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Extension's Work with South Dakotans

Cooperative Extension South Dakota State University

SPECIAL REPORT 2

EXTENSION'S Work with South Dakotans

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COOPERATIVE EXTENSION SERVICE, SOUTH DAKOTA STATE COLLEGE
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Agricultural Production, Management, and Natural Resource Development Use and Conservation

Reported in this project are some of the areas receiving major emphasis by specialists and county agents in 1962. There are many other areas of emphasis, activities and events that have contributed in bringing about change among the South Dakota Extension Service clientele.

A few broad objectives of the work in the project are:

To improve the efficiency of production and increase the labor management income of farm operators.

To develop understanding of improved farm practices and how they may be applied to the farm operation.

To aid farm people to understand and make the needed adjustments to meet competitively the requirements imposed by fast changing technological and economic development.

BEEF CATTLE FEEDING SHOWS GROWTH

South Dakota has an estimated 3 million beef cattle on farms and this number is still on the increase. The annual calf production in the state averages over one-half million head. Less than 500,000 head are fed annually in South Dakota. Over 500,000 head are exported to other states.

Livestock production in South Dakota and its allied services such as marketing, feed industry, meat packing, transportation, veterinary, building materials and equipment, and credit agencies are the major contributors to the economic growth of the state.

South Dakota has a surplus feed grain supply. The annual average grain production is 200 million bushels. Approximately 50% of this amount is shipped out of the state and the remaining 50% is utilized in livestock production. Based upon the feed situation, South Dakota livestock feeding could be doubled.

In veiw of the increasing population, with resulting increase in demand for beef products, a need will be created for increased beef production and feeding. This presents an opportunity for South Dakota producers to expand beef cattle production and feeding, which will improve the economic status of the entire state.

Objectives in the Extension program to assist the producer in his existing or expanded feeding program are to encourage the use of more silage and other high roughage rations in fattening, growing, and wintering cattle. Another is to bring about understanding among producers as to balancing rations for different feeding programs and to encourage them to study feed prices and feeding programs so they will know which feeds will provide the most protein and total digestible nutrients for the least cost. Producers need to understand the need and proper use of feed additives such as stilbestrol, antibiotics, Vitamin A and others.

Feedlot operators need information on the importance of sound planning in making physical improvements when expanding or developing new feedlots. When making an investment in capital improvements in the feeding enterprise the operator should be informed on suitable locations, labor-saving arrangements, equipment selection, and types of feed storage structures. Most important, he needs to know how to integrate his structures, equipment, labor, and management methods into a complete system so that all components match for utmost efficiency.

Based on the above situation and objectives, definite progress has been made in solving some of the exisitng problems in expanding the livestock feeding and management in South Dakota. Table 1 shows the increase in cattle feeding in South Dakota from 1956 to 1962.

Based on table 2, related industries such as silo manufacturers, equipment dealers, materials suppliers, electricians, and contractors transacted an estimated 3.5 million dollars worth of business in 1962 on feedlot improvements. This increased activity in feedlot improvements is reflected by the increase in numbers of cattle and calves on feed as shown in table 1, and is also the result of the feeding programs recommended by the South Dakota Extension Service such as utilizing more roughages, high moisture grain, efficient storage structures, and mechanical processing and handling equipment based on research at South Dakota State College and other experiment stations.

To assist livestock producers in overcoming these problems and in taking advantage of livestock expansion

Table 1—Cattle and Calves on Feed*

Year	January 1	April 1	July 1	October 1
1956	210,000	150,000	104,000	100,000
1957	235,000	180,000	113,000	105,000
1958	266,000	243,000	181,000	155,000
1959	269,000	250,000	203,000	150,000
1960	247,000	232,000	183,000	135,000
1961	294,000	285,000	234,000	200,000
1962	325,000	311,000	246,000	198,000
		% Increase		
Over 1956	Up 55%	Up 105%	Up 136%	Up 98%

*Source: Crop and Livestock Reporting Service

The following table shows the increase in feedlots and silos:

Table 2

Year			
Since 1957	2,215	3,540	3,964
In 1962	396	642	460

Source: County Agent Survey—1962

opportunities provided by the feeder cattle available and surplus feed supplies, Extension specialists in animal science and agricultural engineering conducted 61 special meetings and livestock tours with an attendance of 7,081 producers. At these special meetings new research on feeding, feed storage, processing, mechanical equipment, and feedlot arrangements were discussed. Slides, models, charts, work sheets, and publications were prepared and used in presenting the subject matter. Livestock tours were conducted to successfully-operated feedlot layouts, structures, equipment, and methods of feeding. In addition, radio programs, news releases, and personal visits were used in disseminating information on feeding and planning feedlots by specialists to assist in the livestock feeding program. A total of 201 feedlot operators were given individual planning assistance by personal visits by specialists.

County agents reported 129 additional special meetings on beef cattle feeding in 1962.

People involved in this project included producers, bankers, equipment dealers, livestock improvement associations, rural electric power suppliers, South Dakota Livestock Expansion Foundation, county extension agents, vocational agriculture instructors, Farmers Home Administration supervisors, and feed representatives.

LIVESTOCK OUTLOOK AND CATTLE FEEDING INFORMATION TO FARMERS AND RANCHERS

In the fall of each year, farmers generally make their livestock feeding and breeding plans. They are concerned with how many animals to feed and to breed, what price to pay, what price to expect for the finished animals, what their profit prospects are for various classes, what their feeds will cost, the feeding system to use, rations to feed and in what combinations, and other problems related to achieving the highest net return.

A series of 15 fall livestock outlook and feeding meetings

in the state were conducted in September and October by the Extension farm management specialist and Extension animal husbandman. These meetings were planned and conducted on a sub-district or county combination basis. County Extension Agents from two to five counties cooperated in promoting and sponsoring the meeting for their area. About 50 County Extension Offices were involved in the 15 meetings.

Fourteen of the 15 meetings were held in livestock auction sales rings. The major advantage of this type of meeting place is that live animals can be used in demonstrating feeder cattle grades and prices, and also as examples in calculating expected financial returns from feeding. An added feature at four of the meetings was a demonstration of the different grades of feeder cattle, followed by a contest for the farmer audience at which they judged the grade and weight of 8 to 10 animals that were run through the ring.

A four-part program was presented at these meetings. (1) The farm management specialist discussed the general economic outlook, the livestock and feed situation, the major supply and demand factors, and from these the expected price trends for cattle, hogs, and sheep. (2) The Extension animal husbandman discussed various types of feeding programs, new feeds and developments in cattle feeding, and results of recent feeding trials. (3) The farm management specialist explained the use of a new worksheet for figuring cattle feeding prospects, illustrating its use by referring to calculations for the types of feeder cattle displayed in the two pens. (4) The Extension animal husbandman came back and discussed adequate protein levels, illustrating the use of a special worksheet for computing balanced rations. A question and answer period ended up each meeting.

An innovation at these meetings this year was the use of a large 9'x12' collapsible screen. This large screen proved very effective in the large meeting places (the livestock sales rings), as both specialists used an overhead projector in developing their subjects and demonstrating specific examples and calculations.

Prior to the fall outlook meetings, a four-page "Worksheet for Figuring Cattle Feeding Prospects" was prepared. Its use was explained at the meetings. Also prior to the meetings, "Outlook Highlights" sheets (one each for Slaughter Cattle, Feeder Cattle, Hogs, and Sheep) were printed and used as hand-out materials at the meetings. A total of 10,000 copies of each sheet was printed. These were distributed through County Extension Offices and mailed to several mailing lists of farmers and ranchers in areas where outlook meetings were not held.

The 15 outlook and feeding meetings were conducted at the following places, in the order in which they were held: Yankton, Sioux Falls, Avon, Corsica, Beresford, Chamberlain, Watertown, Sisseton, Madison, Mitchell, Gregory, Huron, Highmore, Eureka, and Aberdeen.

Total attendance at the 15 meetings was 1,785 or an average attendance of 119 per meeting. There was much interest in the discussion and materials presented at each location, indicating a growing farmer interest in this type of outlook and feeding information. County Extension Agents, livestock auction sales officials, and many producers spoke highly of the information presented. The livestock sales rings were excellent for this type of meeting.

These meetings have been very instrumental in expanding beef cattle feeding into Central South Dakota during the past three or four years.

SOUTH DAKOTA BEEF PERFORMANCE TEST PROGRAM

The 1962 South Dakota Beef Performance Test Program continued at about the same level as the 1961 program. Approximately the same number of records were processed for weaning weights (14,000) as were processed in 1961. However, the membership increased by three lifetime memberships and 27 annual memberships. The lack of increase in the number of calves weighed can be attributed to several items. The first and foremost would be the reduction of herd numbers due to the drought of 1961; secondly, the very wet spring and resulting work load that prevented some calves from being tagged for identification; and last, the change of ownership for several large holdings with the new owner showing no immediate interest in performance testing.

Quite a number of the new members were producers of purebred cattle, so we expect a considerable increase in the number of bull calves placed on a feed test—probably as many as 1,200 head, which would be 20% increase over the previous year.

Total membership of the South Dakota Livestock Produc-

tion Records, Inc., as of January 1, 1963, is 295, composed of 194 lifetime members and 101 annual memberships. The annual members become lifetime members after five consecutive years of annual membership. About one-half of the annual members are on their third year of annual membership.

The finances of the association show a slight increase indicating that under the present arrangements with South Dakota State College, the organization can operate and remain financially solvent.

The cooperative agreement with South Dakota State College for the IBM processing of records was continued by mutual agreement with the added condition that the association should begin to pay for the clerical work involved and the rental of the IBM machine. It is estimated that for the present this cost will be between 400 and 500 dollars per year or somewhere between 3 and 4 cents per animal weighed.

Printed IBM forms for the herd summaries have been purchased during the past year. These forms seem to be very acceptable to the operators in that they are more readily understood by the operators and are of a size and shape that makes them suitable for standard files.

One consignment sale of 30 head of performance-tested bulls was held in November. Consignments to the sale were originally limited to AA and A grade bulls. A lack of sufficient consignments made it necessary to admit four B grade bulls. Twenty-nine bulls were delivered and sold at the sale for an average of $614 per head. The top-selling bull brought $1125 and the second top-selling consignment of four bulls averaged $674.

This sale was restricted to Hereford bulls. The directors at their annual meeting voted to try to hold an all-breed sale in addition to the Hereford bull sale in 1963. There may be some difficulty in arranging an all-breed sale due to the lack of sufficient consignments. However, a number of the new members are breeders of Angus and Shorthorn cattle, so the possibility of an all-breed sale looks good.

Our system of grading bulls according to their performance records and their conformation seems to be acceptable to both the producers and the purchasers. The system results in about 5% of the bulls grading AA, about 20% grading A, about 33% grading B, and the balance falling in a C grade. A certificate program is in use for certifying all bulls grading AA and A.

A program of commercial herd certification has been initiated for 1963. The basis of herd certification will be the production index of the bulls in service plus the yearly number of selected replacement heifers put into the herd. All certification must be supported by records on file in the secretary's office.

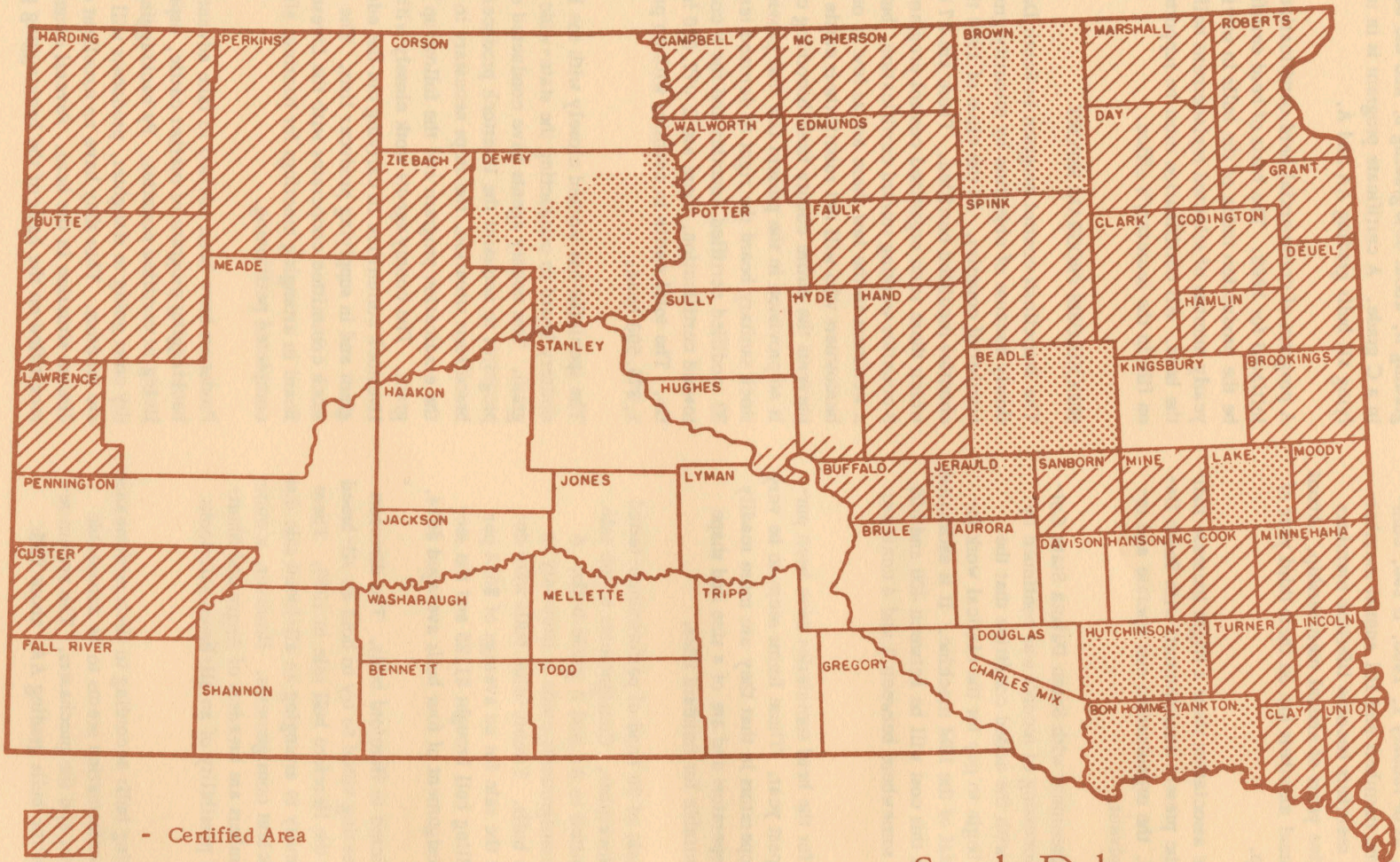
BRUCELLOSIS PROGRAM REPORT

The Brucellosis control program in South Dakota moved slowly because of objection by minority groups in a number of counties. At the close of 1962 there were 32 counties modified certified. There are 27 counties in which there is no organized control program. There are 8 counties working toward certification, but because of a weakness in the law there are as few as one to three herdowners who will not submit their cattle to test, this prevents the entire county from becoming certified. There is no provision in the present law that provides the livestock sanitary board the right to demand testing. In the 32 modified certified counties and the 8 counties working toward certification, there are 2,077,000 head of cattle. The total cattle in counties with no program is 1,379,500 head.

The specialist has worked closely with the livestock sanitary board in conducting the state-wide control program. The county agents have conducted educational programs to acquaint the livestock producers with the brucellosis situation, the steps necessary to bring about the eradication program and the follow-up backtag program. The county agents work closely with the county livestock committee in carrying out the education program and in supplying producer lists. The county livestock committee cooperates with the Livestock Sanitary Board in arranging meetings for hearings after they have completed petitioning.

Producers have been advised to take advantage of the backtagging program of market cattle, especially those living in certified counties. By backtagging cull and dry cows going to slaughter, producers will learn if they are reactors. Thus they have an excellent check on the disease situation in the herd. Several counties have been recertified on the basis of the backtagging program.

Brucellosis Progress Map



- Certified Area
- Testing for Certification
- Approved Area
- No State or Federal Program

South Dakota

During the month of December (1962) 3,997 head of cattle were tested on the tagging program and 25 reactors were found.

The State Brucellosis Committee met with a number of interested livestock groups during December at which time a proposal for amending the current brucellosis control law was discussed. It was agreed that the law must be changed to the extent that a minority of producers could not hold up the program in a county for the majority in favor of it. The new bill will be introduced in the 1963 legislature and if it is passed all South Dakota counties could be modified certified in perhaps 2 years.

The swine producers are working on a voluntary brucellosis control program, as there is no law in the state for a control program. A large number of the purebred breeders are in the process of validating their herds under the voluntary program.

INTENSIVE EDUCATIONAL PROGRAM FOR SWINE PRODUCERS OF SOUTHEAST SOUTH DAKOTA

Hogs are second to beef cattle as the largest livestock enterprise on South Dakota farms. The state ranks ninth nationally in hog numbers with approximately 3 million head produced annually. Annual cash farm income from hogs totals over 100 million dollars.

Farms east of the Missouri River in South Dakota are ideally suited for profitable pork production. Both soil and climate are suited for growing large crops of corn and other feed grains as well as producing an abundance of alfalfa and clover crops which may be used for feed and pastures.

There are many good markets in South Dakota, as well as excellent demands on the West Coast. Hogs moving out of slaughter and marketing facilities can move west, east, or south. Transportation costs to the west are low when compared with several other large midwestern swine producing states.

Recent years have brought about a trend toward larger farms with specialized enterprises. This is true of swine production. Instead of six to eight sows, the farmer today is looking at the swine enterprise as a possible major source of farm income, or at least a unit large enough to make it efficient. Many South Dakota farmers today are considering 20 to 40 sows in a twice-a-year farrowing program.

Because of the importance of the swine industry and in order that producers keep pace with changing conditions there was a need for increased emphasis on management practices and adoption of new methods that would benefit them. It is felt that the county agent is the key person in Extension educational programs; so the agents received training in the following areas of the swine industry: carcass quality; gaining ability and feed conversion; nutrition; housing and sanitation; disease and parasite control; management and marketing.

To facilitate a program which would bring about intensified action the Extension livestock specialist and the southeast area district supervisor invited a group of specialists, research personnel, supervisors, representative county agents, and industry representatives to meet, to plan and develop a program whereby a more intensified swine educational program could be developed.

As a result of several planning meetings the following excellent suggestions resulted:

At state level the following was to be accomplished:

A working committee was formed to develop details for the total program.

Specialists and research personnel from a number of departments were assigned to develop teaching plans.

Supervisors and specialists met with county agents to help them develop a county program.

District training meetings were organized for county agents.

At county level these phases were to be undertaken with guidance of county agents:

Organize county advisory and promotional committees.

Appraise county swine situation and develop county program and plans.

Wide-spread publicity.

Extension specialist and research personnel prepared lesson plans in the following phases of swine production: breeding, management, nutrition, disease and sanitation, marketing, building, and equipment. There were held three district

training schools at Mitchell for agents of eighteen counties of the southeast Extension district. Besides the intensive training given to the county agents, they received lesson plans, slide series, and other teaching aids. They were then prepared to go back into their counties and teach participants who had signed up for the training. Eighteen county agents conducted the intensified swine production training meetings in their counties. Lesson plans covering the various swine production subjects, fact sheets, and other informative materials were covered and handed out to over 800 students (producers) who participated. This gave an average attendance of over 40 producers per county.

