketing channels.
- (3) Price-cutting and low quality merchandise by irresponsible seed dealers.
- (4) Competition of cooperatives.

- (5) Canadian seed imports.

Out-of-state trade hindrances, according to the seedsmen interviewed, included:

- (1) United States Verified Origin Service (USVO) tagging practices as a barrier to dealings with non-VO dealers. (The United States Department of Agriculture maintains a service for identifying the origins of seed shipped between states for the protection of the purchaser.)
- (2) Variation in seed laws of the several states. (Some variation in seed laws is attributable to differences in the type and amount of agricultural activity in each state.)
- (3) Lack of coordination in certification programs. (Most states meet the certification standards of the International Crop Improvement Association.)
- (4) Poor enforcement of seed laws. (Increased tax levies for this purpose would alter this situation.)

The desire for more and stricter seed inspections by state agencies was stated several times by dealers.

The Soil Bank Program of the Federal government increased alfalfa

⁵The formula showing the relationship between these variables is:

$$X_1 = 58 + (-.297) X_2 + .774 X_3$$

X_1 is the dependent variable representing the price of Northern alfalfa seed, X_2 is an independent variable representing Northern supply of alfalfa seed, and X_3 is the independent variable representing the price of California seed. The two independent variables produce beta coefficients that total .7411 and an R^2 value of .74, indicating little indirect effect present.