This training program proved to be an effective way for county agents to conduct educational work as related by both agents and producers.

The group attending the last Wagner session gave full approval to this type of educational activity and encouraged a resumption next year in another subject. Preferred were either beef production and feeding or soil fertility and fertilizers. As one man reported, "I can get a bulletin from the agent's office, read it and not understand it, or I can listen at a regular meeting and forget half the information before I get home, but if I can listen to an explanation of the material in a bulletin and take it home with me, I can understand and remember a lot better."

Swine production meetings were held at Brandon, Baltic, Humboldt, and Garretson. These meetings have been well received by farmers in the county. Swine producers expressed approval of the lessons relating to the swine program.

"The lesson material was well received by our farmers," said the McCook county agent. "This type of Extension teaching is new in my Extension experience but I would guess at this time that it will turn out to be some of the most effective teaching I have ever done. One of the things I particularly liked about this class was that over half of the class members are young farmers who will make very extensive use of the information presented. The trend of young farmers is reverse of the average meeting where it is made up of older men."

The final session of swine classes was held during March. These classes have been a lot of work but I feel that the results obtained were worth the effort. Comments from class members indicate they felt the classes had been very worthwhile and they would like similar classes on other subjects in future years.

Similar-type education conducted by Extension personnel and including other phases of agriculture are planned for the future. Continuation of the swine program into other areas of the state are underway in 1963.

It is apparent that there is need for intensified training programs if producers are to keep pace with the specialized needs of today's livestock industry development.

BUDGETS—TOOLS FOR FARM MANAGEMENT DECISIONS

Management decisions of the farm or ranch are one of the real problems facing the farmer or rancher. To give guidance in this important area, a system of farm budgets were prepared by the farm management specialists. Through the use of the budgets the farmer or rancher can make some decisions about his business and overcome some of the following factors which have placed his business in a bind.

The emphasis to increase volume of production as a means to attain a given level of farm and ranch net income because of increased costs has forced operators to make major adjustments in their businesses.

Increased opportunities outside of agriculture have caused a big shift in labor supply away from the farm sector. Labor costs have gone up more rapidly than the increase in cost of obtaining capital. This plus the fact that costs of production items have increased more sharply than prices received for what is produced have caused operators to become much more efficient in order to stay in business.

Increased use of technology and larger capital requirements have encouraged farmers and ranchers to become more specialized. This has enabled them to increase the size of farm enterprises and at the same time produce more per acre and per livestock unit with fewer enterprises.

The level of management standards for success in agriculture are higher, requiring more specialized knowledge and ability in the decision making process.

Planning guides were developed for eastern and western

South Dakota together with budgeting forms and related subject matter aids to assist farmers and ranchers in making adjustments in their enterprises and total business.

Training sessions were held for county agents in all areas of the state. Special assistance was given to leaders as needed, in cooperation with other areas of specialty such as marketing, animal science, agronomy, and others.

Some county agents have held sessions with two or three farmers at a time in which the budgets were used in analyzing their present operation. Other agents have worked with an individual farmer or rancher who has recognized that he has management problems. In using either of the above techniques the farmers have agreed that the budgets have been most helpful in pointing up enterprises which are weak or that the operation is over-capitalized or that the farmer is under-employed or a half dozen other problem situations. When the farmer or rancher realizes the situation he is often ready to learn what changes can be made. The county agent is then in position to suggest various alternatives and this they have done. Agents recognize the budgets as a good tool in helping cooperators with their management problems.

NEW AND IMPROVED POULTRY HOUSING HELPS TO MAKE SOUTH DAKOTA EGGS COMPETITIVE

Cash receipts from farm marketing and the value of home consumption of poultry and poultry products totaled 37.9 million dollars in South Dakota during 1961. This amounted to about 7 2/3% of the gross income from livestock and livestock products or about 6% of gross income from total livestock and livestock products and crops.

Income from poultry and eggs ranks fourth and just below dairy products among the livestock enterprises. It ranks fifth among all farm enterprises.

Eggs accounted for 33.5 million dollars or about 88.4% of the total poultry income. Farm chickens amounted to 1.6 and turkeys 2.8 million dollars. Because egg production is by far the most important segment of the South Dakota poultry industry, it receives the most attention in both the production and marketing fields.

South Dakota has the unique position of ranking highest in the nation in eggs produced per capita. Farmers produced nearly 1 1/2 billion eggs during 1961. This would amount to 2,186 eggs per capita per year for the estimated 685,000 population. The average consumer used an estimated 325 eggs during 1961. About 85% of the eggs produced in South Dakota must find a home outside the border of the state.

Marketing away from home puts additional pressure on the producers because the eggs must compete with eggs from other areas of the United States. In order to do this our production units must be at least as efficient as the large commercial units in other areas that are bidding for the same markets. We in Extension realize that the poultry business in South Dakota is in egg production. Consequently our efforts have been geared to helping poultrymen to become efficient egg producers with commercial-sized flocks.

More than 94% of the eggs were produced east of the Missouri River during 1961; consequently most of the poultry work is concentrated in that area.

The 1960 census figures indicate 339 poultry farms in the state. (Farms with more than 50% of the income from poultry.) The report also lists 36,061 farms as selling eggs. Our primary objective in poultry production is to get effective and efficient housing of sufficient size to make it a paying enterprise.

Numerous methods have been effectively used in reaching people to bring about change in the poultry business and particularly in housing.

The farm visit is an important method for it is difficult to recommend changes in housing and management for a commercial enterprise without visiting on the farm. Sixty of 79 questionnaires from county agents, hatcherymen, and industrymen reported making personal farm visits in connection with new and remodeled poultry housing. The Extension poultryman made 58 individual farm visits during the year in regard to housing. "Poultry House Plans" and "Housing 6,000 Layers in South Dakota" were the most often used circulars during the visits. The Extension poultry office and many of the others use a work sheet when drawing up recommendations during a farm visit. One copy is left with the farmer and a copy is retained in the offices of the others concerned for future reference.

Large group tours are held to a minimum because of the danger of disease spread. Individuals are freely referred

to specific units that are similar to the one they are planning and in some cases small groups are taken on tour where the folks have something specific in mind as a certain type of building or floor plan.

Meetings with builders have been held where we sat down with the contractors from two or three firms and went over the specifications of sound poultry housing. Meetings were held with producers to go over some of the desirable things that should be included in a poultry house. Many of the meetings were followed by farm visits.

Inserts were made for the Extension Circular, "Poultry Housing." The inserts show the construction of nests, egg cooler door, egg cooler, wire floor frames, and various floor plans. "Poultry Housing Plan #315" illustrates a 36-foot-wide house of various lengths to accommodate different sized flocks. An insert of explanation for the plan was added during the year.

The circulars were made available through the County Extension Offices and many of the hatcheries. Several equipment salesmen carry the literature for reference.

We carry a camera and take pictures of most of the important projects to show good and sometimes bad features. The colored slide library allows us to take people on a tour of many of the poultry units while sitting in a meeting. This gives them an opportunity to see pictures of things without the disease risk of a visit. Three television programs were made this year featuring poultry housing. Housing was discussed in many of the radio programs and news stories at the county level as well as the state office program.

A small model of two sections of the 36-foot-wide house were constructed for use in meetings and exhibits. The models show the important features such as frame construction, truss roof, insulation, ventilation inlets and floor arrangements. The intensive educational work has brought about these changes in the poultry enterprise.

Up to 1959, commercialization moved slowly in the state. The poultry specialist sent a questionnaire to all the known new and remodeled poultry house owners in 1959. There were 104 units listed as making some changes during the previous 6 or more years.

Owners of Various-sized Poultry Flocks Worked with by Extension Poultryman and Agricultural Engineers Prior to 1959

10 Flocks Previous to 1953 and 56 Flocks from 1953 through 1958

Size	0-300	301-600	601-900	901-1200	1201-2000	2001-& over	Total
No. of flocks	7	22	19	9	8	1	66
% of flocks	10.7%	33.3%	28.8%	13.6%	12.1%	1.5%	100%
No. of birds	--	--	--	--	--	--	52,232

Average Flock Size of 66 Units—791 Birds

To measure the progress of poultry building and remodeling in South Dakota, a questionnaire was sent to the following sources to determine the activity for the single year of 1962.

Housing Questionnaires

Who Received Them	Number Sent Out	Number Returned
County Agents	61	48
Hatcheries	90	25
Other Industry Representatives	20	6
Total Number Returned		79

Housing plans are available through the Extension agricultural engineer's office.

A summary of the questionnaires shows a tremendous change is taking place in the state. There were 74 new houses and 120 remodeled units recorded in the 1962 survey. Flock size is up also. Even with the above results, some folks feel that 1962 expansion was slow because of relatively low egg prices during the spring and summer months.

Here is the data:

New Poultry Houses Built in South Dakota During 1962

Size	0-500	501-1000	1001-3000	3001-6000	6001 & up	Total
No. of units	7	9	31	14	13	74
No. of birds	3,000	7,650	71,300	63,200	133,000	278,350
% of birds	1.1%	2.7%	25.6%	22.7%	47.9%	100%
% of flocks	9.4%	12.2%	41.9%	18.9%	17.6%	100%

Average Flock Size for New Poultry Houses—3761 Birds

South Dakota Poultry Houses Remodeled During 1962

Size	0-500	501-1000	1001-3000	3001-6000	6001 & up	Total
No. of units	27	45	40	7	1	120
No. of birds	11,920	36,911	72,050	33,500	14,000	168,381
% of birds	7.1%	21.9%	42.8%	19.9%	8.3%	100%
% of flocks	22.5%	37.5%	33.3%	5.8%	.8%	100%

Average Flock Size for Remodeled Poultry Houses—1403 Birds

Expansion Brings Business to South Dakota

The survey results show new or remodeled housing for almost 400,000 layers in flocks of more than 1,000 birds.

One might look at this as redirecting of present industry rather than new industry for the area. However according to information published by the Springfield, Missouri, Chamber of Commerce, each 100,000 layers will create about 1.3 million dollars in business in an area.

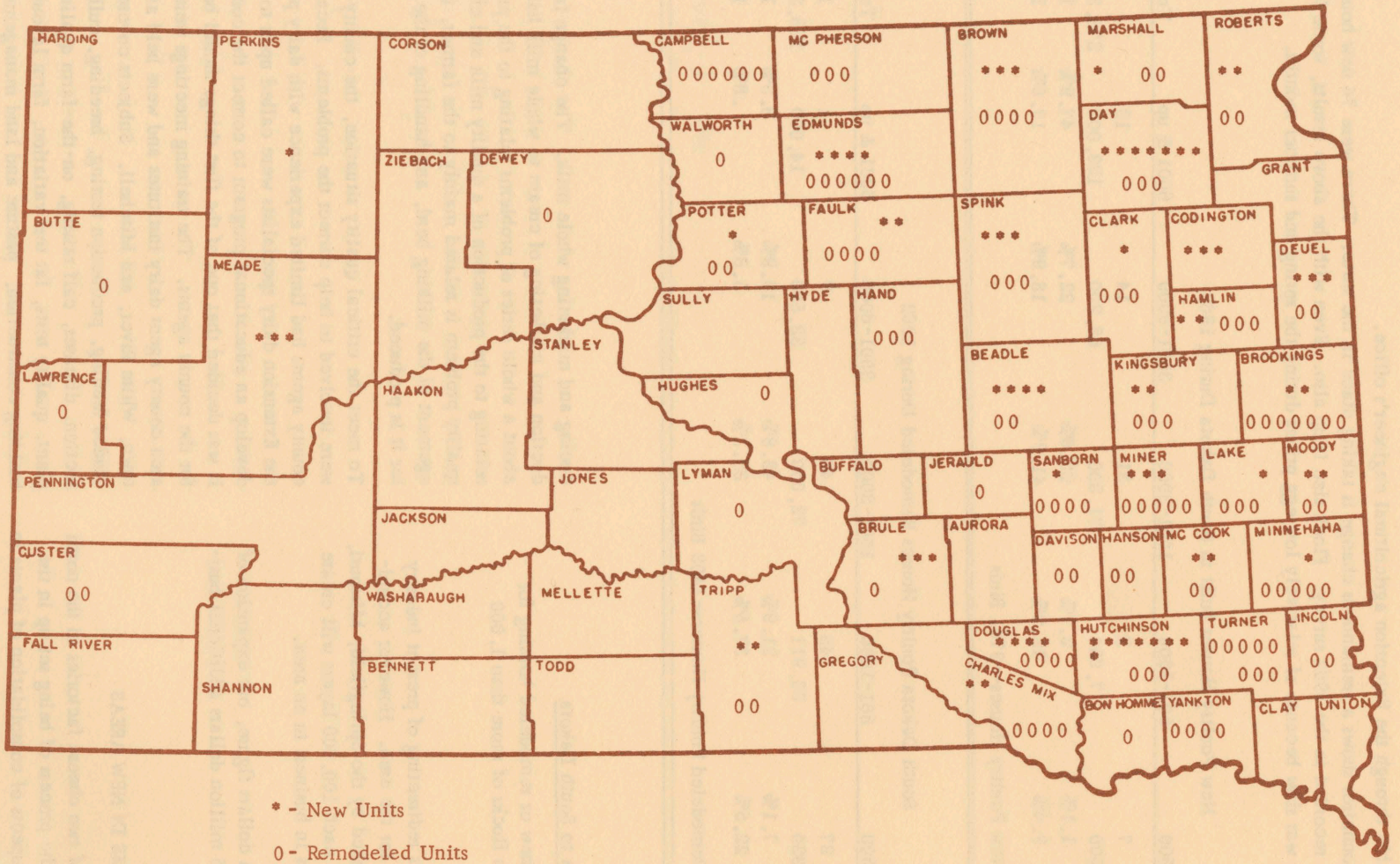
Based on the 1.3 million dollars figure, our expansion of layers creates about 5.25 million dollars additional business in the state.

DAIRYING HAS PROBLEMS IN NEW AREAS

With the establishment of two cheese factories in the north central area and one in the process of being set up in the south central and the prospects of consolidation of plants in northeast, a great deal of interest has developed in producing and marketing whole milk. The change from production and marketing of cream to whole milk has brought about a whole series of problems relating to the problems relating to the production of a quality milk and cheese. The quality problem is related mainly to the farmer, the management of the milking herd, and handling of the milk after it is produced.

To meet the critical quality situation, the county agents were involved to help correct the problems. Because the county agents had limited experience with dairy production, the Extension dairy specialists were called upon to help develop an educational program to correct the conditions. It was decided that one of the first things should be training for the county agents. The training meetings were called area county agent dairy institutes and were held at Watertown, White River, and Mitchell. Subjects covered included feeding, production testing, breeding, culling, selection, diseases, calf raising, on-the-farm quality, dairy plant, quality tests, fat test variation, farm layout, dairy building construction, pasture and land management, marketing dairy products, the dairy outlook and future and farm

Location of New and Remodeled Poultry Houses for Layers in South Dakota
During the Year 1962



* - New Units

0 - Remodeled Units

management decision making. Teaching lessons and reference materials were prepared for each of the above areas. Where possible, visuals such as slides accompanied by scripts and models were developed. All of the lessons and references were put together in a handbook. Specialists in the fields of farm management, dairying, agronomy, agricultural engineering, and agricultural economics worked together in preparation of the teaching materials and the teaching of it to the county agents.

Because of the urgency of the quality of milk situation in the north central area, it was necessary to arrange for a series of three meetings with farmers in cooperation with cheese and milk plants. These meetings were held at three locations in the area. The specialists provided assistance to the agents at these meetings. Dairy cattle feeding, production testing, culling, on-the-farm quality, quality tests, and fat test variation was discussed. The attendance average was 35 milk producers per meeting per location.

As a result of the above mentioned meetings and the individual and group work that the agents are doing, marked progress is being made to improve the quality situation. Farmers are doing a better job of feeding, caring for the utensils, and for the product after being produced.

CENTRAL DAIRY PRODUCTION TESTING LABORATORIES

There are many small county and area dairy herd improvement associations that do not have a large enough membership to support full-time DHIA and owner-sampler fieldmen. Because of the small income, fieldmen do not continue for very long at a half-pay job. During 1962 nine fieldmen were trained; however, only four are still employed as DHIA and owner-sampler fieldmen.

This brief tenure of fieldmen greatly hampers the growth of the dairy production testing program. Some testing months have been missed or averaged because of short notice resignations of the fieldmen.

Some of the partially-employed fieldmen have sought other part-time employment. Whenever this has happened he became so involved in the other employment that he failed to expand the testing program. There have been some dairymen on the "waiting list" that could not test, primarily because the outside employment occupied too much of the fieldman's time. These farmers should be given the opportunity to test if they wish.

These are some of the goals which we are striving to reach in the production testing program:

> To consolidate the testing of the dairy herd improvement associations to give full-time reliable employment for all fieldmen.
>
> To employ only fieldmen that are qualified and that are working only with dairy production records.
>
> To service the consolidated DHIA areas with central laboratories, employing full-time technicians.

Large central testing laboratories have been established at Brookings and Crooks. Smaller laboratories are located at Milbank, Caputa, and Rapid City. The large laboratories handle about 1,000 cows per month. This consolidation of testing areas has been brought about through the cooperation of DHIA members and County Extension Agents. The Brookings laboratory handles records in 17 counties; the laboratory at Crooks handles 9 counties. The laboratories at Rapid City and Caputa each handle three counties and one county is covered with the laboratory at Milbank.

The DHIA's continue to have their local organization who contract for the testing with a central laboratory. The manager of the laboratory is responsible for the hiring of extra employees to handle all records processed. Central laboratory testing complements the trend toward electronically-processed records which facilitates posting on a large number of scattered herds.

Competent full-time managers have been secured for the central laboratories. These managers through reorganization of areas are able to receive a salary commensurate to their responsibilities.

The record-keeping system has become much more uniform because of the smaller number of fieldmen (managers) to work with. The rates for testing have become more closely standardized throughout the state. These laboratories deal in one business, that of testing cows for production.

In the areas serviced by central laboratories, local DHIA boards and County Extension Agents are no longer burdened with constant fieldman changes and inferior work.

EDUCATIONAL PROGRAM IMPACT ON EDUCATION

Fall rains in 1961 and heavy snow cover during the winter

aided in bringing through a good crop of winter wheat and provided moisture for good early growth of all small grains and flax. Above-average amounts of rainfall during late May and June provided moisture to produce excellent crops. However, the high relative humidity and cool temperatures delayed crop development and created ideal conditions for development of crop diseases. A serious epiphytotic of black stem rust seriously damaged winter wheat and other diseases damaged spring-sown grain and flax.

Farmers planted 8,300,000 acres to small grain and flax, 2,839,000 acres of oats, 3,145,000 acres of wheat (2,325,000 hard red spring, 649,000 hard red winter and 170,000 durum) 595,000 acres of barley, 732,000 acres of flax and 250,000 acres of rye in 1962. This was above the 10-year average for all wheats, barley, and flax.

In 1961, farmers had used 51,000 tons of fertilizer, which was more than had been used any previous year. An estimated 25,000 to 30,000 tons of this were applied on small grain.

Of the 8 million acres of small grain and flax, fertilizer would be more effective on the 6 million acres of spring-sown small grain. It is estimated that farmers could profitably use 60,000 tons of elemental nitrogen and 38,000 tons of phosphate on 3 1/2 million acres of small grain (equivalent to 196,000 tons 30-20-0).

There were 1,799,934 acres infested with noxious weeds (1,359,395 acres of field bindweed, 164,810 acres of quackgrass, 149,981 acres of perennial sowthistle, 91,536 areas of Canada thistle, 32,060 acres of leafy spurge, 949 acres of Russian knapweed, 648 acres of horse nettle, and 555 acres of hoary cress) reported in 50 counties. Some methods of control were being applied to noxious weeds on about 80% of the infested farms. There were approximately 5 million acres infested with wild oats in the spring grain growing area with about 75% of the acreage being used for small grain production. Two new herbicides were available for controlling this weed in spring wheat, barley, and flax. A similar number of acres were infested with sunflowers, cockleburs, mustards, and foxtails, but not more than half of the acreage was planted to small grain or flax. Herbicides were available for controlling cockleburs and sunflowers in small grain, mustards in all crops and foxtails in flax. In 50 counties 3,109,000 acres (over half of it small grain) had been sprayed in 1961, indicating that there may have been 4 million acres sprayed in the state.

Of the 8 million acres of small grain and flax, noxious weed control practices could be applied to 2 million acres, and herbicides could be applied for the control of wild oats on 2.5 million acres, foxtail control on 700,000 acres, mustard control on 2.5 million acres, and sunflower and cocklebur control on 2 million acres.

In agronomy we are striving for production at the lowest cost per unit so that the farmer has greater net income.

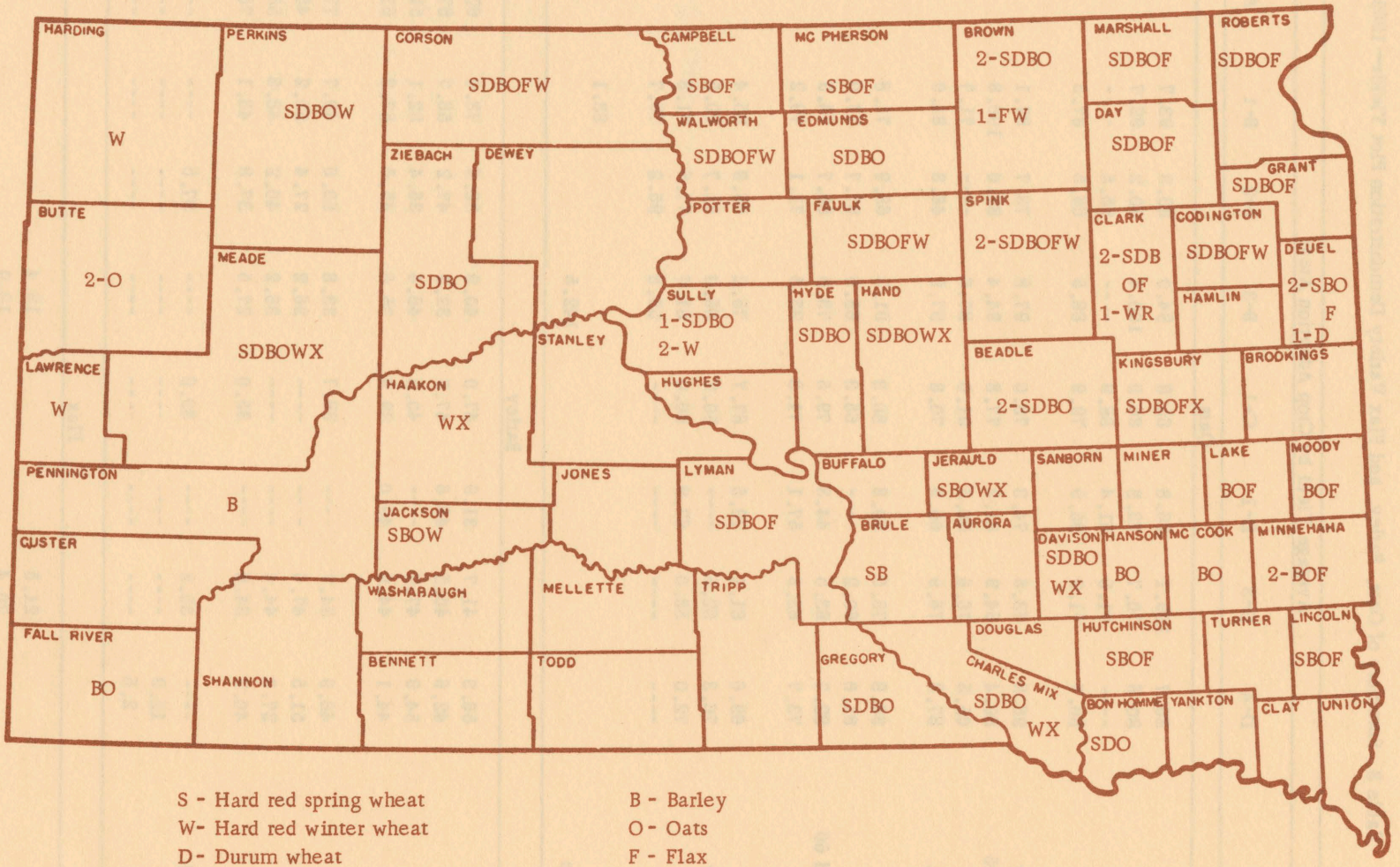
Variety demonstration plots were organized in 47 counties. There were 41 oats, 39 barley, 32 hard red spring wheat, 26 durum wheat, 18 hard red winter wheat, 21 flax, 8 winter barley and 1 rye located throughout the state, as shown in figure 1. The characteristics of each variety were obtained from 20 oats, 16 barley, 16 hard red spring wheat, 12 durum, 5 hard red winter wheat, and 3 flax demonstrations. The data were analyzed statistically by crop adaptation areas and the results distributed to county agents for use at winter crop improvement meetings. A summary of the data is given in tables 1 and 2. Samples from the 21 hard red wheat plots and from 3 state-wide testing plots were analyzed for sedimentation value and protein content. These data are being distributed to aid in comparing the quality of wheat varieties grown in different areas of the state.

Tours were conducted to the county small grain variety demonstration plots between June 30 and July 24. There the farmers have an excellent opportunity to compare varieties, observe growth, straw strength, maturity and disease conditions. Generally an Extension agronomist and/or the county agent is available to discuss the merits of the varieties. Samples are harvested and used for winter meetings and exhibits.

Fertilizer was applied in a band across the varieties and weeds sprayed in several of these variety demonstration plots to demonstrate the use of fertilizer and herbicides.

The TVA Fertilizer Test Demonstration Program, which is a cooperative project between TVA and the Extension Service, was conducted in 25 counties with 52 cooperators to demonstrate how small grain responds to fertilizer on different soils. Counties active in the program were: Bon Homme, Brule, Clark, Charles Mix, Codington, Davison, Day, Edmunds, Fall River, Faulk, Gregory, Hamlin, Hanson, Hutchinson, Jerauld, Kingsbury, Lake, Lyman, Marshall, McCook, Miner, Moody, Roberts, Spink, and Yankton.

Figure 1. Location of 1962 Small Grain Variety Demonstration Plots



S - Hard red spring wheat
W- Hard red winter wheat
D- Durum wheat
R - Winter rye

B - Barley
O - Oats
F - Flax
X - Winter Barley

Table 3. Summary of Oats, Barley, and Flax Variety Demonstration Plot Yields—1962

Variety	Average Yield by Crop Adaption Areas								State Average
	D-4	D-3	D-1	C-1	B-3	B-2	B-1	A	
Oats									
Dodge	86.7	109.1	96.8	85.9	94.0	83.3	93.7		86.7
Burnett	80.6	70.7	73.2	86.9	100.4	80.2	92.7		85.5
Russell	----	71.5	81.4	88.9	----	85.5	----		83.6
Andrew	86.7	71.9	95.9	79.9	88.5	66.5	87.3		82.7
Minhafer	96.6	73.6	74.3	78.0	97.8	73.7	87.1		79.3
Mo-o-205	80.4	64.9	81.3	77.8	94.4	82.0	106.8		78.9
Rodney	65.5	76.6	58.5	91.0	87.6	----	71.7		78.8
Nehawka	87.3	76.9	60.9	70.8	97.9	48.3	84.0		78.4
Portage	86.8	75.6	80.8	80.3	91.3	68.9	71.8		77.1
Tonka	81.6	60.2	----	65.3	88.6	87.7	77.0		75.8
Clintland 60	82.7	83.5	44.3	79.5	73.9	88.7	74.9		74.8
Garry	73.7	65.8	57.1	71.3	93.5	71.1	79.2		73.9
Marion	69.6	61.1	78.5	67.7	75.2	66.8	85.4		71.3
Nodaway	76.3	62.5	----	50.2	85.0	81.7	80.5		70.3
Ransom	72.0	53.0	67.9	60.0	81.7	77.6	71.8		65.6
Dupree	----	----	----	----	55.8	95.2	75.7		75.6
Brunker							83.1		83.1
Cherokee					142.5				142.5
Barley									
Liberty	56.3	41.7	31.9	47.0	40.9	38.6	78.0	62.6	49.6
Larker	42.6	40.5	46.6	47.7	39.1	47.2	56.7	67.1	47.3
Plains	54.9	47.2	----	40.5	46.4	36.4	52.1	51.7	45.8
Trophy	44.1	44.6	49.0	39.9	35.6	45.6	57.3	61.6	44.9
Traill	46.9	34.7	----	38.7	33.8	50.6	49.7	77.9	43.5
Spartan	51.5	47.6	----	----	36.2	27.4	55.2	45.9	52.5
Otis	27.0	44.4	----	----	38.2	40.2	48.3	55.2	42.5
Kindred	40.2	34.2	----	35.0	27.5	37.8	48.1	70.5	38.9
Parkland	----	35.8	----	39.9	----	37.5	----	----	38.4
Kearney	12.9	----	----	----	----	----	----	----	12.9
Chase	2.5	----	----	----	----	----	----	----	2.5
Flax									
Linda		21.5			13.4				18.8
Arny		20.4			13.0				17.9
Marine		20.2			12.2				17.5
Bolley		19.9			10.0				16.6
Redwood		17.0			10.9				14.9
13-5128		11.9			16.2				13.3

Table 4. Summary of Wheat Variety Demonstration Plot Yields—1962

Variety	Average Yield by Crop Adaption Areas								State Average
	D-4	D-3	D-1	C-1	B-3	B-2	B-1	A	
Hard Red Spring Wheat									
Pembina	19.4	28.1	26.7	29.1	26.9	38.1	44.7		30.9
Selkirk	14.2	27.5	31.3	27.6	26.5	37.3	41.9		30.1
Lee	11.3	21.5	26.7	25.2	26.0	36.9	41.9		27.7
Rushmore	11.4	22.8	----	25.4	24.2	33.9	41.2		27.0
Justin	11.1	21.5	26.8	22.4	20.5	22.6	37.7		23.3
Minn 404	12.5	22.6	25.2	23.8	16.9	35.5	36.9		25.8
Canthatch	3.3	19.8	21.9	18.9	16.7	32.3	32.1		22.7
Hard Red Winter Wheat									
Minter	3.6					20.2		53.5	24.4
Omaha	2.5							41.1	21.8
Pawnee	2.3							34.6	18.5
Ottawa	16.5								16.5
Warrior	1.7				4.7			42.6	16.3
Kaw	16.3				9.7	19.5			16.3
Cheyenne	0.5				6.7			35.6	14.3
Yogo	0.4				9.1	15.8		25.1	13.2
Nebred	1.8				11.6	7.2		31.7	13.1
Bison	4.1				5.5	2.9		34.5	10.1
Wichita	2.4				8.0	9.9			7.6
Early Triumph	1.6				9.0	9.6			7.4
Ponda	2.1				9.5	7.9			6.9
Red Chic	1.7				8.0	8.8			6.8
Aztec								27.1	27.1
Durum Wheat									
Lakota	11.7	41.5	52.5	35.4	22.3	26.9	48.4		36.2
Wells	11.6	35.2	39.3	35.2	27.3	31.5	46.4		34.5
Ramsey		34.7		27.7	23.8		43.2		34.7
Langdon	19.4	32.5		30.2	30.8	28.6	45.4		32.3

The fertilizer rates used on the fields vary according to soil tests. In most cases the dmonstrations are a given rate of fertilizer vs. no fertilizer. Table 5 gives the results of these demonstrations on oats.

The counties were developed on a complete Farm and Home Development concept with project responsibility at the county level. Informational meetings are held to explain the program, collect bench mark information, from which progress can be measured, and to set up a bookkeeping system for each cooperator. Yield data were collected from the fertilizer trials and an economic evaluation made of each fertilizer practice. The data are available to the counties and will also be used at the state level for radio, news stories, and farmer meetings.

Tours were held on several farms during the growing season to show the responses of small grain to fertilizer application to other farmers in the county.

County Fertility Demonstration Plots were conducted in counties. Yield data were collected, interpreted, and distributed for use in winter educational meetings. Figures 2 and 3 compare the results obtained with hard red spring wheat in seven demonstrations in four West River counties with results obtained in 1961, while the data in table 4 show the effect of several fertilizer treatments on hard red spring wheat and oats in 10 demonstrations in 8 East River counties and barley in one West River county.

The data in figure 2 show the importance of the correct placement of the fertilizer. The yields of wheat are increased more when the fertilizer was drilled with the seed than when the fertilizer was broadcast. The data in figure 3 show which kind of fertilizer response was mainly a phosphate response, but in a wet year, 1962, the response was primarily from nitrogen fertilizer. The wheat was planted on fallowed fields and in normal or dry years would have a sufficient supply of nitrogen available. It is only during years of extremely favorable moisture that a yield increase could be expected from the application of additional nitrogen. The most economical fertilizer application during a normal year on these West River fallowed soils would be approximately 20 pounds of P_2O_5 per acre.

The data from these placement trials in most cases show a response to fertilizer and generally the drill application is the more efficient method of application. The difference between the two methods of application are not as great as they are in years when the moisture supply is more limiting. It can also be seen that the kind or kinds of fertilizer that is responsible for the yield responses vary, depending on which element is limiting. As a general recommendation, a combination of nitrogen and phosphorus is giving the largest yield increases.

Other fertilizer trials were conducted on winter wheat, but due to the rust problem the yields were lowered making it difficult to interpret the data. On these trials when

Table 5. The Effect of Fertilizer on Yield and Economic Return of Oats in Test Demonstration Plots

County	Crop	Fertilized Yield	Unfertilized Yield	Treatment	Return Over Fertilizer Cost
Yankton	Oats	50.5	34.4	39-13-0	$1.76
"	"	63.1	41.9	39-13-0	$4.76
"	"	62.4	28.9	20-52-0	$9.52
"	"	62.7	28.6	40-30-0	$8.90
"	"	63.7	28.9	60-20-0	$7.80
Bon Homme	"	58.9	39.4	40-30-0	$1.80
"	"	64.3	31.9	40-30-0	$8.30
Lyman	"	67.3	67.3	30- 0-0	$3.90
Hamlin	"	90.8	60.9	25-65-0	$5.85
Average		65	40	37-28-0	$4.98

Figure 2. Effect of Phosphate Placement on Spring Wheat Yield in West River Counties--Blanket Application of 30 Pounds of N.

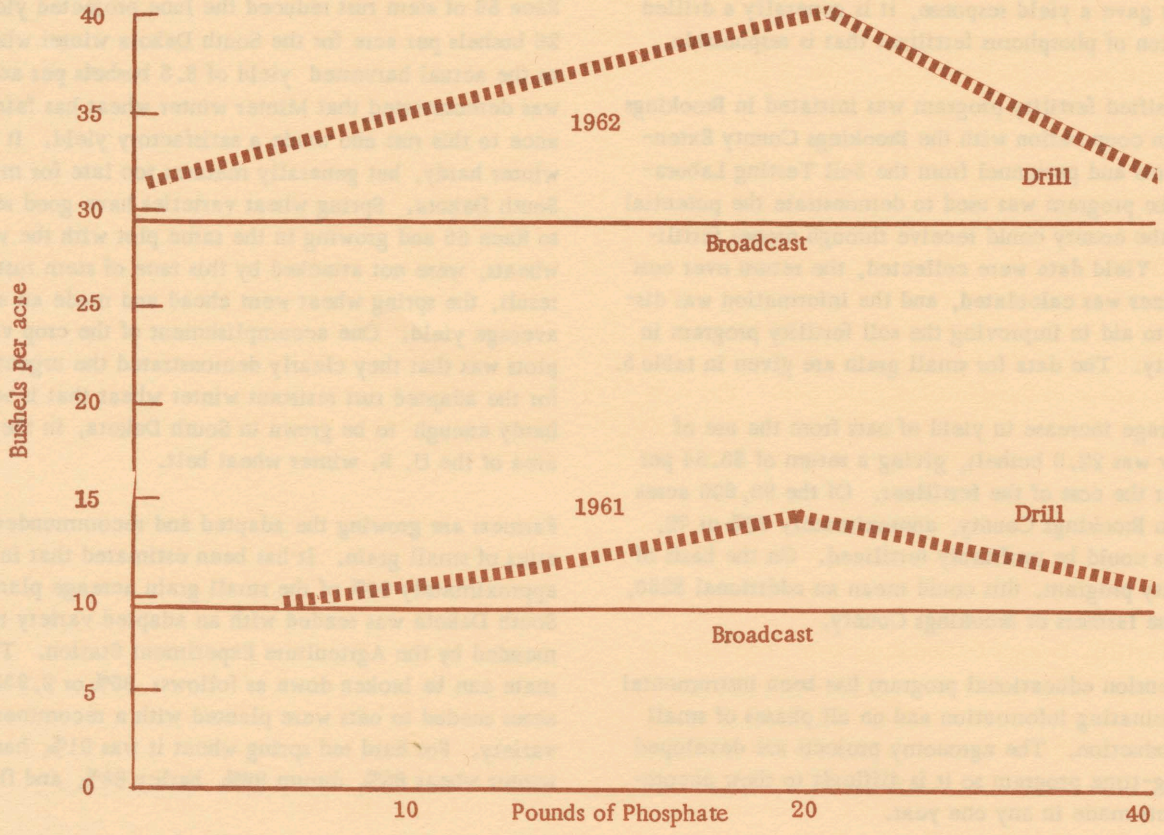
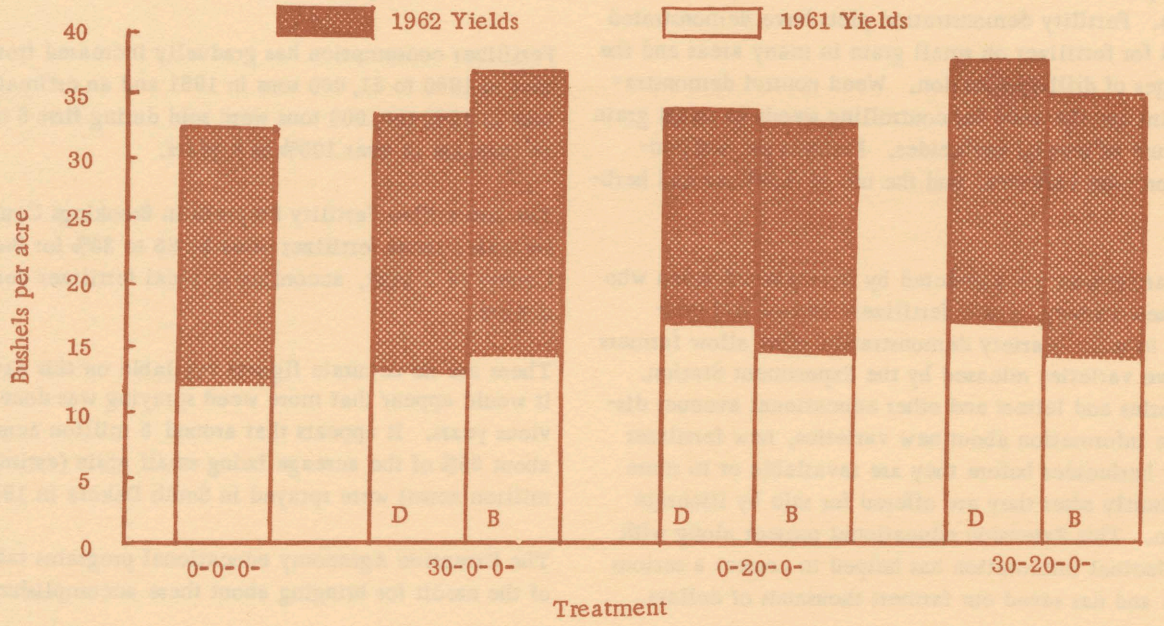


Figure 3. Effect of Nitrogen and Phosphate Fertilizer on the Yield of Spring Wheat in West River Counties.



fertilizer gave a yield response, it is generally a drilled application of phosphorus fertilizer that is responsible.