MARKETING CHANNELS FOR GRASS AND SMALL-SEEDED LEGUME SEED

Wholesale Dealers in the North Central Region

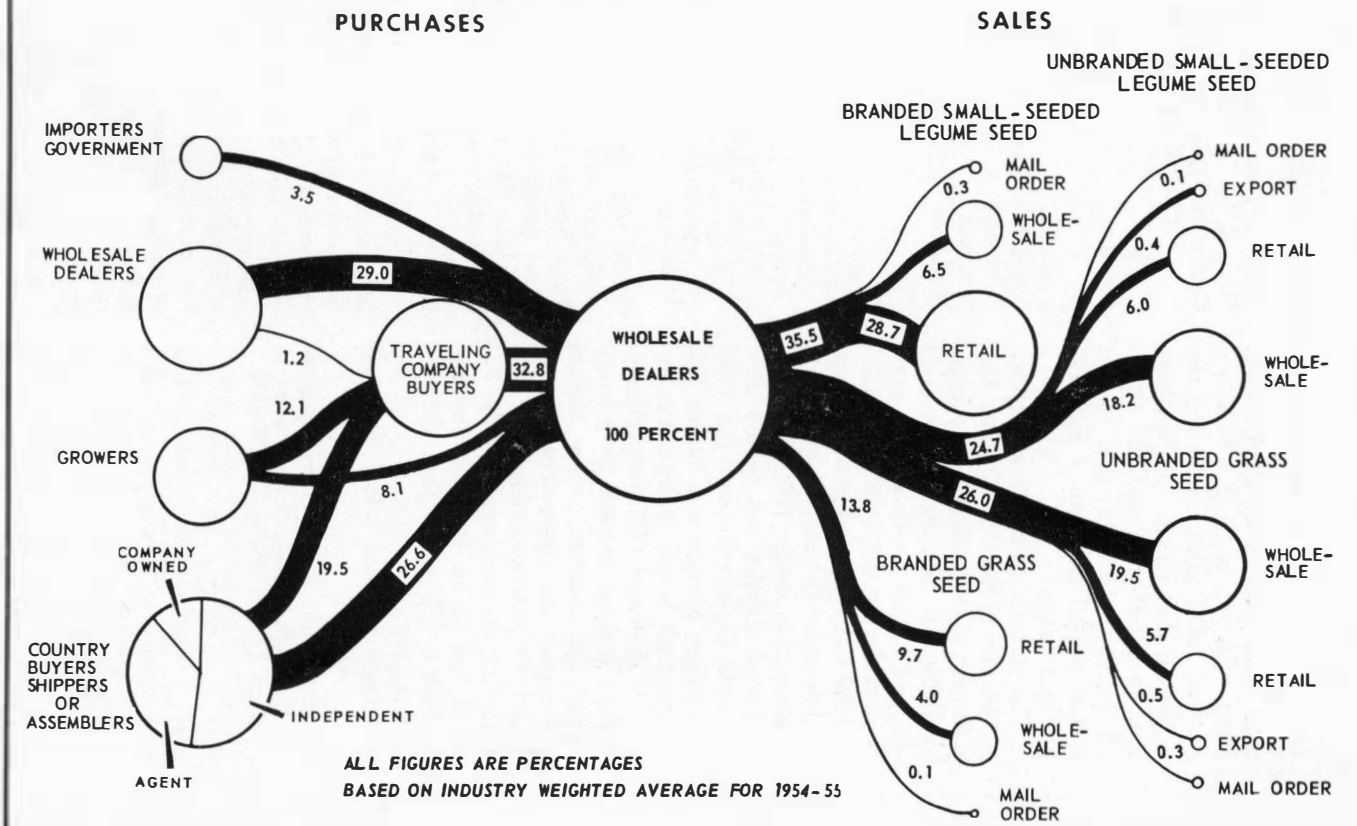


Figure 3. Marketing channels for grass and small-seeded legume seed—wholesale dealers in the North Central Region.

Source: "Seed Marketing Channels for Grass and Small-Seeded Legumes in the North Central States, 1954-55," Marketing Research Report No. 158, AMS, USDA, March 1957.

seed sales by varying amounts. Most affected were Northern dealers' retail sales, indicating the declining demand for Northern seed in out-of-state markets. Overall increases in sales, due to this factor, varied between 5 and 10% on the average.

The records of the Verified Origin Service of the United States Department of Agriculture were made available for this study. The seed shipped by 39 South Dakota seed dealers during the fiscal years 1955 to 1957 was reviewed in an attempt to determine the major out-of-state consumption areas (table 3 and 4). The seed shipped out of the state of South Dakota through the Verified Origin Service was 30 and 50% of the total South Dakota production in 1956 and 1957, respectively. Although these records gave us an incomplete picture, some notion concerning the movement of seed out of the state was afforded.

Comments were made on the Federal Soil Bank Programs by the seedsmen. They felt that delayed information concerning federal soil programs did not allow the seed

Table 3. Origin of Alfalfa Seed Shipped by 39 South Dakota Seed Dealers in Fiscal Years 1955-56 and 1956-57*

Seed origin	1955-56		1956-57	
	(lbs.)	(%)	(lbs.)	(%)
S. D.	3,259,917	82.8	1,597,519	83.3
N. D.	199,144	5.1	35,416	1.9
Wyo.	234,239	5.9	184,724	9.6
Mont.	182,290	4.6	17,752	0.9
Neb.	59,569	1.6	81,705	4.3
Total	3,935,159	100.0	1,917,116	100.0

*Information derived from records of Verified Origin Service, Minneapolis, Minnesota Office.

Table 4. Destination of Alfalfa Seed Shipped by 39 South Dakota Seed Dealers to Dealers in Other States in Fiscal Years 1955-1957*

Seed destination	1955-56	1956-57
	(Percent)	
In-state	5.5	7.1
North Dakota	1.8	0.6
Nebraska	3.1	0.9
Minnesota	15.4	14.7
Wisconsin	0.5	1.8
Iowa	26.6	52.5
Missouri	33.9	21.5
Illinois	3.6	0.9
Indiana	3.7	—
Unknown†	5.9	—
Total	100.0	100.0

*Information derived from records of Verified Origin Service, Minneapolis, Minnesota Office.

†Typographical errors in Verified Origin Service records.

dealer enough time to stock in accordance with future demand. They further believed that the Federal program led the farmer to purchase the cheapest seed available without concern for quality.

Certified Seed

Certified alfalfa seed generally has not been in great demand in the northern four-state area, according to most of the seedsmen interviewed. This has not been true in eastern states according to a study at Cornell University. The demand for certified seed is steadily increasing (figures 4 and 5). Even northern area sales have shown some increased demand for certified seed (table 5).

When asked whether branded or unbranded certified seeds sold the best, seed dealers gave divided opinions. This may be due in part to