An intensified fertility program was initiated in Brookings County in cooperation with the Brookings County Extension Agents and personnel from the Soil Testing Laboratory. The program was used to demonstrate the potential income the county could receive through proper fertilizer use. Yield data were collected, the return over cost of fertilizer was calculated, and the information was distributed to aid in improving the soil fertility program in the county. The data for small grain are given in table 5.

The average increase in yield of oats from the use of fertilizer was 22.9 bushels, giving a return of $3.54 per acre over the cost of the fertilizer. Of the 90,600 acres of oats in Brookings County, approximately 80% or 72,480 acres could be profitably fertilized. On the basis of the county program, this could mean an additional $250,000 to the farmers of Brookings County.

The Extension educational program has been instrumental in disseminating information and on all phases of small grain production. The agronomy projects are developed on a long-time program so it is difficult to show accomplishments made in any one year.

The small grain variety demonstration plots have again in 1962, as in past years, thoroughly demonstrated the high yielding potential, disease resistance, and adaptation of varieties. Fertility demonstration plots have demonstrated the need for fertilizer on small grain in many areas and the advantages of drill application. Weed control demonstrations point out the need for controlling weeds in small grain and the use of several herbicides. Farmers are well informed on crop varieties, and the use of fertilizer and herbicides.

Each year farmers are contacted by itinerate salesmen who have a new variety, a new fertilizer, or new soil conditioner to sell. Variety demonstration plots allow farmers to observe varieties released by the Experiment Station. News stories and letters and other educational avenues disseminate information about new varieties, new fertilizer and new herbicides before they are savailable or in some cases, shortly after they are offered for sale by itinerate salesmen. This Extension educational project along with printed factual information has helped to correct a serious problem and has saved our farmers thousands of dollars.

Race 56 of stem rust reduced the June projected yield of 26 bushels per acre for the South Dakota winter wheat crop to the actual harvested yield of 8.5 bushels per acre. It was demonstrated that Minter winter wheat has fair resistance to this rust and made a satisfactory yield. It was winter hardy, but generally matures too late for much of South Dakota. Spring wheat varieties have good resistance to Race 56 and growing in the same plot with the winter wheats, were not attacked by this race of stem rust. As a result, the spring wheat went ahead and made an above-average yield. One accomplishment of the crop variety plots was that they clearly demonstrated the urgent need for the adapted rust resistant winter wheat that is winter hardy enough to be grown in South Dakota, in the northern area of the U. S. winter wheat belt.

Farmers are growing the adapted and recommended varieties of small grain. It has been estimated that in 1962 approximately 90% of the small grain acreage planted in South Dakota was seeded with an adapted variety recommended by the Agriculture Experiment Station. This estimate can be broken down as follows: 85% or 2,935,000 acres seeded to oats were planted with a recommended variety. For hard red spring wheat it was 91%, hard red winter wheat 88%, durum 98%, barley 88%, and flax 91%.

During the last 3 years there has been a steady increase in the number of soil samples tested at the Soils Testing Laboratory. A total of 66,904 samples were tested in 1962 which is an increase of 60% over the number tested in 1959.

Fertilizer consumption has gradually increased from 37,000 tons in 1960 to 51,000 tons in 1961 and an estimated 65,000 tons in 1962 (50,000 tons were sold during first 6 months) an increase of over 100% in 2 years.

The Intensified Fertility Program in Brookings County has increased local fertilizer sales by 25 to 35% for Brookings County in 1 year, according to local fertilizer dealer reports.

There are no accurate figures available on this data, but it would appear that more weed spraying was done in previous years. It appears that around 5 million acres with about 65% of the acreage being small grain (estimated 3.3 million acres) were sprayed in South Dakota in 1962.

The Extension Agronomy educational programs takes much of the credit for bringing about these accomplishments.

Table 6. The Yield of Spring Wheat, Oats, and Barley in County Fertilizer Demonstration Plots—1962

County	Fertilizer Treatment and Method of Application											
	0-0-0		30-0-0		0-20-0		30-10-0		30-20-0		30-40-0	
	D*	B*	D	B	D	B	D	B	D	B	D	B
Wheat												
Sully	36	36	35	36	42	38	39	38	37	38	33	38
Faulk	17	17	18	17	25	21	22	19	22	19	27	24
Edmunds	32	32	29	28	34	38	31	33	32	34	31	32
Spink	10	10	9	11	10	10	11	12	13	12	10	14
Spink	12	12	21	22	12	12	21	17	19	19	22	20
Beadle	18	18	18	20	16	18	22	15	24	21	20	23
Average	19	19	20	21	21	21	23	20	24	23	23	24
Barley												
Perkins	46	46	44	57	48	46	62	65	56	55	55	47
Oats												
Minnehaha	32	32	39	43	37	37	52	48	59	51	50	50
Lincoln	26	26	30	24	26	30	35	29	35	29	29	33
Deuel	31	31	42	41	38	33	50	41	51	45	53	56
Average	30	30	37	36	34	38	49	39	48	42	44	46

*D applied with drill attachment; B applied broadcast

Table 7. Yield and Return over Fertilizer Cost in the Brookings County Intensified Soil Fertility Program

Cooperator	Crop	Treatment	Bushels Yield	Return Over Fertilizer Cost
A	Oats	0- 0-0	37	--
		32-40-0	55	$1.42
		23-23-0	63	8.20
		16-20-0	64	9.89
B	Oats	0- 0-0	39	--
		22-22-0	58	4.85
		44-44-0	56	1.01
C	Oats	0- 0-0	37	--
		20-25-0	58	6.00
		32-40-0	58	3.00
D	Oats	0- 0-0	50	--
		30-30-0	65	1.20
		60-60-0	86	5.40
E	Oats	0- 0-0	66	--
		14-18-0	78	2.37
		28-36-0	89	4.35
F	Oats	0- 0-0	24	--
		33- 0-0	28	2.00 loss
		66- 0-0	35	2.32
G	Oats	0- 0-0	51	--
		10-40-0	64	1.60
		20-80-0	71	.71
H	Wheat	0- 0-0	8	--
		16-20-0	16	12.74
	Wheat	0- 0-0	17	--
		16-20-0	22	6.24
		32-40-0	22	2.48

DECISION MAKING ASSISTANCE AND INFORMATION TO FARMERS ON WHEAT AND FEED GRAIN PROGRAMS

An area of intensive Extension educational activity receiving particular emphasis early in 1962 was that of providing information and assistance on the 1962 wheat program and the 1962 feed grain and barley programs.

These factors made it essential that a hurried educational program be developed.

Incentive payments were offered farmers by the federal government in 1962 for reducing planted acreages of wheat and feed grains, as a means of decreasing the national buildup of storage stocks of these grains accumulated under price support programs.

Wheat and feed grain crops are very important crops to South Dakota farmers and ranchers. In general, individual farmers have attempted to maintain or expand their acreages of these crops in order to increase their farm business volume and also their net farm income. Before voluntarily participating in acreage reduction programs for these crops, they want to know how their net farm incomes are likely to be affected.

Many farmers look to the county agent and the State College Extension Service for advice and counsel on how such programs may affect their farm operations.

In the program our plan was to:

> Provide information on the essential provisions and requirements of the 1962 wheat and feed grain programs, stated clearly, and explained in farmer language as much as possible.
>
> Provide farmers with an analytical tool or budget procedure by which they could apply the particular program provisions to their own farm, and calculate the possible net income effects of participation and at different levels of participation.
>
> Get these (1) explanatory and (2) decision-making materials into the hands of the maximum number of farmers, early in the sign-up period, so they could make their own best management decision for their own particular farm situation.

The farm management specialist, and the Associate Extension Editor, were designated by the director to head up Extension educational activities on the 1962 wheat and feed grain programs. A regional meeting was attended by the two specialists on February 5 at Omaha, held primarily for state ASCS officials, fieldmen, and Extension workers. Details of the two programs for 1962 were obtained at this meeting.

Following the Omaha meeting, the specialists collaborated in the preparation of two Extension fact sheets, which were printed and ready for distribution by the end of February. One was fact sheet #120, "The 1962 Feed Grain and Barley Programs", of which 30,000 copies were printed. The other was fact sheet #121, "The 1962 Wheat Stabilization Program", with 20,000 copies printed. The manuscripts for both publications were checked with the State ASCS office prior to printing. The fact sheets were distributed mainly through County Extension Offices but also by a number of county ASCS offices.

In both fact sheets, a budget procedure was outlined and illustrated by an example farm showing the calculations necessary to estimate the possible effects on net farm income by participation in the programs. By substituting figures for his own farm, a farmer could use these budget forms in analyzing the questions, "Should I participate?" and "At what level?" and arriving at his own management decision on whether or not to participate in the programs.

News releases on both programs were prepared and given wide distribution through daily and weekly newspapers in the state. Several of these were in a "question and answer" form. Suggested news stories were sent to County Extension Agents for use in their county agents' columns. Radio tapes were prepared for the college radio service for dissemination through radio stations in the state. A February issue of the economics department's Farm and Ranch Outlook Letter was written on the subject "Wheat Farmers: Consider the 1962 Wheat Program," and other issues explained the main features and provisions of the "1962 Feed Grain Program." The County Extension Agents used these materials extensively at educational meetings conducted jointly with county ASCS committees throughout each county.

It is difficult to say how well we accomplished our goal of providing a maximum number of farmers with decision-making information on the two programs which they would apply to their farms. However, one indication might be a report from a county agent who said that the county ASCS office manager in his county had asked him if Extension

would have similar fact sheets and budget forms for the 1963 programs. He said he liked our materials and was looking forward to them again.

As Extension workers, we believe that it is our job to see to it that farmers are provided with essential information about the programs, in a form that they can understand and apply to their own farms, so that they can make the wisest decisions under their own particular farm conditions of land, labor, and capital resources. In the long run, this should result in the largest number of satisfied program participants and also satisfied non-participants—farmers satisfied that they made the wisest decision to either sign up or stay out. We feel that we at least partially accomplished this goal in 1962.

THE HOME AND PUBLIC GROUNDS IMPROVEMENT PROGRAM

It is estimated that 75% of South Dakota farm homes and 50% of the town homes could benefit from landscaping improvements. In addition to this a great many public, private, business and industrial grounds are much in need of landscape improvement.

Many home owners and other property owners are seeking sources of landscaping information, advice and assistance but there are few people trained to provide assistance in this field. There are problems of site selection, preparation of plans, and identification, selection and use of the many plant materials available for landscaping purposes.

Goals to be achieved include an increase in the number of farm and town homes and public or private properties in South Dakota with pleasing landscape plantings, and to develop an understanding of the basic principles of landscaping or grounds improvement.

The specialist presented landscaping information to state, county,and local groups or clubs requesting such information. In addition to this, training was given to County Extension staff members. Some demonstration landscape plans and a limited amount of planning service was carried out.

Mass media, such as radio, television,and bulletins were used in the dissemination of landscaping information. Visual aids such as colored movies, slides and flannelgraph presentations of landscaping principles were used.

Six hundred and fifty people attended nine public meetings on the subject. Meetings were arranged for by state, county,and local groups.

Landscaping information was presented at county crop show programs, vo-ag adult meetings, the state garden club convention and other special county meetings. Special emphasis for the program was given in Brown, Beadle, Clark, Hyde, Bon Homme, Grant, Lake, Minnehaha, Brule, Lyman, Gregory, Edmunds, Hand, Aurora, Lincoln, Turner, Codington, Brookings, and Charles Mix Counties.

Assistance was given to the development of landscape plans for the Edmunds and Lake County 4-H Club Fair Grounds. Help was given to the towns of Hosmer and Miller in development of plans for park improvements. Assistance was given to the Augustana Academy of Canton, the Public High School at Canton, and Public High School at Watertown in the development of landscape improvements. Plans were developed for landscaping the farmsteads at the Cottonwood Research Substation Farm and the Southeast South Dakota Research Farm located near Centerville, South Dakota. Several farm and home visits were made in cooperation with County Extension personnel to assist adults and 4-H club members with landscaping problems and plans.

During the year there was a wide distribution of the two Extension Circulars relating to landscaping. "Landscape Planning for Farm and Home" was reprinted in February. Ten thousand copies were printed for distribution to adults, 4-H clubs, and others. "Ornament Trees and Shrubs for Landscape Plantings in South Dakota" was printed in April. This circular lists and briefly describes over 200 trees and shrubs suitable for planting in South Dakota.

A landscape result demonstration was developed in Lyman in cooperation with the County Extension Agent.

Arrangements for the demonstration and meetings were made by the County Extension Agent with the people who owned the demonstration home.

The plans for emphasizing home landscaping in the county called for a preliminary conference with the demonstration family at their new home the morning of the meeting and tour date. The prupose of this conference was to become acquainted with the family and to discuss with them the

various features of a landscape plan, to take measurements of the house and farmstead and to prepare a rough sketch of the property and some of the proposed plantings.

After securing the necessary information the specialist and agent returned to the courthouse where the specialist prepared the landscape plan and the suggested list of plant materials for landscaping the farmstead.

A public meeting and a tour of the farmstead to explain the principles of landscaping and how they can be applied were planned for the afternoon. These arrangements were made by the county agent.

Thirty-five women attended the meeting and tour. The specialist presented a flannelgraph landscaping demonstration and also showed a movie and colored slides to illustrate the various landscaping principles.

The landscape plan that had been prepared for the farmstead was shown. The specialist named the various plants that were suggested for use in the plan. He also described the particular plants and explained why they were used in certain locations.

The farmstead is open to visitors who may wish to observe the development of the landscape plantings and in this way other cooperators may become familiar with the plants and how they might be used at their own farmsteads.

This demonstration planting should serve as a guide to homeowners in the county who may be interested in making home grounds improvements on their property.

The increased interest in home and public grounds improvement in South Dakota is reflected in the numerous requests for information and assistance. Progress is being made and each improved or developed area serves as a demonstration of the values that can be obtained through the wise use of horticultural plants around our homes and public grounds.

Maintenance of Tree Plantations

There are approximately 195,000 acres of tree plantations in South Dakota. All of these plantings need protection from fire, livestock, diseases, and insects. About 30,000 acres of this total also needs protection from rodents, weeds, and grass.

Failure on the part of many tree owners to provide adequate and timely cultivation and failure to protect plantings from grazing are the chief problems in this project. Many farmers also need information on "in-the-row" weed control methods. Overcoming the attitude of farmers that trees can survive without adequate and timely cultivation and protection of them from grazing are real needs. Making available to them the latest information on "in-the-row" cultivation, rodent, insect, and disease control methods are necessary to bring about improvement in the tree plantings.

The education program relating to this problem was mainly conducted through mass media. There were 14 radio transcriptions prepared on subjects connected with cultivation and maintenance of tree plantations. Seven news releases were issued on tree maintenance subjects. Two new fact sheets were prepared and 5,000 copies of each were distributed to tree owners through the County Extension Agents. One of these was on the subject of Dutch elm disease and the other on "over-the-row" tree cultivation. A fact sheet on chemical weed control in trees was revised and distributed to tree owners through the county agents. A film on "over-the-row" cultivation was obtained from North Dakota and shown at the State Weed Conference. A print of this film was then purchased and made available to county agents for showing to farm groups. A chemical weed control demonstration was installed in a shelterbelt adjacent to Highway 34, just east of Madison. A new ACP practice covering shelterbelt renovation was developed and submitted to the ASCS for possible inclusion in the 1963 docket.

Six newsletters, containing timely topics and new research information on tree maintenance, were issued during the year and sent to 450 forestry technicians, soil conservationists, and key farmers. Eighty farm visits were made to give individual assistance to farmers and ranchers on specified tree problems.

Spot checks have been used throughout the year to evaluate the results of the methods used to promote better tree cultivation and maintenance. It appears evident from these checks that there has been decided improvement in the care of young plantings insofar as weed control is concerned. With regard to reduction in grazing damage, some improvement has been noted. Comparison of the

number of plantings being grazed last year with the results of spot checks made this year indicates a five percent reduction in this destructive practice.

The specialist, as chairman of the tree Farm Committee, gave leadership to this nation wide program which is designed to encourage better management of privately-owned woodlands. During 1962 the committee certified 11 new tree farms covering 1,807 acres. South Dakota now has a total of 225 tree farms covering 36,941 acres of privately-owned woodlands.

Mechanized Feed Handling and Processing

The increased interest in livestock feeding, the shortage of reliable labor, and the interest in greater efficiency of production are causing many farmers to have a great interest in mechanized feed handling and processing. Also new techniques of putting up feed such as haylage and high moisture corn are bringing about changes in systems of feeding.

Lack of understanding by farmers and suppliers and poor planning resulting in excessive labor, excessive capital investment, and inefficient use of feed handling and grinding systems are problems on which educational work is being undertaken.

South Dakota State College Agricultural Engineering Department has pioneered the research of low horsepower automatic feeding systems. South Dakota Extension Service Agricultural Engineers have planned educational programs to inform farmers concerning the need for planning feed handling systems carefully, equipment and controls available and suitable for farm feed handling systems, and the possibilities for reducing investment and saving labor through use of low horsepower systems which could operate unattended.

An operating miniature feeding system, and controls arranged for easy sequencing of many types of systems, was demonstrated at meetings, shows, fairs, and field days. This dramatized the possibilities of utilizing low horsepower, automatic or semiautomatic operation. It was used at 13 meetings and shows, with about 1,290 persons viewing it. A half day workshop on design of low horsepower automatic systems was presented at the Electrical Advisors Conference. About 15 farm visits were made in planning low horsepower feeding systems. Equipment suppliers were contacted to assist in securing of suitable equipment. A meeting of manufacturers of controls with Chamber of Commerce, equipment suppliers, and agricultural engineers was arranged to explore potentials and problems in the getting of automatic feeding systems onto farms.