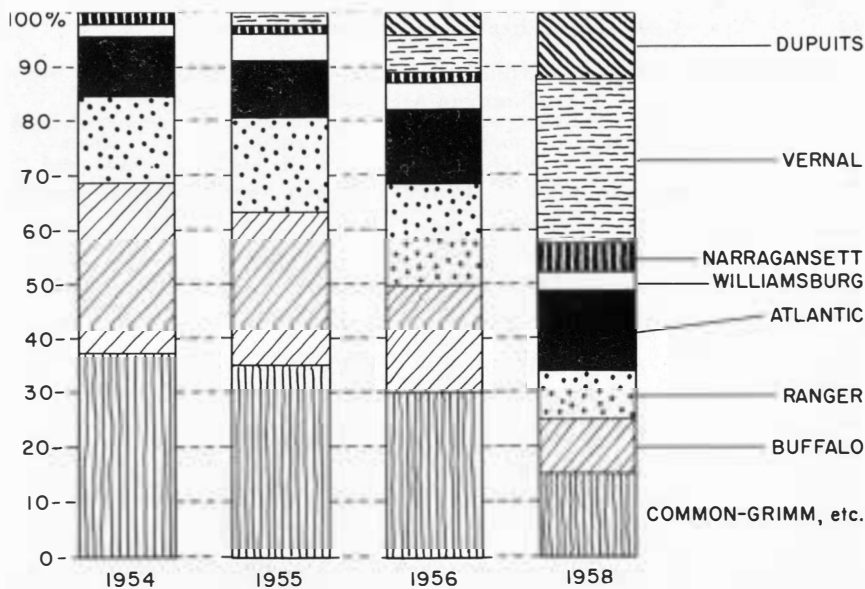


Figure 4. Proportionate seed usage of alfalfa varieties in the southern subregion including New Jersey, Maryland, Delaware, West Virginia, and Southern Pennsylvania. Survey data for 1954 and 1955, predicted usage for 1956 and 1957. Source: "Usage of Seed of Improved Forage Crop Varieties in the Northeast," Pennsylvania Experiment Station Progress Report 152, July 1956.

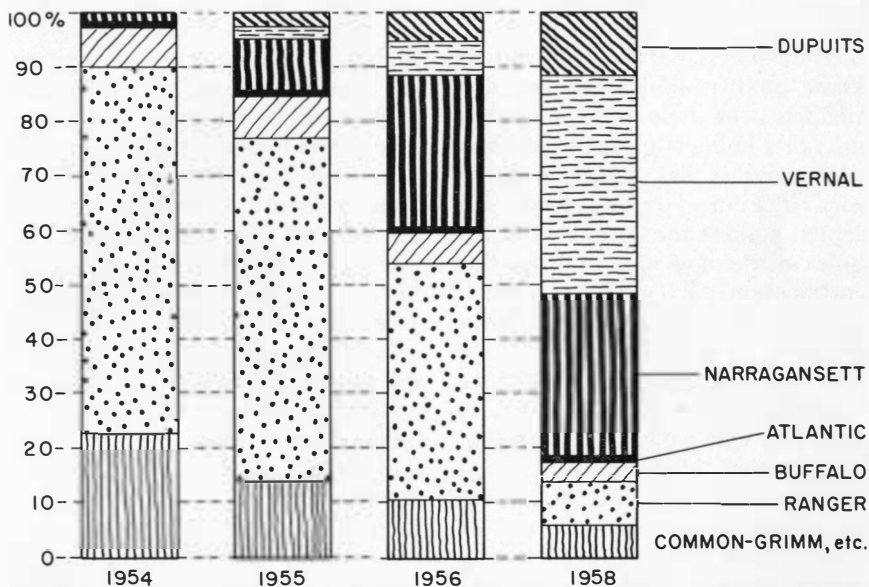


Figure 5. Proportionate seed usage of alfalfa varieties in the northern subregion including New England, New York, and Northern Pennsylvania. Survey data for 1954 and 1955, predicted usage for 1956 and 1957.

Source: See footnote in figure 4.

Table 5. Sales of Northern, Certified, and Other Alfalfa Seed by 14 Seed Firms in the Northern Area, 1947-1957

Years	Number of companies	Northern alfalfa seed		Certified alfalfa seed		Other alfalfa seed	
		(pounds)	(percent)	(pounds)	(percent)	(pounds)	(percent)
1947	1	50,000	100.0	—	—	—	—
1948	3	538,985	100.0	—	—	—	—
1949	3	730,447	100.0	—	—	—	—
1950	4	2,357,061	100.0	—	—	—	—
1951	4	1,081,818	100.0	—	—	—	—
1952	6	3,714,112	88.9	305,000	7.3	158,000	3.8
1953	6	2,794,871	81.0	389,000	11.3	268,000	7.7
1954	10	5,313,760	78.4	801,760	11.8	664,000	9.8
1955	11	7,272,663	78.7	1,254,700	13.6	711,000	7.7
1956	11	6,501,517	78.7	1,016,000	12.3	746,000	9.0
1957	14	5,508,485	75.2	1,217,670	16.6	599,900	8.2

individual selling experiences where seed dealers handle only the unbranded or branded type of certified seed.