At least six completely automatic feeding system demonstrations are in use or being contructed on farms in South Dakota. Two manufacturers are supplying controls, based on the system developed at South Dakota State College Agricultural Engineering Department.

Crop Drying and Aeration

Present methods of harvesting and storage result in excessive losses in alfalfa, grains, and corn in South Dakota, ranging from 10 to 25% of the crop on the average. Available drying and aeration equipment can be used to eliminate most of these losses. Many different kinds of equipment are available with emphasis recently on bin-drying which has been encouraged by Extension agricultural engineers for a number of years. Farmers need technical assistance in selecting of drying systems to fit their particular needs.

Through requests from county agents and electrical power suppliers a number of farm visits were made to assist farmers in the selection of drying systems. New releases were used to differentiate between available methods and call attention to available bulletins. The prospect of a late corn crop prompted the Dakota Farmer, South Dakota High-Liner, and East River Electric Power Guardian to request feature stories and pictures. The distribution of these publications brought the story of forced warm air drying of corn to 90% of the farms in South Dakota.

A corn-drying demonstration was staged at the site of the South Dakota Mechanical Corn Picking Contest through cooperation of the contest committee and equipment suppliers. Results were entirely successful and resulted in plans by farmers in the area for such drying systems. Previous training of the electrical power supplier personnel in this area enables them to assist farmers in planning of such systems.

Larger storages in use on farms makes desirable the use of aeration equipment to stop moisture migration in stored grain and shelled corn and subsequent spoiled crust on top. News releases supplied basic information to selection of aeration equipment and recommended operating procedures.

1963 YEAR OF IMPORTANT DECISION FOR LAND OWNERS WITH IRRIGABLE LAND IN OAHE UNIT

These major steps have been taken toward realizing water resources development in north central South Dakota:

Large water supplies are being accumulated behind the Oahe Dam on the Missouri River above Pierre.

The Oahe Conservancy subdistrict has been formed by a favorable vote of the people. The formation of the subdistrict was indicative of the interest and desires of the people for water resources development.

The Bureau of Reclamation has submitted a feasible project report and are in the process of developing a master water contract with the Oahe Conservancy Subdistrict Board. However, the Bureau of Reclamation will not proceed with detail studies or any construction of supply or distribution systems to get water from the Oahe Reservoir to the James Valley until irrigation districts are formed.

During 1963 land owners with irrigable lands in the Oahe Unit should decide whether or not they want to organize irrigation districts. These irrigation districts would be located in Spink County, the west lake plain of Brown County, and the Missouri slope area in Sully County.

Land owners with potential irrigable lands of the above counties are asking questions. One of the questions frequently asked is what can I expect from my farm in production and income under irrigation versus dryland. To get at this kind of information the county agents of the counties have located four rather typical and average-sized dryland farms with a known amount of irrigable land. They have obtained the cooperation of the farmer to the extent that he has supplied the cropping and livestock systems on the farm, the acreage and yields of crops, the crop rotation system and records if possible. This information was sent to the Extension farm management specialist who in cooperation with the experiment station economists and those of the Bureau of Reclamation and of the Soil Conservation Service have worked out a number of budgets under dryland and irrigation for the different farm units.

These budgets will be used by the county agents and other persons holding meetings with landowners of irrigable lands to help them visualize some of the changes that take place under irrigation such as added capital, larger yields, more expenses and labor, and a larger labor management income. These budgets are primarily mediums to create discussion which will bring out problems that are on their minds so that they can be cleared up. When people have the best answers to their problems they are in much better position to make a decision whether or not they desire to organize districts or any other such decision of magnitude.

A sample of the budget material begins on the next page.

EXTENSION HAS A VITAL ROLE IN THE CONTROL PROGRAM OF THE SUGAR BEET LEAF SPOT DISEASE

In 1961 the first sugar beets were planted in eastern South Dakota. The Utah and Idaho Sugar Company with the assistance of the Extension Service carried on educational work with farmers that could irrigate and about 4,000 acres of beets were planted in 3 counties. In 1962 the acreage was expanded to three additional counties and about 10,000 acres were contracted.

Many things happened in 1962; the highest rainfall in years started falling in May and continued through July. Some plantings were washed out or drowned out; others were not planted until in June. Weeds became a serious problem because cultivation could not be accomplished. The county agents along with the sugar company carried on extensive work with the growers in the use of chemical weed control. Then in mid-July, surveys indicated that cercospora leaf spot was present but only in trace amounts in the southeastern sugar beet areas.

By August 3 the disease had definitely built up to epidemic proportions in Turner County. Of 14 fields surveyed at this time, 7 had more than 60% of the plants infected, 6 had greater than 20% infected, and only 1 showed less than a 10% infection. Only trace amounts of the leaf spot disease were present in the Elk Point, Yankton, Vermillion, and Huron sugar beet areas.

It was determined by South Dakota State College Experiment Station personnel and the Extension plant pathologist that immediate disease control steps were necessary to protect the crop from extensive losses in Turner County. Before a control program could be gotten underway it was necessary to do some convincing of both growers and U & I Sugar Company fieldmen that the disease could be very damaging to the beet tonnage and sugar content.

Most growers were second-year producers of beets and had had no experience with the disease, consequently, they

BRIEF COMPARISON OF SPINK COUNTY DRYLAND AND IRRIGATED FARM PLANS

		Dryland Plan #1	Dryland Plan #2	Irrigated Plan #1	Irrigated Plan #2
Dry cropland	acres	556	556	108	108
Irrigated cropland	acres	---	---	320	320
Native pasture and hay	acres	200	200	200	200
Other land	acres	44	44	44	44
Total	acres	800	800	800	800
Dairy cows		35	35	45	42
Beef cows	number	---	---	---	---
Calves fed out	number	---	---	---	---
Sows W/2 litters	number	---	15	---	25
Sows W/1 litter	number	---	---	---	---
Ewes	number	---	---	---	---
Labor used, operator	man-days	340	375	375	375
Labor used, hired	man-days	---	28	134	223
Total investment	dollars	102,350	106,685	118,755	124,186
Net cash income	dollars	11,986	14,095	15,941	19,086
Less: depreciation	dollars	2,104	2,420	2,638	3,081
Net farm income	dollars	9,882	11,675	13,303	16,005
Less: interest on investment	dollars	6,147	6,451	7,180	7,560
Labor and management income	dollars	3,735	5,224	6,123	8,445

SUMMARY OF SPINK COUNTY FARM PLAN: DRYLAND PLAN 1

CROPPING PLAN

Crop	Acres	Yield	Unit	Production	Price per unit	Total value
					dollars	dollars
Corn	100	27	bu.	2700	1.00	2,700
Oats	70	38	bu.	2660	.55	1,463
Barley	36	26	bu.	936	.75	702
Wheat	150	16	bu.	2400	1.75	4,200
Alfalfa	170	1.6	ton	272	18.00	4,896
Diverted	30					
Native hay	20	1.0	ton	20	10.00	200
Native pasture	180	.41	ton	74	5.00	370
Other	44					
TOTAL	800					14,531

LIVESTOCK PLAN

Enterprise	No. of unit	Income Per unit	Income Total
		dollars	dollars
Dairy cow, Grade C	35	140	4,900

FINANCIAL SUMMARY

Total value of crops	14,531	
Total livestock income	4,900	
Total		19,431
Less cash crop costs	2,930	
Less fertilizer costs	867	
Less building repairs	350	
Less L. S. equipment repairs	228	
Less taxes, insurance	3,070	
Net cash income		11,986
Less depreciation	2,104	
Net farm income		9,882
Less interest on investments	6,147	
Labor and management income		3,735

INVENTORY VALUES

Land and buildings	67,800
Building and improvements	(8,750)
Machinery and equipment	15,750
Livestock	17,300
Other	1,500
TOTAL	$102,350

LABOR REQUIREMENTS

Operator	340 days
Hired	0 days
TOTAL	340 days

SUMMARY OF SPINK COUNTY FARM PLAN: IRRIGATED PLAN 1

CROPPING PLAN

Crop	Acres	Yield	Unit	Production	Price per unit (dollars)	Total value (dollars)
Dryland						
Corn	26	27	bu.	702	1.00	702
Wheat	52	16	bu.	832	1.75	1,456
Diverted	30					
Native pasture	200	.41	ton	82	5.00	410
Other	44					
Irrigated						
Corn	192	82	bu.	15,744	1.00	15,744
Oats	58	80	bu.	640	.55	2,552
Alfalfa	40	4.5	ton		18.00	3,240
TOTAL	672					25,289

LIVESTOCK PLAN

Enterprise	No. of units	Income Per unit (dollars)	Income Total (dollars)
Dairy cow, Grade C	45	140	6,300

FINANCIAL SUMMARY

Total value of crops	25,289	
Total livestock income	6,300	
Total		31,589
Less crop cash costs	3,194	
Less fertilizer costs	3,497	
Less building repairs	450	
Less L. S. equip. repairs	292	
Less hired labor	1,250	
Less taxes, insurance	3,563	
Less water charges	3,402	
Net cash income		15,941
Less depreciation	2,638	
Net farm income		13,303
Less interest on investments	7,180	
Labor & management income		6,123

INVENTORY VALUES

Land and buildings	75,480
Building and improvements	(11,250)
Machinery and equipment	19,590
Livestock	22,185
Other	1,500
TOTAL	$118,755

LABOR REQUIREMENTS

Operator	375 days
Hired	135 days
TOTAL	510 days

hesitated about going into additional expenses. The U & I Sugar Company has its operations in areas of the United States where they have not encountered the disease, so they were not fully appreciative of the problem and the damage that could result.

As all the sugar beet acreage was under contract with the sugar company, all efforts to initiate a disease control program were made through representatives of this company. Therefore, considerable effort was expended in direct teaching of the U & I fieldmen. The initial step taken was to send out a letter to all county agents having sugar beet acreage in their counties, as well as to certain U & I personnel. This letter described the symptoms of the disease and told of the potential disease situation in Turner County; also, specific recommendations were given for a fungicide spray program for disease control.

When the fieldman and the county agent became fully appreciative of the disease potential and how rapidly the epidemic was developing they were very active in getting the control program started. The experiment station personnel and plant pathologists then assisted the fieldman and county agent in direct visits with individual growers to explain the disease situation and the need for an immediate control program on the part of the growers. The good response of the growers in agreeing to a disease control program, at their own expense, could not have been obtained so rapidly by any other approach. While the decision to use a fungicide program, after the facts were known, had to be made by an individual grower and the U & I fieldman, the impetus and support of the Extension Service was involved throughout the entire program.

The fungicide maneb (manganese ethelyene bis dithiocarbamate) was recommended for the control program. As it was important to get the spray program started as soon as possible, aerial application was recommended. The application of fungicides is more exacting than herbicide or insecticide application in that thorough coverage of all plant surfaces is required. Also, different nozzle sizes, spacings, and pump capacity are required for effective coverage. Aerial application of fungicides is a new potential to South Dakota serial applicators and none were equipped to take on this spraying; however, one serial applicator refit his planes so that he could do the job. The Extension Service assisted in arranging for the aerial applicator and technical assistance was supplied by a representative of the Rohm and Haas Company, who also was able to supply the maneb fungicide on short notice. The county agent coordinated the necessary arrangements between the growers and the aerial applicator for the first application. Succeeding fungicide applications were followed by the aerial applicator on a regular schedule.

Four applications of maneb were recommended to be made during August. Applications were to be seven days apart. The dosage rate was 2 pounds of maneb per acre applied using 5 gallons of water per acre. A spreader-sticker was also used to increase the effectiveness of the fungicide. The cost of the fungicide plus the spreader-sticker was $2.22 per application. The aerial application cost ranged from $1.59 to $2. per acre per application depending on the number of acres sprayed for each grower.

As a result of this emergency education program on this disease in Turner County, 14 of 21 growers (67%) participated in it. Although 4 spray applications at 7-day intervals were recommended it developed that only 3 sprays at 9-day intervals were applied. The fungicides could not be applied during September as the chemical, under present tolerances, cannot be applied 30 days prior to harvest.

Of the 14 growers who sprayed, 10 made 3 applications, 2 growers made 2 applications, and 2 growers made only 1 application. Twelve growers had the fungicide sprays made by aerial application and two growers used ground spray equipment. One grower increased the number of acres sprayed for the second application and three growers decreased the number of acres sprayed for the third application. The number of acres sprayed is indicated in the following table:

No. of sprays and date of application		No. of Growers	No. of acres sprayed
1	8- 7-62	14	1,719
2	8-16-62	12	1,560
3	8-27-62	10	1,047
TOTAL			4,326

Using an average cost of $4 per acre the total of 4,326 acres sprayed represents an expenditure of $17,304 by the sugar beet growers in Turner County for the disease control.

This, of course, reflects the interest of the growers in doing all things possible to insure the success of sugar beet production.

The application of a fungicide for disease control does not mean that the disease will be eliminated. The fungicide acts as a protectant and will not eradicate the infection already present prior to spraying. The chemical will protect non-infected plant surfaces from becoming infected to a severe degree.

Careful observations were made in the fields during September and the development of the disease was slowed down considerably. Most growers also thought the chemical was effective in holding down new infections. There was considerable leaf spot present in September but there was not extensive defoliation. Visually the disease appeared to be arrested but real proof was not available until harvest time in October.

Most growers left test strips (non-sprayed) for comparison purposes. Six fields were selected for detailed evaluations comparing sprayed and non-sprayed areas of the fields. The information obtained from the six different growers' fields were averaged and are presented as outlined below:

	Sprayed	Non-sprayed	Net change relative to non-sprayed
Spots/leaf	157	279	-44%
Ave. no. leaves	49	52	- 6%
% green foliage	61	52	17%
Yield, tons/acre	18.2	15	21%
% sucrose	13.1	12.2	7%
Gross sugar (lbs.)	4743	3677	29%

Comparing the sprayed versus the non-sprayed it is clear that the disease control program was quite effective. There was an average of 44% less spots per leaf on the plants which were sprayed and this indicated that less defoliation should occur on the sprayed plants. This is borne out by the fact that the total number of leaves produced by the plants which were sprayed was 6% less than the total number of leaves produced by the plants which were not sprayed. This means that the sprayed plants were better able to contribute to the beet development and subsequent sugar accumulation in the beet, whereas, the non-sprayed plants had to expend consideralby more energy in the production of new leaves, thus, detracting from potential increase in beet size and accumulation of sugar in the beet. As a result of fewer spots per leaf and less total new leaf production there was 17% more green (functional) foliage present on the plants which were sprayed. This is strikingly reflected in a 3-ton (21%) increase in yield, as well as a 29% increase in pounds of gross sugar of the sprayed plants over the non-sprayed. Although the percent sucrose was disappointing for the area in general it does not detract from the effectiveness of the disease control program as there was an average of 7% more sucrose present in the beets harvested from the sprayed than from the non-sprayed areas.

The 21% (3-ton) increase in yield and the 7% increase in sucrose would indicate that the growers had a 3- to 4-fold return on their initial expenditure for the fungicide disease control program.

The fact that this particular fungicide used was effective in controlling or reducing disease development on sugar beets is not something new. This fungicide and others have been used effectively in disease control programs in other states. The effectiveness per se of the fungicide was not the important result of this program. The important result was that, in a short time, a new tool for growing better crops through protection against destructive disease losses was made available to and adopted by the growers within the relatively short time of 10 days. The Extension Service was instrumental in getting the program started but the over-all program and its success involved close cooperation with the research staff of the plant pathology department, the county agent, personnel of the Utah and Idaho Sugar Company, the area representative of the Rohm and Haas Company, and the Dakota Aviation Company.

CORN ROOTWORM WORK EMPHASIZED BY THE EXTENSION SERVICE

South Dakota has all three corn rootworm species, the northern corn rootworm, Diabrotica longicornis, being predominant; followed by the western corn rootworm, Diabrotica virgifera; and the southern corn rootworm, Diabrotica undecimpounctata howardi.

Corn rootworms may reduce yield by as much as 12% but this is only part of the problem. A heavy infestation of corn wootworms cut off many of the roots including the

brace roots of the corn plant while the plants are still young. Not only does this prevent the plant from getting the amount of needed nutrients and water, but also lets the slightest wind blow the plants over. As the plant continues to grow it becomes badly tangled and "goose-necked" making mechanical picking nearly impossible and a great amount of corn to be left in the field.

In 1961 only two corn fields in South Dakota were known where there was no immediate answer for failure to obtain control of rootworms. Both of these fields were located in Lincoln County. Only small spots within the fields were affected and damaged. Upon checking these fields and visiting with the farmers, errors in methods of application were found.

In 1962 plans were made to set up a number of demonstration and research plots. The USDA Northern Grain Insect Research Laboratory became interested and worked on these research plots. County agents, chemical dealers, and the Extension entomologist worked together on demonstration plots. All demonstration and research plots were selected in areas known to have high population of corn rootworms in previous years and secondly they were located on or near main highways in these areas. Some demonstration plots had signs marking them.

The Northern Grain Insect Research Laboratory set up a plot on the Ivan Sundal farm north of Brookings in which they treated with aldrin, trithion, and Diazinon at various rates. A second field used by the Extension entomologist and the USDA Northern Grain Insect Research Laboratory was set up on the Robert Dailey farm in Moody County. This plot was used for the purpose (1) To observe the effectiveness of varied dosages of three commonly used chlorinated insecticides against corn rootworms when applied each year for 4 consecutive years of corn. (2) To observe differences in the soil faunal complex with particular attention to beneficial insects (USDA only). (3) To provide a treated series of plots for detecting possible spread or development of resistant strains of Diabrotica spp. into southeastern South Dakota. (4) To make available a demonstration plot for the use of county agents and others interested in control of these pests.

Demonstration plots were set up on the Lundstrom farm and the Paulson farm in Lincoln County through the cooperation of the county agent and Dakota Fertilizer Company. The Lundstrom field was one of the two fields which were reported to have had a chemical failure in 1961. This field was treated with four chemicals used in the band type treatment.

The Paulson field was treated with the broadcast treatment with three chemicals. The above mentioned fields were used freely for observations by farmers and other interested people.

Four radio tapes were made by the Extension entomologist and used by several radio stations throughout the state. Recommendation for chemical usage was given in each tape, particularly where the fields are in continuous corn. Circular letters and fact sheets were mailed out to all county agents and other interested parties on controlling corn rootworms. News releases were sent to the Extension Editor's office for release through various news channels.

A fall survey of the demonstration plots showed excellent results in all but one. The Paulson field did not get satisfactory control with any of the chemicals used. There is considerable question to the method of application in this field as fields just across a fence line had no evidence of damage. It was also found out that the chemicals may not have been applied at the recommended rates. Some evidence of resistanct species of western corn rootworms were found, however not to the same degree as reported from the problem areas of Nebraska.

Considerable damage by corn rootworms was found in the southeast and south central area of the state this fall. In most cases the farmer did not treat at all or if he did treat, he applied the insecticide too deep into the soil. In checking with the leading manufacturers of insecticidal applicators to be attached to corn planters, the Extension entomologist found that many are making improvements on their equipment and having much better results.

In working with the county agents in the corn areas, the Extension entomologist found much interest and need for continuation of demonstrations with chemicals and application equipment. Where it is financially possible, 3-year crop rotation should also be worked into the farmers' plans.

In areas where definite resistance is found, Diazinon granules applied as a band treatment over the seed is recommended. In all other areas the insecticidal recommendations stay the same.

Marketing and Utilization of Agricultural Products

The over-all objective of the marketing project is to develop the highest possible degree of efficiency in the marketing, distribution, and utilization of agricultural products. The following is a report of the work completed and programs being carried out under the Marketing Project. The major sub-projects are the same as those outlined in the plan of work.

OUTLOOK AND MARKET PRICE INFORMATION

Changes in the supply and demand of agricultural products in recent years have created many problems for producers, assemblers, processors, and distribution firms. Continued production and marketing of products not commanding the highest prices leads to a misallocation of resources and low returns.

In assisting these groups with their planning and marketing decisions, and to help them keep abreast of changing economic conditions, outlook and market price information was provided on a regularly scheduled basis throughout the year. Methods used by the marketing specialists in conveying the information was through the use of the weekly "Economics Newsletter," circular letters, press releases, Dakota Farmer magazine, radio talks, and meetings. Articles prepared covered outlook and price information as it related to supply, demand, trends, seasonality of production, market margins, marketing orders, and pricing procedures.

Responses received from producer groups and industry firms, the demand for additional copies of the publications, and requests for names to be placed on the mailing lists indicate that this type of information is, to some degree, fulfilling a particular need.

"Western Livestock Round-up"

As an aid in assisting South Dakota livestock industry leaders to improve their marketing decisions in conjunction with regional developments, the Extension Service provided the industry with 580 subscriptions of the "Western Livestock Round-up" on a trial basis for one year. The results were encouraging. Thus the subscriptions were extended an additional half year.

A mail survey of the 580 recipients showed that 56 out of the 125 respondents used the information in the "Western Round-up" to make decisions in their businesses. Respondents stated they used the information in (1) purchasing feeder cattle, (2) selling feeder cattle and calves, (3) selling finished or fat cattle, (4) selling lambs and wool, (5) feed availability, (6) livestock marketing decisions, (7) market outlook and trends or general conditions, (8) an advisory capacity to farmers, and (9) making loans.

MARKETING COSTS AND SERVICES

Changes in consumption patterns, marketing methods, and services have added greatly to the costs of marketing agricultural products. A lack of understanding for the need of regulations, grading, standardization, and changes in marketing practices and distribution systems by producers, farm organizations, and marketing firms has resulted in the loss of market outlets and reduced prices to these groups for their finished products.

Dairy Product Quality Costs and Regulations

As a result of increased consumer demand for higher quality dairy products the marketing specialist cooperated with South Dakota's Secretary of Agriculture and the Department of Dairy Inspections, to develop improved methods and standards to be presented to the dairy industry as a means of increasing quality. The Extension Service will assist in the program, if adopted by industry, to increase producer knowledge and understanding of sanitation requirements and methods of producing and handling quality milk.

In the furtherance of a broader understanding of the need for higher quality products, marketing costs and services as they relate to the dairy industry, the marketing specialist in cooperation with the Sanborn county agent and the Wessington Springs Industrial Development Committee, prepared a cost analysis of a model cheese plant operating at various levels of output, the services required, and the costs of such services as compared with present methods of processing and marketing low quality sour cream.

With numerous industrial committees requesting this type of information in planning community development programs, the Extension marketing staff prepared analyses of various size operations for the major agricultural product processing firms to be used as a tool in training community

leaders to perform such functions as market analysis in determining the need for new industry firms and the cost of establishing new firms. The cases prepared were used as a basis for several training sessions for county agents.

Income Losses from Low Quality Eggs

Because of inefficiencies, low quality and changing consumer preferences for eggs, the egg industry of the U. S. and South Dakota is experiencing considerable losses in income. These factors are forcing industry leaders and educators to take a closer look at the egg marketing system, in evaluating its efficiency and to distinguish the specific from the general and the ingredients from the mixture.

As an aid in assisting the industry to better understand the nature and complexity of the problems with which they must cope the marketing specialist prepared an analysis of the industry's history, the changes and trends in consumer preferences and in marketing methods, and projected these trends to indicate what the structure of the industry may be in the future. Also, pointed out in the paper were alternative ways or means of coping with the expected changes.

The material was distributed to county agents, industry leaders, marketing firms, industrial development committees, and chambers of commerce. The marketing specialist, Extension poultryman, and the Brookings county agent presented a 40-minute radio broadcast covering the material presented in the paper.

Livestock Grading Schools

As a means of increasing the understanding and importance of grading livestock products, a sheep and wool school for agricultural leaders was conducted at Newell, South Dakota. Cooperating in the conduct of the school were research, teaching, and Extension personnel in the Animal Sciences and the Extension livestock marketing specialist.

A beef grading training session for Extension agents and agricultural leaders was held at Rapid City to increase the understanding, use, and value of grades in livestock marketing. Receiving considerable emphasis at the session was the explanation of the new dual-grading program for beef cattle.

ECONOMICS IN MARKETING AND DISTRIBUTION

Because of the lack of understanding among agricultural leaders and those engaged in marketing agricultural products of the principles of marketing, the functions performed in the marketing system and business management, many costly uneconomic decisions are being made.

Developing a Clearer Understanding of Marketing

In assisting county agents in developing a clearer understanding of the factors involved in marketing agricultural products, the Extension marketing specialists cooperated in conducting four dairy schools and three swine schools. Dairy school subject matter included supply and demand, market structure, marketing practices, trends and importance of dairy to the state's economy and future developments.

Areas discussed in swine schools included supply, demand, and price determination; elasticity of demand; seasonal and cyclical price and supply patterns for South Dakota; market structure; what weight to market hogs based on feed costs, price level, seasonals, cycles, market demand and weight; market selection based on shrinkage, transportation costs and other marketing costs and what you can afford to pay for feeder pigs.

The agents were provided with a prepared text and a set of slides and other visual aids to assist them in presenting the information to producers and other farm groups.

A resume of the major changes and developments and their implications to the dairy industry was prepared as an aid to dairy industry leaders in planning future programs. The publication was distributed to all county agents, dairy processing plants, industrial development committees, and other agricultural leaders.

A series of five meetings was conducted by county agents, State Department of Agriculture, and the marketing specialist in areas where industrial groups were considering the establishment of new dairy processing facilities. These meetings were designed to provide a better understanding of the entire scope of dairy production and marketing rather than attempting to satisfy anyone of a number of minor problems within each area.

In all areas where educational programs have been conducted, income from dairying has shown increases according to the statistics reported by the Crop and Livestock Reporting Service.

Livestock Auction Markets

At the request of the Secretary of the South Dakota Auction Market Association assistance was provided in the areas of

marketing costs. The marketing specialist obtained information from Packers and Stockyards Division and developed the total range, middle 2/3 range, and the middle 50%'s range of market tariffs for all types of livestock sold through auction markets. The information developed on tariffs was used by the secretary to assist auction operators to adjust their rates and/or make decisions on their rates in view of their competitors.

Assistance was provided the National Auction Market officers in developing the program for the National Marketing Congress held at Rapid City, South Dakota. Included in the discussions at the congress were livestock market structure, changes and outlook, methods used in developing outlook information, and the reliability of the information contained in outlook data. By special request of the planning committee a discussion of the research being conducted at South Dakota State College on ethics of small business was made a part of the over-all program. During the business session, the group went on record proposing more cooperation with their relative colleges and universities and expressed their appreciaitons to the schools for the assistance provided the auction associations.

Commerical Feedlots

With greater emphasis being placed on plant efficiency, many commercial cattle feeding firms have requested assistance from the Extension Service on alternative means of attaining greater efficiency. Several requests were for information regarding the feasibility of adding feed mills to the feeding operations. As an aid to these managers the marketing specialist compiled estimated cost and income figures for various size operations when feed mills were added to the present method of feeding and marketing cattle. The cost and return estimates served as a basis for discussion with industrial development committees and producer groups by county agents.

The information provided by agents was used in establishing a new feedlot operation in connection with an existing feed mill.

Marketing Orders and Quotas

With considerably more emphasis being placed on marketing orders and quotas under present farm programs, many requests were received for information that would help clarify the various proposals. Marketing specialists attempted to meet this need by preparing and circulating to commodity groups and processors an analysis of the dairy and turkey order proposals, questions and answers to clarify various points and by conducting a series of discussion meetings throughout the state. The press and radio were used as a media to keep the industries informed on current developments and happenings.

As a result, producers had a clearer understanding of the issues and were better prepared to make a more rational decision in casting their votes in the turkey referendum.

Business Management for Marketing Firms

With greater emphasis being placed on increasing marketing efficiency, marketing firm managers are rapidly becoming aware of the need for additional management training in order to successfully cope with marketing problems. The growing complexities of the marketing system has encouraged many managers to seek assistance from the Extension Service in the area of management training.

In an effort to provide managers the opportunity to broaden their knowledge and increase management proficiency, the marketing specialist in cooperation with the executive secretary of the South Dakota Association of Cooperatives developed plans to conduct the first in a series of training courses for cooperative managers and directors in March, 1963. The first 2-day course will center around the concept of modern business management and the functions of management. Following the first session at 6-month intervals will be 2-day sessions covering in greater detail each of the major functions of management. These will include: planning, organizing, directing, coordinating, and control.

Preliminary planning began this year on an educational program and a short course for managers of livestock auctions. The first step was taken during a 1-day meeting with the officers of the South Dakota Auction Market Association.

Topics discussed included the need for improved business management, how a long-range management program could be developed and conducted, the areas of management to be studied, and the development of public relations programs.

The idea was enthusiastically received. Plans are being developed to conduct the first in the series of five 2-day management short courses in the summer of 1963. Em-

phasis thus far with auction market managers has been limited mainly to creating interest and to planning. Accomplishments have been encouraging.

IMPROVE EXISTING AND DEVELOP NEW MARKETING AND PURCHASING SYSTEMS AND METHODS

Technological innovations in the purchasing, handling, processing, and marketing of agricultural products are causing many processing and marketing firms to adjust operations to changing conditions or be forced out of business by their competitors. Both large and small firms are confronted with the problem of selection of operating techniques and marketing methods that will result in highest returns.

Assistance Provided Dairy Firms

Five dairy plants in eastern South Dakota were assisted by Extension specialists in analyzing their operations. Comparisons of present organizational and operational methods, costs, and returns were made against those of alternative actions.

In each case plant efficiency was improved considerably with only moderate changes in operational methods and types of products produced. In two cases the processing of whole milk was discontinued and the plants acted as receivers for a larger, more efficient, processing firm. Two plants reorganized their procurement and distribution systems while the other added the processing of an additional product. These changes resulted in an increase of 10 cents per hundredweight of milk to producers of each plant.

Assistance was provided the industrial development committee and a group of local businessmen in determining the feasibility of establishing a cheese processing plant at Miller. A survey of milk producers and potential producers in the area and an analysis of the cost of establishing and operating a cheese plant was made. Because of the lack of sufficient milk volume to support a small cheese plant and the high operating cost it was recommended that the producers market their milk through existing plants outside the area. This type of marketing program could serve producers until such time that sufficient volume became available to support a plant.

The Todd County Extension Agent with the assistance of the marketing specialist, State Department of Agriculture, Rosebud Indian Council, Indian Bureau, Cherry-Todd REA, and the Mission Industrial Development Committee formalized plans and financial arrangements for the establishment of a new cheese plant at Mission. More than 2 years of planning, surveying, and working with producers and others were required in bringing the venture to its final stages of development. The survey and feasibility of the project was carried out by the Extension marketing specialist.

South Dakota Egg Industry

With greater emphasis being placed on market efficiency in the egg processing industry many plant operators are vitally concerned with rising unit costs in their operations. In an effort to increase market efficiency, industry leaders have requested the assistance of the Extension people in planning and developing programs that would provide maximum benefits for all types of egg processing firms in the industry. Several proposals that would bring about the type of structural changes needed in improving market efficiency were prepared by the Extension poultryman and the marketing economist and discussed with industry leaders. Industry leaders agree that a general restructuring of egg processing and marketing segments is necessary in holding present and developing new market outlets.

In the furtherance of developing new market outlets for South Dakota eggs the marketing specialist and the Extension poultrymen discussed the state's existing marketing practices and alternative means for improvement in a joint meeting with representatives of Farm Best Eggs Inc. and the Federal Inspection Service. Technological developments, changes in market structure, and methods of pricing eggs have brought about the need for new marketing methods and procedures for South Dakota egg producers. In attempting to meet this need the Consumer Cooperative Association of Kansas City established an egg marketing division entitled Farm Best Eggs to organize and operate egg processing plants in a five state area. The Extension Service has been requested to assist in developing these plans and in determining the most feasible locations of new processing facilities.

In an effort to further the development of adequate marketing facilities for processing eggs in the Clark, South Dakota area, the local industrial development committee and interested producers requested the assistance of Extension specialists in exploring the various alternatives open to them.

A number of meetings with special committees and pro-

ducer groups were held to explain and discuss the various production and marketing programs required by wholesale buyers willing to expand their operations in the Clark area. An analysis of the estimated operating and processing costs for handling various volumes of eggs was prepared by the Extension specialists as a guide in helping the group decide the type of organization and operation that would best meet their needs.

Sugar Beet Processing Plant to be Constructed in Southeastern South Dakota

Sugar beet production has been carried on successfully by a limited number of farmers in irrigated areas of central and southeastern South Dakota during the past 2 years. Surveys of irrigated acreage potential for sugar beets in these areas indicate that the acreage would be expanded sufficiently to justify a beet sugar processing plant in the area.

Through the cooperation of the U & I Sugar Company and County Extension Agents in these areas of central and southeast South Dakota, meetings with producer groups have been held to present the facts about production for the purpose of expanding growers contracts with the sugar company. The contract acreage goal set for the area was 31,000 acres. This goal has been nearly reached. Marketing economists assisted the firm in determining the most economical site for locating the new plant.

Pulp Wood Industry Established

Cooperation of the County Extension Agent and the State Forester in Custer County resulted in a survey of potential pulp wood production in the country. Owners of 4,000 acres of timberland indicated an interest in cutting of pulpwood. Working in cooperation with pulpwood buyers, meetings were held with timber owners to discuss production, prices, and agreements on delivery. A pulpwood loading station was established at Buffalo Gap. The first half year resulted in delivery of 1,100 cords of pulpwood by 12 owners. This project represents the development of an entirely new industry for this county and the southern Black Hills region.

COOPERATIVE MARKETING

A continuation of assistance was provided the Lake Region Dairy Marketing Federation and REA in developing plans and programs for the establishment of an ultra-modern dairy processing plant to serve a four county area. The marketing specialist prepared a feasibility report for the establishment of the new facility upon request of the Lake Region REA in order that they could assist in providing part of the necessary capital requirements.

Because of inadequate capital resources for financing the half million dollar processing plant the Federation applied for an Areas Redevelopment Loan. Since considerably more detail of the proposed plant was required additional assistance by the Extension Service was provided.

At the request of the Deputy Administrator of the Areas Redevelopment Administration, Washington D. C. assistance was provided the Lake Region Dairy Marketing Federation Board of Directors in the development of exhibit and supporting information to more clearly show the need for, and the potential benefits that could be derived from the establishment of a multi-product dairy processing plant in the area. An analysis of the estimated costs of processing dairy products in a large volume plant in comparison with the actual costs within the existing plants was prepared. The potential benefits that could be derived from the large plant in terms of dollars was estimated at one million annually and the employment of 10 to 12 additional persons.

Included in the exhibit was a set of slides showing the five existing processing plants, their equipment and facilities. Tables, charts, and graphs showing plant volume, costs, and returns were prepared to supplement the slides of each plant. A written report describing the present industry structure and the anticipated changes that would be brought about by the establishment of the new plant was prepared as an added means of bringing more depth into the understanding of the situation. Two days were also spent in Washington, D. C., counseling with Department of Commerce and Department of agriculture officials concerning the proposed drying plant. As a result of these efforts Area Redevelopment Administration officials have given tentative approval of the loan.

Extension Home Economics

The basic purpose of the Extension Home Economics program is to help women and their family members achieve a high level of living while building well-informed progressive, efficient, happy families in a democratic society.

The home demonstration club is the basic unit through which the Extension Home Economics program is channeled. However, the outreach is far greater than the total membership. In the home demonstration agent counties, the subject matter of the major areas of emphasis is taught at open meetings in which those homemakers are invited who prefer not to belong to an organized unit.

All major projects are handled in the same way; namely, the subject matter specialist trains the home demonstration agents in district meetings. The home demonstration agent (of which there are 46) teaches project leaders of all the local clubs. The specialist or field agent-at-large trains the project leaders of local clubs in non-home agent counties. In both home agent and non-home agent counties, project leaders take the lesson to their local clubs. This means that all major projects are carried by the membership in all counties. There are 1,280 clubs, enrolling 17,357 women.

To meet different interests and needs of both the member and non-member, special interest lessons are conducted in all of the subject matter areas, reported specifically in the subject matter section. These are done by home agents and specialists.

In the youth phase of the Extension Home Economics program, each specialist works with a home economics agent on the 4-H staff in the planning, teaching, and evaluation of the clothing, home life, and meal planning project areas. In the spring of 1962, specialists and 4-H staff presented a leader training meeting on subject matter in all counties. In the fall, specialists prepared and presented project information in 17 area workshops for county project leaders. County project leaders train local leaders in each of the counties. There are 6,078, 5,922, and 4,830 youth enrolled in the clothing, meal planning, and home life projects, respectively, in South Dakota.

Major program emphases are supported by state, area, and county mass media coverage. The home economics specialists prepared 10 television programs, 94 radio programs, contributed to the quarterly house organ on their subject matter specialty, and prepared news releases for the communication notes, which goes to the county staff every other week. In addition, 20 home agents cooperate with television programs on 7 stations. Seventeen home agents have either a weekly or bi-weekly radio program. Over half of the agents have regular weekly columns. These plus the rest of the agents furnish feature stories for local papers. All mass media is directed toward major areas, when it is timely.

A 5% random sample of the total membership was used to evaluate all major emphases. Those people in the random sample were asked specific questions about the subject matter area. This was the way the percentages were determined in the results that will be presented in the text.

CLOTHING

1. Objectives for South Dakota Clothing Program:

   To help South Dakota homemakers meet the physical and psychological needs of family members as they relate to clothing the family, specifically:

   a. To help homemakers make decisions in relation to the use of time, energy, skills, and money as these decisions pertain to clothing the family, i.e.; construction vs. buying—what garments can best be purchased ready-to-wear? When is home sewing practical? Etc.

   b. To teach basic principles and improved methods to homemakers and 4-H club leaders who have need, so that the home sewing which is done is satisfactory to the wearer (fit, professional appearance, etc.)

   c. To create an awareness of the need for good grooming practices for all family members.

   d. To acquaint homemakers and 4-H girls with principles of good buymanship in relation to clothing purchases and to help keep them abreast of the times in the textile and fabric field.

   e. To stimulate thinking regarding the psychological and sociological significance of clothing in the lives of family members.