In response to the question of whether the present certification program is in line with other states' programs, over one-third of the seed dealers stated that they did not know. So little alfalfa seed certification has been done in this four-state area that knowledge of the certification program has not been necessary. The major argument presented against the certification program as it is now operated was that certification should be allowed without the state recommendation attached to it. (Most states make provision for certification without recommendation. South Dakota, for example, will permit Inter-State Certification of Cossack, Grimm, Narragansett, and Rhizoma even though these varieties are not recommended for use within the state.) Other comments included: (1) it should be permissible to bulk

the seed of several growers of the same variety into a single lot, (This is currently permissible provided certain requirements are met.) (2) inspectors should personally draw the sample for testing instead of letting the farmer or processor send in the sample, (3) standards should be higher for purity and germination. (If this happened, many a hardship would be put on the seedsmen. The present standards in South Dakota and the International Crop Improvement Association is 99% purity and 80% germination. The 99% purity was raised in 1957 from 98% by the International Crop Improvement Association. If the 80% germination were raised, it would not allow for years of unfavorable conditions on germination.) (4) "Blue-tagging" should be done by an inspector, and (5) quicker service on tests for certified seed is desired even if it costs more. (It requires one week to provide an adequate germination test. Further delay comes in the months of Janu-

ary and February when most of the samples are received.)

Seed dealers were divided in their opinions as to whether or not the Northern area farmer could profit by growing certified seed under present regulations. Those who stated that the farmer would not profit mentioned that they could only give him a small premium at the present time for certified seed over the Northern varieties now produced. Those dealers indicating that the farmer would profit by growing certified seed stated that such a premium large enough to make it worth while could be offered to the farmer. They looked for certified alfalfa seed production to be an enterprise of the future for the Northern grower.

THE MARKET

Introduction

The hypothesis that 80% of the alfalfa seed marketed in the United States was used in the states of Nebraska, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and New York was based on alfalfa acreage studies, shipping records of Northern seedsmen, and a study of grass and small-seeded legume seed marketing by the USDA (figure 6).

To obtain information on the market in this and surrounding areas, a mail questionnaire was sent to all the county agents and a large number of seed dealers operating in this "major market" area. A break-down of the questionnaire returns by state and area is found in tables 6 and 7.

The investigation of the market

included (1) determination of the present extent of the Northern alfalfa seed market, (2) what changes have occurred in that market, (3) the general nature of the market in terms of demand, price, and quality, and (4) predicting the future of this market for Northern alfalfa seed.

Except for recommendations concerning alfalfa seed plantings from the county agents, both the seed dealers and agents were asked the same questions. Additional questions were asked of seed dealers concerning price relationships, the future of Northern seed, and a more detailed analysis of the demand factors.

For the purposes of this study the United States was divided geographically into three separate sections. One section included the four-state Northern area, another section included the major market area covered by the county agent survey, and a third section included the rest of the United States and was termed the "outlying" or fringe

Table 6. Questionnaire Returns from County Agricultural Agents, by State

State	County agents	Returns	Percent
Nebraska	83	74	89
Minnesota	91	73	80
Iowa	100	85	85
Wisconsin	71	57	80
Illinois	99	68	69
Michigan	83	53	64
Ohio	88	65	74
Pennsylvania	67	49	73
New York	56	41	73
Total	738	565	77

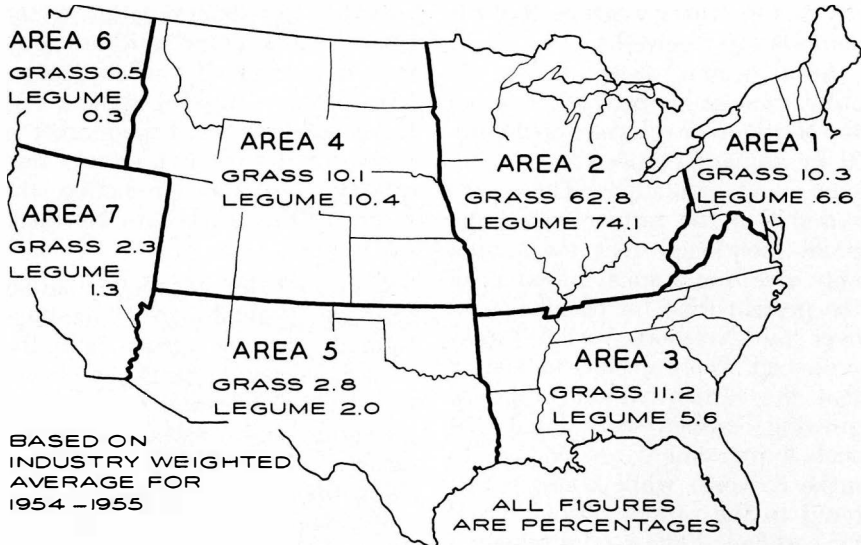


Figure 6. Grass and small-seeded legume seed delivered to various geographic areas by wholesalers in the North Central Region.

Source: See footnote in figure 3.

area (figure 7). It was assumed that the answers to the questions posed might vary in these different areas.

Present Market

Whether or not alfalfa seed was grown in the county represented by the agricultural agent, or the area served by the seed dealer, and whether or not Northern alfalfa seed was used during the past 5 years in that area were questions used to determine the existence of a market for Northern seed in these areas.

The area assumed to be the primary market area for Northern alfalfa seed was substantiated as such by both county agents and seed dealers located there. Eighty-nine percent of the county agricultural

agents and 93% of the seed dealers answering indicated that Northern alfalfa seed has been purchased and planted since 1952.

Almost all of the seed dealers in the Northern area had indicated purchases and plantings of Northern alfalfa seed, but dealers located in the outlying area knew of little planting of the Northern seed during the past 5 years.

Market Changes

Changes in the volume of purchases of Northern alfalfa seed in this market and why these changes occurred were the objects of questions asked of both the seed dealers and county agents.

Seventy-one percent of the seed dealers and county agents in all areas combined believed that less

Table 7. Questionnaire Returns from Seed Dealers, by Area

Area	Dealers	Returns	Percent
Northern area	551	165	33
Major market area	1,824	592	32
Illinois	239	76	31
Indiana	103	34	30
Iowa	266	95	28
Michigan	134	58	43
Minnesota	476	125	26
Nebraska	112	45	40
New York	56	13	23
Ohio	132	42	32
Pennsylvania	96	38	40
Wisconsin	210	66	31
Outlying area	197	61	31
Total	2,572	318	32

Northern alfalfa seed was used in 1957 than in 1952. The major reason for this change was the farmer's acquaintance with certified seed.

The remaining 29% of the respondents, who believed that more Northern alfalfa seed was used in 1957 than 5 years earlier, felt that the farmer's acquaintance with "hardy" seed was the reason for this change.

A detailed break-down of these market changes and causal factors is shown in tables 8 and 9.

Nature of Market

In response to the question, "What influences the farmer in your area the most in deciding what type of alfalfa seed to purchase?", the respondents many times checked two or three factors. Each of these checks were given equal weight in the analysis, and responses indicated that experiment stations and county agent recommendations

Figure 7. Geographical areas considered in market investigation, 1957.



Table 8. Responses of County Agents and Seed Dealers Reporting Why Less Northern Alfalfa Seed Was Used in Their Areas in 1957 Than in 1952, by State

Response	Total*	Major market		Northern Outlying	
		Co. Agents	Dealers	market	market
Acquaintance with certified seed	215	74	127	11	3
Availability of California seed.....	90	33	51	4	2
Higher price	77	12	60	5	0
Response to recommendations	43	21	18	3	1
Publicity	19	6	12	1	0
Variety prejudice	15	12	3	0	0
Decrease in farm operations.....	12	9	2	0	0
Local production high.....	11	9	0	1	1

*Where total response was less than ten, the response was omitted.

strongly influence alfalfa seed purchases outside of the Northern area. In all areas past experience was a leading factor determining demand. Only in the Northern area was price listed as a leading factor. Rankings are listed in table 10.

Most of the county agents and the seed dealers in the major market and outlying areas felt that the farmer-purchaser regarded quality a more important factor than price in purchasing alfalfa seed. The seed dealers in the Northern area, however, believed that *p r i c e* was the first consideration of local farmers in buying their alfalfa seed.

Asked what the farmer used as a basis for seed quality, all respondents listed "tag analysis" in first place. Recommendations made to farmers was ranked as another important basis used to determine seed quality by all respondents. Other bases included price, brand name, color, and variety name.

Hay was the most prominent purpose for which alfalfa was grown in all areas surveyed. Pasture usage, soil building, seed production, and milling were other purposes listed by the respondents.

Most respondents believed that Northern alfalfa seed accomplished

Table 9. Responses of County Agents and Seed Dealers Reporting Why More Northern Alfalfa Seed Was Used in Their Areas in 1957 Than in 1952, by State

Response	Total*	Major market		Northern market	Outlying market
		Co. Agents	Dealers		
Acquaintance with hardy seed	78	41	31	6	0
Greater use of alfalfa.....	39	22	7	10	0
Poor results with non-hardy seed.....	24	18	4	2	0
Lower price	18	5	8	5	0
Publicity	14	11	3	5	0
Northern is of high quality.....	12	1	4	7	0
Substitute alfalfa for other hay	11	4	7	10	0

*Where total response was less than ten, the response was omitted.