2. Major Accomplishments in the State in the Area of Clothing:

a. Results of the project "Facts for the Wise Clothing Shopper" are available from the clubs at this writing.

The aim of the project "Facts for the Wise Clothing Shopper" was to help remove the confusion in the minds of shoppers created by the large number of brand names of fibers on today's market. The generic or family names of fibers as set forth in the "Fiber Identification Law" were taught. Information regarding the nature of each fiber which would offer clues to care and handling of fabrics bearing each family name was given.

Seventy percent of the membership felt that the project "Facts for the Wise Clothing Shopper" had been helpful to them in the following ways: 61% in understanding labels on fabrics and garments; 54% in understanding mail order catalogue descriptions; 50% report a feeling of more security and less confusion caused by the number of brand names on the market; 40% in buying yardage, 59% in shopping for ready-to-wear; 59% in caring for garments.

Members were urged to remember to call the fiber content of fabrics by the family names instead of by brand names. Twenty-five percent of the members reported that they were following this suggestion. Sixty percent said that they were more aware of labels which identify fiber content than they were before the lesson.

Fifty-one percent of the membership report that they have shared information learned in the lesson with others who were not club members—4,800 shared with neighbors; 7,420 with family; 1,080 with retail store personnel. Some members report that they provided store personnel with the circular.

Twelve percent gave one or more of the circulars to others outside the club.

b. The project "Clothing and You" which dealt with the psychological and sociological significance of clothing in the lives of people today was presented to the home demonstration agents in four district meetings in the fall of 1962 in preparation for the clothing project for the 1963 program. It will be reported in 1963.

c. Special Interest

Care of sewing equipment including sewing machines came in for its share of consideration in the state clothing program. The specialist conducted sewing machine cleaning and adjusting special interest workshops at the request of five counties—47 women attended these workshops. Each woman worked on her own machine. Although these were not done primarily on a leadership training basis, each woman attending planned to share the information received with others.

Twenty-three clothing construction workshops were reported by home agents in the state. These were held for beginning sewers in general. Most were held in a series of three to six sessions where the women attending actually constructed a garment.

The Brown County Home Demonstration Agent reports having had a series of 14 television half hour presentations during which time she demonstrated how to make a simple cotton dress.

Nine special interest meetings for the purpose of teaching interested homemakers how to knit were reported. Generally the agent capitalized on the skills of county homemakers who assisted with these workshops.

Seventeen special interest meetings were reported by home agents in the state, where women were given help in hat making. In most cases women who were skilled in this art were employed to do the teaching, with the home agent making arrangements. Some home agents report that they held workshops where hats were made from pheasant feathers—a traveling kit and mimeographed instructions were prepared by a woman who was skilled in this craft. This kit was made available to agents through the supervisor. This activity did not originate from the specialist's office.

d. 4-H Clothing Program

The clothing Specialist conducted leader training meetings and 4-H help days at the request of counties; judged at eight 4-H Achievement Day events; participated in six district 4-H short courses for the training of clothing leaders of 4-H clubs in the clothing area of the state; conducted two classes in clothing buymanship at the annual 4-H Club Week. (Refer to Annual Report of Project VI for details on both the short courses and state 4-H Club Week.)

FOODS AND NUTRITION

1. Objectives for South Dakota Foods and Nutrition Program:

a. To assist the women of the state to better plan, prepare, and serve meals to their families so as to attain

goals of greater health, happiness, and economy.

b. To impress the youth of the state with the fact that good nutrition does make a difference and to encourage them to adopt good nutrition practices.

c. To provide agents with facts to counteract "food fads."

2. Major Accomplishments in Foods and Nutrition:

a. Results of "Food Dollars and Sense" Project

Fifty percent of the women received the lesson by actual comparison of foods for price, grade, quality, and brands. Forty percent got their information mainly through discussion. Sixty percent of the membership reported that they now pay more attention to the brands, measures, and descriptions on the product label.

Forty percent of the women have changed buying practice to different brands or grades of food. Thirty-two percent reported that they were more alert to items about food quality, packaging, labeling, and price on television and radio.

The bulletin prepared for this lesson has been used as a reference by 37% of the women 1 or more times. Sixty-four percent reported that the lesson gave them help on their food shopping tasks.

Both home agents and county agents in non-home agent counties reported a continued interest of homemakers in the matter of food quality, grade, brand, and price.

b. A leaflet "Guests at Home" was prepared for the 1963 major project. It gives a meal situation approach for the general theme "Creative Living." The theme of this project is that food habits, discipline, and mutual relationships (for good and bad) are greatly influenced by family meal situations. The project will be pursued and evaluated in 1963.

c. Special Interests

Bread demonstrations were given because both the Extension Club women and 4-H leaders wanted them to improve techniques and judging. The demonstrations were basic—making bread, shaping loaves, and rolls, quick techniques, and judging. A leaflet was prepared to use with these demonstrations.

d. Work with 4-H Clubs

The specialist shares leadership on the 4-H Foods and Nutrition program with a home economist on the 4-H staff. The objective relating to improving the nutrition of youth was the underlying goal of all work with youth in this area.

Twenty spring leader training workshops were held. The morning was spent in helping leaders to establish standards of quality and to judge products. This had been requested and the leaders were very appreciative. The afternoon was used to help the leaders in understanding the teen-ager; (1) what she or he is like physically, emotionally, and socially, and (2) how to use these traits to an advantage in securing the best for the youngster nutritionally.

The fall leaders training workshop or "short course" was part of a general change of program method. (Refer to Annual Report of Project VI for details). Because of the possibility of unfamiliarity with the subject matter it was necessary to begin at the beginning assuming nothing. Along with the subject matter material, the nutritionist tried to inspire enthusiasm and supply motivation for the leaders for this project.

Articles for the nutrition column in Club Doings continues emphasizing teen-age nutrition and establishing of good food practices for all 4-H'ers.

Achievement Day and Fair Exhibits—An effort is being made to direct exhibits toward those things which are more important in encouraging good food practices. Some new classes of menu planning, poster, and booths have been added and a class of cake and one of cookies removed. The nutritionist was particularly impressed with the good class of posters and booth exhibits and that they were really studied by the visitors, not just scanned for the blue ribbons.

e. Special Work with Agents on Food Fads

Agents have been provided with information through regular channels, and special letters, to furnish facts to counteract the "food fad" craze. Information was provided to help homemakers realize the risk to health and waste of money the fad causes. Home agents used the information through mass media, letters, and personal contacts with the leadership of both youth and adult groups.

HOME MANAGEMENT, HOUSEHOLD EQUIPMENT, AND HOME FURNISHINGS

1. Objectives for the Program Area Include:

a. To help families make better use of their money resources.

b. To help families who buy household equipment this year make selections which best fit their needs.

c. To help homemakers and 4-H club leaders conserve furniture by refinishing.

d. To help members and leaders appreciate the beauty of a well-done finish and good lines in furniture.

2. Major Accomplishments in the Area of Management, Equipment, and Furnishings:

a. "Clean, Bright Laundry"—the programs carried out in relation to objective two are outlined below.

Thirty-four percent of the sample said they helped another person with her laundry problems in the following ways: giving opinions, citing own experiences and sharing the fact sheet used as the basis for the lesson.

One of the biggest laundry problems in South Dakota is the hard water most families have to use for laundry purposes. One of the questions asked was the degree of hardness of water the homemaker used. Homemakers were to get their water analyzed for the purpose of selecting a detergent to best suit their needs.

Twenty-three percent of the women decided an all-purpose soap was best for them; thirty-six percent use a high-sudsing, synthetic detergent; and twenty-six percent decided on an all-purpose, low-sudsing detergent.

Comparison of cost and the amount of detergent in the package was another feature in the lesson. One half of the sample said they compared cost and amount when buying detergent.

b. Special Interests

Refinishing—The specialist held 12 workshops on refinishing woods; 150 women attended and worked on 81 pieces of furniture. The furniture ranged from picture frames to pianos. The furniture was brought with the old finish removed. Each owner worked on her own piece. The specialist suggested the use of penetrating wood seal as a finish. Several coats were put on with sanding between. Although the 3 days allowed for the workshop are not enough to completely finish the furniture, all of the steps are experienced so the women can finish at home. Due to the time taken for finishes to dry, it is impossible to finish in 3 days.

Upholstery—A man was hired to conduct upholstery planning meetings and workshops in 17 counties; the specialist conducted them in 2 counties. This was done on a special interest basis, rather than leader training. At the same time, this particular activity is one in which some of those attending do go into business to supplement the family income.

House Heating—Increased sales efforts by electric power suppliers on electric house heating has resulted in dramatic increases in use of electricity for this purpose. Insulation recommendations have been according to standards set up by the industry. Recent experimental work has shown that considerably larger amounts of insulation can be profitably used. Some newer-type windows have not been compatible with the tighter houses now being built, and excess condensation of moisture on windows has been experienced.

The background information showing the profitability of more insulation was explained to electrical advisors at a meeting in Bison. Shown to them also, was the desirability of using triple glass to avoid the condensation problems and reduce operating costs.

Numerous requests for information on insulation, vapor barriers, and electric heating were answered during the year. This is an indicator of the confidence they hold for Extension agricultural engineering information.

c. 4-H Program

The specialist helped carry out the 4-H program by holding leader training meetings in 12 counties with 189 attending; by conducting 4 help days; by judging home life exhibits, demonstrations, dress revues at county achievement events, and by teaching a class during State Club Week. (Refer to Annual Report, Project VI for details).

As the 4-H staff is trying a different method of training leaders the specialist prepared materials and presented them to three district meetings with forty-nine attending. (Refer to Annual Report of Project VI for details). Three subjects were chosen to work on: management, color, and art principles. Every club member is required to do something in three areas.

FAMILY LIFE

1. Objective of the Family Life Program:

a. To aid South Dakota family members to become

well-informed units which will better contribute to family achievement, progress, satisfactions, and enrichment in both material and emotional ways so that each family and its individual members achieve the highest potential in development through awareness of needs, goals, ways of working together, and inter-personal relationships.

b. To increase our general knowledge of aging and the problems and opportunities associated with the process.

c. To encourage each person to look forward confidently to the later years and to prepare for them as adequately as possible.

2. Major Accomplishments in the Family Life Area:

a. Results of "The Aging and Aged—Senior Citizens" Project

Items which were helpful in providing new information, ideas, attitudes, and feelings are as follows: 66% better understood the aging process; 67% better recognized that more people are living longer and that we have a higher percentage of our population in the "above 65 years" age group.

Seventy percent saw that older persons have special needs. Seventy-three percent feel that they better understand and accept older persons. Seventy-four percent recognized personal need to plan for later years well before the time arrives. A recognition on the part of 64% of the membership that the family and the community has a responsibility to provide care, jobs, housing, recreation, etc., for older persons in the county.

The increased awareness of the situation of the senior citizen was noted by the fact that 86% of the membership read additional material in magazines, books or pamphlets since studying the topic. Further evidence can be cited in that 78% of those reporting discussed the topic with someone following the lesson. This tended to be with their own club members (58%) to a greater degree than with some others in the community (42%).

Topics suggested by the women for future program emphasis included: retirement—21%; jobs and income—20%; improving health—36%; housing—47%; financial planning—35%; recreation and use of leisure time—24%; creative activities—26%; and three generation families—42%.

Impetus for this particular project has been spearheaded by the State Home Demonstration Council. The state project "Our Senior Citizens" provides opportunity for the club membership to get into an action program. A state project is carried for two years, and the final report will be made at the National Home Demonstration Council Meeting in Little Rock this fall.

The specialist cooperated in South Dakota Federation of Home Demonstration Clubs by: assisting Federation Project Committee with resource materials; judging 21 Grant County essay entries on topic "What It Means to Me to be a Senior Citizen;" acting as resource person in state workshop discussion group.

b. "You--The American Woman"

The objective of this project was to teach each woman the importance of assuming the vital responsibility to achieve her greatest individual potential development in appearance, in health, and in her contribution to others.

The bulletin was prepared, the Home Agent Training Schools were held, and project leaders in non-home agent counties were trained. However, effectiveness of this educational emphasis will be in the 1963 report.

c. Other Program Activities

Working with other specialists as a resource person—The family life specialist consults with other specialists, as the subject matter of a particular specialist involves understanding the behavior of a specified audience.

State Congress of Parents and Teachers—Participated in two meetings of State Board of Managers as State Child and Family Education Chairman. Attended all sessions of annual state conference. Presented material and gave demonstration to workshop group on use of role-playing in unit programs. Contributed to state bulletin. Prepared exhibit for state meeting and mimeographed handout material on "Good Families."

d. Work with 4-H Clubs

Assisted 4-H program by planning and preparing materials for 4-H Club Week on the pre-adolescent and leading workshop groups on same subject. Planned and prepared material for Area Leadership Training meetings and did Home Life Teaching at three of the meetings. Judged entries in four county achievement day events. Assisted state club agent in selection of items and groups for slide series on State Fair entries.

OTHER AREAS

Public Affairs

Women are becoming increasingly aware of and participate in public affairs programs. A good example of a public affairs program carried out in one of the counties was the study of the Oahe Unit proposal by the Brown County Home Demonstration Council. The program was carried out by local leaders trained by the home agent, with assistance of one of the Directors of the Oahe Water Conservancy Sub-district. Project leaders presented the information to local clubs. In some cases, open meetings were held by clubs to invite non-member neighbors.

Home Demonstration club members in isolated cases are studying taxation (Dewey County), school reorganization (Sully County), county government, public welfare, such as care of the aged and the retarded child. The success of the bookmobile project in many counties has been attributed to the work of the membership. (Refer to Annual Report, Project VII, for details).

Music, Reading, Crafts

Cultured aspects of family living are studied by the clubs through the reading and music programs. The Free Library Commission works with staff members on the program. The reading program encourages a variety of reading for all family members, including background reading for participation in public affairs programs. Leadership in the music program is provided at county level.

Creative use of leisure time is the objective of the crafts program. While there is no state emphasis, all counties do leader training in crafts. Resource persons outside the Extension organization assist the home agent in this area.

Work with Cooperating Groups

A staff member serves as liaison between Extension and other agencies and groups whose programs are of concern to families. Examples of such groups are: Civil Defense, Safety Council, Mental Health, REA Coops, Wool Growers, to name only a few. This cooperation exists on both state and county level, and involves organization, furnishing programs, judging exhibits, and the like.

Staff members serve on college committees, particularly those of the Division of Home Economics.

Home Economics Work with Indian Families

Seven home agents work with Indian families on four reservations. The home agent serving Indian families is trained broadly with other home economists, and specifically in program areas for low-income families. The over-all program is adapted to suit the particular needs of Indian families.

An example of a special program was the work on Public Housing done on the Pine Ridge Reservation during 1962. The Home Management and Family Life specialists worked closely with the agents on the reservation. In the expansion of the program to other reservations in 1963, home agents will be trained by the specialist, and then do the teaching on their own reservations.

Intensive programs in foods and nutrition through better use of commodities, and buymanship of fresh fruits and vegetables, clothing construction and care workshops (especially the use of good used clothing which needed remodeling), family life (through leadership and pride in surroundings), and in Extension's youth program have been carried out.

The special report on the BIA contract program will have more details.

4-H and Other Extension Youth Programs

FOREWORD

South Dakota enrollment in boys and girls 4-H club work shows a total of 18,209 for 1962. This figure represents about 27% of the potential youth reached between the ages of 10 and 21 years of age. This also includes nearly 1,000 Indian youth from the reservations in the state. There are 1,445 4-H clubs organized in the state with an average membership of 12.5. The organizational leaders have increased to a total of 2,339 and project leaders total 1,036. There is a definite trend toward more project leaders for 1963. Farm homes are represented by 7,147 girls and 6,883 boys, while the rural-non-farm girls total 2,076 and 601 boys. Cities in South Dakota over 2,500 claim 1,016 girls participating in club work and only 225 boys. More girls than boys are enrolled in 4-H club work for several reasons, but primarily home economics projects and activities whether on the farm or in the urban or city areas are more adaptable. New projects and activities such as automotive, electricity, public speaking, beautification of home grounds, and others have made significant changes in attracting more boys into 4-H club work. Previously about all to offer town boys in 4-H was handicraft, garden, and poultry. Handicraft, however, is still high with a total of 9,673 boys and girls.

There are 2,920 girls and 1,825 boys enrolled as first-year 4-H members while second-year girls enrollment dropped to 2,200 and boys to 1,616. The greatest drop out comes after the first year and then again at the end of the eighth grade when youth enter high school taking on new responsibilities and interests. Third-year girls in club work total 1,755 while figures show 1,253 boys enrolled. The fourth-year continues with 1,223 girls and 1,023 boys. A decided drop starts the fifth year when the girls total 976 against 860 boys which proportionately isn't too great at this level. The sixth-year level drops to 543 while the boys continue with 529 making only a difference of 14 which is a very small margin. Contrasting boys and girls enrolled for the seventh-year, we find 364 girls and 297 boys while the eighth-year girls total 196 to 194 boys.

According to ages of boys and girls enrolled in club work in South Dakota during 1962 it is significant to note that nine-year-old girls total 1,351 against 880 boys. At ten years of age the picture changes in that 1,575 girls and 1,080 boys are enrolled. The figure continues to grow showing 11-year-old girls totaling 1,673 as compared to 1,069 boys. The relationship of enrollment of girls to boys tend to hold their own until the club members reach the age of 15 years. At this period there are 164 more boys enrolled than girls. The boys continue to lead by about 200 between the ages of 15 and 20 years of age, there being enrolled this year 945 girls against 1,042 boys.

The project enrollment situation shows, as previously mentioned, handicraft as the leader with 9,673 members this year. Next in line comes the vegetable garden which enrolls 5,450 while clothing follows with 5,094 and foods and nutrition claim 4,938. Home life, being the least popular of the three, still claims 3,846 members. Fattening beef is next with 3,282 and then the beginners project in home economics with an enrollment of 2,956. The light horse, one of the most popular and newest projects, boasts 1,481 members but the market lamb excells by a total of 1,802. Other projects not exceeding 1,000 members include poultry, range management, entomology, forestry, automotive, small fruit, indoor gardening, dairy, market barrow, and swine. Activity enrollments claims health with 8,198 members, safety 7,771, and music and recreation 7,273. Courtesy and grooming loses to community service activities with 6,919 members by a narrow margin of 90. This shows both activities to be very popular.

Citizenship totals 6,215 while canning totals 2,525; bread baking 2,732 and is an activity to be watched the coming year the way it is growing. Frozen foods enrolled 1,782 while dairy foods had 1,716 enrolled. The conservation activity with 841 members holds the lowest total enrollment in the activities.

Another growing program in the state is junior leadership which claims 2,339 members. There are young people between the ages of 14 and 21 who are carrying on their own project work as well as assisting the local project leader.

The nearly 4,000 key adult leaders assisting with club work in the state assuming responsibility of club leadership without pay are still the keystone of the club program in the state.

South Dakota 4-H club work and enrollments are holding their own and growing steadily. Completion in project and activity work may not be too clearly defined but we do know that we rate 72.1% for re-enrollment against the national figure of 70.0% for the North Central Area.