Table 10. Factors Influencing Alfalfa Seed Purchases, 1957

Factors influencing demand	Order of importance according to:			
	County Agents	Primary market seed dealers	Northern seed dealers	Outlying seed dealers
Experiment station recommendations	2	1	5	1
Past experience	4	2	1	3
Seed dealer salesmanship	3	3	4	4
Price	5	4	2	6
County agent recommendations	1	5	3	2
Advertising	6	6	6	5
Neighbor's experience	7	7	*	*

*This factor was not reported by these respondents.

the purpose for which alfalfa seed was grown in their areas. Those who did not feel that Northern seed accomplished this purpose, stated that Northern seed failed because of unknown quality. Other reasons given included lack of certification, non-adaptability, poor yields, lack of wilt-resistance, and high price.

The growing of mixtures, whether pre-mixed by seed companies or mixed later by farmers, was cited as a common practice by all respondents.

The most heavily planted variety, both certified and uncertified, was Ranger alfalfa. County agents in some states gave "common" as the most heavily planted alfalfa, while those in states close to the Northern area reported Grimm as an alfalfa planted in their state. Those in the Eastern states suggested Narragansett and DePuits as their most heavily planted alfalfa, in some instances exceeding Ranger plantings. A chart indicating the varieties most heavily planted in each of the states is contained in table 11.

Varieties of alfalfa that were re-

commended by county agents in 1957 were Ranger and Vernal for most states, with Buffalo being mentioned as a recommended variety by over half of the states. Narragansett and DuPuits were most heavily recommended in New York and Pennsylvania. Common alfalfa was recommended in most of the states as a soil builder. A further breakdown of the varieties recommended by agricultural advisors is given in table 12.

By far the most heavily planted alfalfa in the Northern area was Grimm, with Ranger and Cossack following in order of importance. In the major market area, Ranger alfalfa exceeded all others by a considerable margin as the most heavily planted alfalfa. Vernal and common ranked next in order of importance. In the outlying area, common seed was the most heavily planted, with Buffalo and Ranger in second and third place, respectively.

Price Relationship

Slightly over 50% of the dealers in the Northern area indicated that a

Table 11. County Agent Report of Varieties of Alfalfa Most Heavily Planted in 1957, by State

Variety	Nebr.	Minn.	Iowa	Wis.	Mich.	Ill.	Ohio	N.Y.	Penn.
Certified									
Ranger	x*	x	x	x	x	x	x	x	x
Buffalo	-	-	-	-	x	-	x	-	-
Grimm	-	-	-	-	-	x	x	-	-
Atlantic	-	-	-	-	-	-	x	-	-
Narragansett	-	-	-	-	-	-	-	x	x
DuPuits	-	-	-	-	-	-	-	-	x
Hardistan	-	-	-	-	-	x	-	-	-
Vernal	-	x	x	x	-	x	-	-	x
Uncertified									
Blends	-	x	-	-	-	-	-	-	-
Ranger	x	x	x	x	x	x	x	x	x
Buffalo	-	-	-	-	x	-	-	-	-
Ladak	x	-	-	-	-	-	-	-	-
Grimm	-	x	x	x	-	x	-	-	-
Cossack	-	-	x	-	-	-	-	-	-
Common	x	x	x	-	x	x	x	-	x

*Varieties most heavily planted.

higher price would be paid by their customers for certified seed than for Northern alfalfa seed.⁶ The amount quoted by these dealers as differentials that farmers would pay for certified averaged 4.0 cents. In the outlying area dealers believed that 4.7 cents was the average amount that the farmer would pay for certified over Northern alfalfa seed. Sixty-two percent of the dealers in the major market indicated that a price differential does exist between certified and Northern seeds. The average premium paid for certified over Northern in the major market area would be 4.4 cents per pound.

Future of Northern Seed

One hundred thirty-one of the 165 responding seed dealers in the Northern area believed that there would be a future market for

Northern alfalfa seed in their area because of Northern seed's hardy characteristics. Only 12 dealers felt that there would not be, two of these replying that certified is superior seed.

In the outlying area, 36 dealers felt that there would not be a market in the future because of the unknown quality of Northern alfalfa seed. Ten dealers felt that there would be a future for Northern seed in their area because it is hardy and will not winter kill.

Sixty-one percent of the seed dealers in the major market area concluded that there would always be a future for Northern seed in their area. The most recurring reason listed for this was the farmer's

"Certified seed" from the West can generally be interpreted as the Ranger variety.

Table 12. Varieties of Alfalfa Recommended by County Agents in 1957, by State

Variety	Nebr.	Minn.	Iowa	Wis.	Mich.	Ill.	Ohio	N. Y.	Penn.
Certified									
Ranger	60	56	64	37	52	24	49	9	25
Buffalo	22	0	25	0	48	0	40	0	11
Grimm	0	0	0	0	0	1	0	0	0
Atlantic	0	0	6	0	7	0	23	0	1
Narragansett	0	1	0	0	0	3	0	36	7
DuPuits	0	2	0	0	4	0	0	31	29
Hardistan	1	0	0	0	0	6	0	0	0
Vernal	1	53	57	51	17	46	42	31	35
Viking	0	0	0	0	0	0	0	0	1
Uncertified									
Terraverde	0	0	1	0	0	0	0	0	0
Ranger	0	0	0	0	0	0	0	0	0
Ladak	22	4	1	1	0	1	0	0	1
Grimm	1	11	12	4	0	1	0	0	0
Cossack	1	0	4	3	0	0	0	0	0
Common	1	1	8	5	23	5	5	0	0

faith in the hardiness of the seed from this area. Approximately 20% of the dealers felt that there would not be a future market for Northern seed, due to the increased use of certified seed in their area. These and other reasons are listed in tabular form on tables 13 and 14.

MARKET EXPANSION

Alternative Future Actions

The following question was asked Northern alfalfa seed wholesaler-processors: "If certified seed from the West is a major problem to the Northern seed industry, what do you think is the best and most practical solution?"

Various answers were received. After close analysis, however, these answers appeared to fall into five major categories.

1. Some seed dealers believed that no such problem existed and offered no further comment.

It was evident from their comments that seed dealers who stated that no such problem existed were referring to their own separate businesses. These businesses performed a primary function of distributorship rather than accumulation. Perhaps more accurately worded, they were saying that the problem did not strike so close to them as it did to others. Certainly, the findings of this research indicate the existence of a problem for the Northern seedsmen and growers.

2. Other seed dealers believed that no solution was possible; that we should merely accept these changes as impossible to challenge.

The belief that no solution to this problem is possible was perhaps somewhat pessimistic. Nothing is unalterable. But whether change

Table 13. Reasons Seed Dealers Feel That a Market for Northern Seed Will Always Exist in Their Selling Area

Response	Total*	Northern	Major market	Outlying market
Hardy, won't winter kill.....	107	20	85	2
If competitive price-wise.....	60	16	43	1
Northern is of high quality.....	47	14	33	0
Prejudice.....	43	6	37	0
Good past results.....	32	13	18	1
Good for short rotation.....	25	5	20	0

*Where total response was less than ten, the response was omitted.

brings progress is quite another question.

3. Some dealers did not suggest any physical production change but suggested solutions without altering the production status quo. These solutions were:

- (a) maintenance of a price differential
- (b) increased advertising activity (for which the seed dealers were not willing to pay)
- (c) increased service to the farmer, and
- (d) attempt to compete with production areas other than California.

To maintain the status quo and attempt to find solutions within this

framework is a reasonable line of action.

The first action recommended in this framework was the maintenance of a price differential between certified and Northern alfalfa seeds. This belief was substantiated by this research. The seed dealers responding in the market survey stated that an average price differential of between 4.0 and 4.7 cents would be paid by their farmers in their area for certified over Northern alfalfa seed. Further than this, letters received in addition to the questionnaire from some dealers indicated that a price differential was necessary to sell Northern seed.

Increasing advertising is a method that defies proper analysis. It is

Table 14. Reasons Seed Dealers Feel That a Market for Northern Seed Will Not Always Exist in Their Selling Area

Response	Total*	Northern	Major market	Outlying market
Increased use of certified.....	27	1	20	6
Not competitive price-wise.....	16	0	15	1
Certified is superior seed.....	14	2	10	2
Recommendations.....	12	1	6	5
Not adaptable.....	11	0	3	8

*Where total response was less than ten, the response was omitted.

worthy to remark, however, that advertising was rated only as a moderate factor in determining demand by the seed dealers surveyed. On the other hand, experiment station recommendations and past experience rated high. It is perhaps just as, if not more, important to "sell" the product to the experiment stations and the seed dealers before it is sold to the farmer.

The increasing of the services performed by seedsmen for the farmers was in concurrence with seed dealer recommendations in the Cornell study.

Attempting to compete with other areas is a point of significance only if we are in conflict with those areas. California is not too big for us to compete with. Many California seed dealers have concurred that the Northern alfalfa seed industry is the biggest competition.

4. Other dealers believed that the production of Northern seed should be greatly increased in order to drive the price down so far that California cannot effectively compete with our product. This increase, it was suggested, could come about by increased yields as well as acreage.

To increase Northern production by greater acreage and greater yield would call for a promotion program for the farmer that may not be acceptable to him. It would be necessary to say, "Increase your production, use better spraying and cultivation methods, and we will give you less money." Such a solution does not seem practical, be-

cause grower interest is not sufficient to allow such action.

5. Another group of dealers believe that the Northern area should engage in certified alfalfa seed production in future years.

It was suggested by the dealers that such action would allow us to compete with a similar product and at the same time would have the backing of the experiment stations throughout the United States. Extensive advertising programs and recognition of the benefits from all certified alfalfa seed advertising were recognized and connected to this alternative. There was some disagreement as to whether or not the Northern certified alfalfa seed should be higher or lower in price than the California certified product.

Production of certified seed in the Northern area would undoubtedly have the unqualified backing of the experiment stations, and would provide a means of competing with California with a like product. To suggest this alternative seems feasible.

Proposed Action

It appears that there will always be a market for Northern alfalfa seed, but only at a price differential between it and certified seed from the West. This market probably will never be as large as it was before. A segment of the market has been taken and will remain lost to Western certified seed producers unless a like product can be produced here and marketed in competition with the Western certified seed. The proposed action should contain three elements:

- (1) So that present markets can be retained, Northern uncertified seed should be sold at a price differential (perhaps from 4 to 5 cents) less than the price of certified seed. With such a difference in price, production areas other than California may lose some of their business to Northern producers. In addition to this, more uncertified seed markets should be sought out.
- (2) The production and marketing of certified seed from the Northern area appears to be a realistic means for regaining some of the markets that have been lost to the Western producers. It is believed by the authors that Teton alfalfa (a new variety released by the South Dakota Experiment Station) is one means available to attain this end.
- (3) The Northern product should be identifiable by some merchandising means. Northern seed appears to have its best marketing advantage through

the winter-hardiness quality. This factor should be stressed in future advertising. Many wholesalers are doing this now, but there is no organized effort in this advertising. A single slogan adopted by all Northern seedsmen to include in their individual advertising would probably be most beneficial. The ultimate aim of this slogan would be to make the farmer conscious of seed from this area.

Maintenance of a price differential between uncertified Northern and certified Western seed, the production and marketing of certified alfalfa seed in the Northern area, and organized product identification by the Northern seed producer would, in the opinion of the authors, help most in retaining and expanding the markets for Northern alfalfa seed.⁷

⁷The details of this study are available in pamphlet form under the heading, "Marketing Northern Alfalfa Seed—A Progress Report," Agricultural Economics Pamphlet 97, Agricultural Experiment Station, Brookings, South Dakota.

SUMMARY

South Dakota alfalfa seed producers have enjoyed a ready market and premium price for their crop for many years. Recently, however, the wholesaler-processors (who serve these producers) have met increased competition in Eastern markets from Western-produced certified alfalfa seed. This competition has resulted in a continuing decline in the usage of Northern uncertified seed by out-of-state farmers.

Because of this market loss, the major market for Northern alfalfa seed was surveyed to determine the changes that have taken place, the demand situation, and the future of Northern alfalfa seed in this market.

County agricultural agents and seed dealers contacted in the states extending from Minnesota to New York (the major market) indicated that seed sales from this area have generally declined because of the increased usage of certified alfalfa seed. The change in usage from Northern alfalfa seed to certified seed from the West has primarily resulted from adverse experiment station recommendations and the past experience of farmers located in this area. Quality, rather than

price, was listed as a most important factor in alfalfa seed purchasing. The quality of the seed purchased was determined by the purchaser from recommendations and knowledge of the seed's germination and purity analysis as indicated on the tag attached to the bag of seed.

The seed dealers surveyed indicated that a market for seed from South Dakota in the East would exist in the future, but that a price differential existed between Northern and Western certified seed. At the time of the survey, the farmers in the major markets would pay from 4 to 5 cents more for the certified than the uncertified product.

To solve this marketing problem, a three point program was recommended by the authors. To retain those markets that currently handle Northern seed, a price differential should exist between certified alfalfa seed and the uncertified product from this area. The use of an organized advertising program by producers and seedsmen in the Northern area should better aid in identifying the area product in the markets. The eventual solution to this problem, however, would be only through the production and marketing of certified alfalfa seed from the Northern area.