LEADERSHIP DEVELOPMENT

During 1962 an expanded 4-H leadership development program was undertaken to provide a 4-H structure that would: (a) encourage more leadership for local clubs and provide the opportunity for more young people to belong to a 4-H club, (b) lighten the leadership load of the present dedicated leaders by involving more individuals, (c) provide training for leaders in specific areas of need, and (d) expand the effectiveness of county Extension personnel by allowing them to work on other programs while trained leaders are training other leaders in areas they would formerly have had to assume. To implement the leadership development program the state was divided into three 4-H training areas. There were 17 training sites selected over the state which made for equal distance of travel inasmuch as possible for the leaders. Extension specialists and 4-H staff personnel conducted subject-matter training workshops for 700 county and club project leaders in the various project fields. The county project leaders (elected or named on the county level) in turn conducted training programs for the club project leaders in their respective counties.

The county staffs are currently in the process of evaluating the structure of their county organization to take fullest advantage of the leadership development program. The impact of the total leadership program will not be measurable for several years. However, the first reaction of leaders attending these training sessions was excellent.

4-H literature was revised to be more helpful to the members and the local volunteer leaders. Most of the new 4-H literature distributed this year was developed for different age groups. Emphasis was placed on grading the project requirements to the developmental needs and interests of the various age levels.

Special leader's guides were developed to be more helpful to local volunteer leaders. These guides were particularly designed to give the first-year leader a satisfying experience by providing guidance meeting by meeting for a full year of 4-H club work in the particular project area. The science approach (why as well as "how") is being built into all project manuals.

As a program aid for county Extension personnel a 4-H Handbook on 4-H procedures and policies was developed. The Handbook contains helps on administration, planning of activities and events, rules, standards, and policies. The use of the book and its contents will be introduced through office conferences by 4-H personnel responsible for program development.

NEW PROGRAM DEVELOPMENTS

Knowing that 75% of South Dakota farm and ranch youth will have to seek employment elsewhere, according to our present day economists, the Extension Service has a real concern in finding job opportunities for these youth. A committee met in August to discuss youth career training and employment representing the following groups:

The Bureau of Apprenticeship and Training
The Employment Service Division
The State Pupil Personnel Service
The State Home Demonstration Clubs
The Home Economics Division
The Extension-Rural Area Development
The State 4-H Club Staff

Growing out of this committee was the decision that Extension's job was to give information and provide opportunities for youth to learn about careers. Extension agents, working with Rural Area Development, developed an excellent set of slides which was made available to community groups. The Annual Extension Conference also stressed "Opportunities for Training and Employment" for youth. Representatives from the State 4-H Club staff participated in the National Conference Career Exploration and Youth Employment at Lincoln, Nebraska. Activities accomplished this year in Career Guidance included:

Sessions at State Club Week entitled, "Looking to the Future"

Address by the Governor, "Looking to the Future"

Tours to business places, colleges, Federal Insect Laboratory where job opportunities were discussed

A staff member from the 4-H Club Department attended the National Training Conference on Career Exploration and Youth Employment

A 4-H staff member is presently serving on the South Dakota State Home Economics Public Relations Committee. This coordinating group works closely with the Admissions and Records at South Dakota State

College in their high school career days throughout the state.

One other 4-H staff member is listed to make talks promoting high school career days.

YMW ACCOMPLISHMENTS

The YMW clubs have been in existence for the past 13 years. There are six counties with organized clubs at this time. The program is built around four main phases, namely Special Interests, Social Interests, Study or Recreation, and Service. A well-rounded program incorporates all four phases. County-wide monthly meetings are conducted by officers who are elected annually.

The present composition of membership is mostly young married couples, though many single farmers are a part of each group.

The State YMW organization met twice during the year, one time in the spring for business and election of state officers and a second time to conduct their annual summer week-end camp which was held at Camp Lakodia.

PLANS FOR A STATE 4-H FOUNDATION

In August a meeting was held in conjunction with the Director of Extension and plans were made to start action towards incorporating and establishing a 4-H Club Foundation in South Dakota in order that 4-H can serve more effectively.

Mr. Wm. McCann, lawyer in Brookings, was contacted to draw up the Articles of Incorporation, selecting ideas and parts of several other states in this area who have successfully established 4-H foundations.

Contact by letter or personal visits were made by the state 4-H club leader to the following men and women who were asked to serve on this nine member board. All of these people accepted the responsibility of serving on this first board.

Position Members:
Dr. H. M. Briggs, President, South Dakota State College

Dr. Orville Bentley, Dean of Agriculture, South Dakota State College

Dr. John T. Stone, Director, South Dakota Extension Service

Mr. John F. Younger, State 4-H and YMW Leader, Extension Service

Other Members:
Mr. C. A. Quamberg, Chairman of Tri State Milling, Rapid City

Mrs. Edith Guindon, Plankinton, (local leader)

Mrs. Wilmer Davis, Sakota Hybrid Producer, Brookings

Mr. Robert Dailey, Flandreau, South Dakota Board of Regent Member

Mr. Jack Harrington, President of John Morrell and Co., Sioux Falls

The lawyer is presently working on details of the Articles of Incorporation after which the board of directors will meet and set up by-laws for the foundation. If a 4-H Foundation can be set up, there are hopes that more donors will be attracted toward donation.

EVENTS ACCOMPLISHED THROUGH LEADERSHIP DEVELOPMENT

Lemmon Junior Livestock Show

The 20th Annual Lemmon Junior Livestock Show was held on September 17, 1962. This is an event for the area under the supervision of a committee of businessmen and Extension personnel. Financial sponsorship is provided entirely by the Lemmon Commercial Club.

Western 4-H Round-Up

The 43rd National Western 4-H Club Round-Up was held in Denver, Colorado, January 14-18, 1962. A delegation of 26 South Dakota 4-H club people attended the event and joined delegates from Colorado, Wyoming, Kansas, Montana, Nebraska, Utah, and New Mexico in the 4-day program.

Western Junior Livestock Show

The Western Junior Livestock Show was held at the Pennington County Fair Grounds in Rapid City from October 11 through 13th, 1962. Over 700 exhbitis were shown by 441 boys and girls from 19 counties at this 25th anniversary event.

Through the 25 years the show has been in existence, the same basic organizational structure has prevailed. Volun-

teer 4-H leaders, ranchers, businessmen, and Extension personnel combine thought and effort to provide direction and financial support to this event. Through a Board of Directors and an executive committee the activities of the show are planned and carried out. It has been through this procedure that the show has grown to include beef cattle, sheep, dairy, showmanship, range management, entomology, forestry, forage exhibits, meats, livestock, range plant identification, and judging contests.

Ninth Annual IFYE Mid-Point Conference

Rural young people from 41 countries learning about the United States this summer by living and working with rural families gathered on the campus of South Dakota State College July 31 to August 4 for the Ninth Annual International Farm Youth Exchange Mid-Point Conference.

The IFYE Mid-Point Conference was the half-way mark in their 4-6 month visit to the United States. This is the first time the conference has been held in South Dakota. It was co-sponsored by the South Dakota Extension Service and the National 4-H Club Foundation of Washington, D. C.

The young "grassroots ambassadors" become acquainted with other IFYE's from different corners of the world, giving them a broader understanding of the people of other lands. The IFYE exchangees reviewed their experiences in the United States, took a second look at the objectives and operation of the IFYE program, and visited agricultural and home economics work on campus. Recreation and fellowship activities from each of the countries was an important part of this international exchange of ideas and culture. The IFYE exchangees who took part in the conference are the counterparts of the United States delegates, most of whom are now visiting in some 42 countries around the world. Many of the delegates will live with families of the IFYE exchangees, as these exchangees visit the homes of IFYE's in the states. South Dakota's IFYE delegate is currently living in Germany.

Rural Youth Leaders Workshop

The Rural Youth Leaders Workshop held on the campus of South Dakota State College preceding the Mid-Conference was attended by 39 IFYE exchangees from 32 countries. The purpose of this conference was to:

Provide opportunities for the exchange of ideas and experiences between countries so that appropriate, effective techniques may be shared by all.

Learn how to plan an effective balanced program to meet the needs of rural youth.

Learn the basic principles and techniques of effective teaching methods, administration and evaluation for educational rural youth programs.

These 39 young folks work in an Extension-like program in their country. The exchangees divided into groups according to similar conditions at home and actually developed a project they could use at home. This was a week of intensive work. Many people from Extension and the college contributed their time in helping with workshops or presenting material. These two weeks were a very rewarding experience.

The programs were developed by the National 4-H Club Foundation and the 4-H club staff cooperating.

Achievement Days

County 4-H Achievement Days were held during the month of August. In a few counties the event was held in conjunction with a county fair, but generally it was an event by itself. The length of the achievement day varied from 1 to 3 days, with some counties having home economics and agricultural shows as much as a week apart to allow more time for 4-H members enrolled in both types of projects.

The 4-H staff, specialists, county and home agents, and some of the supervisory staff assisted with the judging. In a few instances, former home agents or other qualified people assisted with the judging where there were conflicts. In some counties the leaders also helped. This makes the event educational not only for the leaders who judge, but for those who ask questions about their exhibits.

There is still a need in some counties to better organize achievement day activities, especially the entering and placing of exhibits. Some counties expect one judge to cover several project and activity exhibits in one day. This is possible with leader assistance, but difficult to do alone.

There is increasing demand for more uniformity in the judging standards of the judges. Some judges do not read the materials sent out in judge skits or if they do, do not follow it. It seems to indicate the need for county or district judges training schools, although even this method will probably not reach all achievement day judges.

Fruit Pie Bakeoff

The South Dakota Fruit Pie Contest provides girls and boys with the opportunity to demonstrate baking skill and develop poise. They are judged on baking skill, the finished product, poise, and personality.

State 4-H Share the Fun Festivals

The Share the Fun Program is designed to develop the 4-H club boys and girls as they participate in the fun of sharing their talents with others. It provides an opportunity to display talent and imagination, develop leadership and confidence. County, district, and state festivals are a showcase for 4-H for people who are not acquainted with the 4-H program.

Sixty-three counties and approximately 1,105 boys and girls participated in the 1962 District Share the Fun Festivals. Many more participated on the local and county levels. The District Festival programs were composed of two numbers and master of ceremonies from each county. A committee of two attended each district event throughout the state to select numbers for the State Fair Share the Fun Festival and the Morrell Barbeque.

The numbers presented at the District Events were of such excellent quality that it would seem that there could be other occasions to present the numbers, such as rally nights, recognition events, or at State 4-H Club Week.

Adult 4-H Leaders Food Training Schools

4-H Leader Training meetings were held in March and April in all 20 counties in the northeast area. The counties had a choice of an all day or half day meeting. The all day meeting included judging helps in the morning with a workshop "Food Does Make a Difference" in the afternoon.

In the judging workshop the leaders brought seven or eight items for judging classes in white bread and food preservation with a class of menus being provided. The leaders discussed standards in the different classes, set up the classes, judged, and gave reasons. Discussion as to why we judge, how to set up judging in the club, and how to give reasons preceded the actual workshop. This seemed to be helpful to the leaders as many had never actually judged before, but had been expected to teach it in their clubs.

State 4-H Leaders Camp

Seventy-eight leaders from 27 counties attended the camp which was sponsored by the Sears-Roebuck Foundation. The theme "Challenge of Leadership" was carried out in workshop groups as the leaders planned the various parties and events and the final evening program. Special interest presentations (ceramics, corn husk craft, etc.) at meals and coffee time were particularly well received.

Rally Events

The original purpose of county rally events was to encourage new members, acquaint others with the program, and to provide an opportunity for older 4-H members to practice leadership and to become better acquainted with other members and leaders. A majority of the counties held such an event in 1962.

National 4-H Club Congress

South Dakota was represented at the 40th National 4-H Club Congress by 31 4-H delegates and five chaperones. Larry Pressler, Humboldt, was awarded a $400 scholarship in addition to a silver tray from the President of the United States as National Citizenship winner. He was also selected as one of six 4-H'ers to present the 4-H Report to the Nation in March, 1963.

College 4-H Club

The collegiate 4-H youth group has been in existence in a service organization on the campus for more than 16 years. The potential membership of approximately 600 former and continuing 4-H'ers is higher than any other college organization on campus. About 200 of those are registered as members, with an average of 60 attending regularly.

International Farm Youth Exchange

South Dakota has participated in the IFYE program since 1949. The program is financed through contributions from 4-H clubs, YMW, and home Extension clubs. Donations at Rural Life Sunday observance make up a large amount to the IFYE fund. The county that sponsors a delegate raises $500 and the other $500 is paid out of the State IFYE fund. The National 4-H Club Foundation furnished the balance of the needed finance for the two-way exchange.

Twenty-nine delegates have been sponsored by 21 counties. Fifty-eight counties have had host families and every county except one has contributed money to the state fund.

Seventy-five IFYE exchangees have visited South Dakota since 1949. The four exchangees during 1962 were from New Zealand, Turkey, Venezuela, and Ceylon.

Three host families' meetings were held. Orientation was given several families by correspondence and assistance from the Extension agents.

The IFYE alumni association held one meeting. The business meeting included ratification of the constitution and by-laws of the National Association, donation to National 4-H Foundation for furnishings in the IFYE room, election of officers, and plans for the 1962 IFYE mid-point meeting. Assignments were made for the IFYE alumni assisting with this program.

Rural Life Sunday

Rural Life Sunday is observed in different ways in the local clubs and counties. In many areas the club attend church as a group, others attend the church of their choice. The ministers are provided with the Rural Life Sunday bulletin and they give a special sermon on rural living. Nine counties sent in reports this year. Fifty-one club reports were included.

Minneapolis Home Economics Judging Trip

Eleven South Dakota 4-H club girls spent 4 days in Minneapolis during June. This was the educational tour for the three high individuals in the four home economics judging contests. This trip is sponsored by the Sears Foundation.

Award Summary Report

South Dakota 4-H club members will be receiving nearly $50,000 in awards processed through the State 4-H Club Office during 1962. This is the approximate cash value of trips, medals, scholarships, ribbons, and other awards that will go to South Dakota 4-H clubs, members, and leaders during the present year. This does not include the generous amount of time and money donated by individuals and businesses at the county level. Over $33,000 of the total amount was contributed by individuals and businesses within the state. The remainder was received from national donors.

Most state and national awards are educational trips. For example, about 29 attended the National 4-H Conference in Chicago in the fall, four South Dakotans attended the National 4-H Conference in Washington, D. C.; there are numerous judging trips and a home economics tour. Some funds are also provided for leader training, workshops, 4-H literature, and gift awards such as clocks, wristwatches, silver, etc.

The donor movement was established in 1919 with a national budget of $3,400. Well over $1 million is now contributed nationally to the 4-H movement and there are about 55 businesses that provide the bulk of the support for national awards. In addition each state has a donor award program which is supported by businesses and individuals who believe that 4-H club work is an investment in America's future.

The primary purpose of the 4-H program is to develop the personality and leadership ability of young people. The program operates under the theme "To Make the Best Better." All programs have the approval and acceptance of the South Dakota Cooperative Extension Service and are under its supervision.

Peace Corps

The Peace Corps contact person is responsible for sending out all correspondence that comes from the Peace Corps headquarters in Washington, D. C. There are questions to uncover from interested persons. News articles have been prepared for "Club Doings." Several appearances were made at group meetings to explain the program.

In 1962 the Peace Corps representative appeared on the State Club Week program. This is one part of our International Program phase. The IFYE representative to Sweden was responsible for the International Farm Youth Exchange phase. A Peace Corps film was shown and explained at the Annual Conference.

Peace Corps is our opportunity for young people to have new experiences and also as a training opportunity for many careers. Schools, industry, and labor are waiting to hire young people with this experience. South Dakota has 19 in the Peace Corps.

State 4-H Club Week

State Club Week was held on the campus of South Dakota State College June 18-23 with approximately 550 4-H delegates participating.

The orientation leaflet was completely revised and the material reorganized this year. An index was added to

facilitate its use. The delegates received the leaflet at the time they were selected to attend.

Pre-registration cards were required so room assignments and workshops could be planned ahead of Club Week.

The Club Week theme was the same as the national theme: "Learn, Live, and Serve Through 4-H." General sessions were planned for the mornings with workshops scheduled for the afternoons. There were 27 workshops offered, 14 offered for the Tuesday and Wednesday sessions and 13 offered for the Thursday and Friday sessions. Instructors for the workshops for the most part included state Extension specialists, South Dakota State College faculty, county and home agents, and 4-H staff members. Delegates attended two workshops of their choice.

National 4-H Dairy Conference and Judging Contests

Shirley Waltner, Turner County; Avis Larsen, Turner County; Robert Biers, Pennington County; and Shirley Lundberg, Beadle County were the state winners in the state dairy judging conference. As the state winners these four individuals participated in the National 4-H Judging Contest held in connection with the National Dairy Cattle Congress in Waterloo, Iowa in October.

The same four individuals also participated in the National 4-H Dairy Conference which is held in conjunction with the International Livestock Show and particularly the International Dairy Show in Chicago in November. While at the conference the team members also participated in the Non-Collegiate Dairy Judging Contest.

4-H Dairy Production Contest

Joan Satterness, Hamlin County, was named first place winner in the 1962 State 4-H Dairy Production contest. As state winner, she has been awarded a trip to the National 4-H Dairy Conference to be held in Chicago in November, 1963 in conjunction with the International Dairy Show.

National Invitational 4-H Poultry Judging Contest

South Dakota's 4-H poultry judging team took fourth place honors in the Invitational Interstate Poultry Judging Contest in Chicago in November. Four contestants were chosen on the basis of their high individual scores in the poultry judging at the state contest held in connection with the State Fair.

State Crops Judging Contest and Winners

The annual State 4-H Crops Judging Contest was held as an activity of the State Fair. Nine counties had teams in this state-wide event. The Hutchinson County team received the trip to the Minneapolis Grain Exchange sponsored by that firm. The four high individuals in the contest will receive an expense-paid trip to the Little International Show at South Dakota State on March 29-30, 1963. This trip is sponsored by the South Dakota Crop Improvement Association.

Report to the Nation, by Larry Pressler

South Dakota had the honor and prestige of having had Larry Pressler, ten-year 4-H Club member, and junior at the University of South Dakota, chosen this year during Club Congress time as one of six young people to make the annual report to the Nation.

This report is a summary of 4-H club work nation and state wide presented in a special copy to the President of the United States. During National 4-H Club Week in 1963 Larry Pressler along with five other youth will spend a week in Washington and on across to the West Coast on a scheduled trip telling and selling the 4-H club program. This is one of the highest honors a 4-H Club member could achieve and South Dakota is more than proud to know that they have one of six representatives selected on citizenship, leadership, and all-around person in 4-H club experiences for this honor.

Black Hills Leaders Recreation Laboratory

Fifty professional and lay people from Montana, Wyoming, Colorado, North Dakota, and South Dakota attended the Black Hills Leaders Recreation Laboratory held September 19-26 at Nemo, South Dakota.

4-H Advisory Committee

In 1962 the 4-H Advisory Board met three times:

March—selection 1962 Club Congress and scholarship winners, regular business

October—regular business

December—National Conference selection, regular business

The objectives of this committee are to:

promote a stronger 4-H program

evaluate the program and make recommendations

promote understanding of the 4-H philosophy

bring about a better understanding of mutual 4-H problems of all people concerned

promote public relations through mutual understanding of 4-H

establish some common denominators, rules, or regulations for leaders, agents, and the state 4-H club staff

State Fair Dress Revue

One hundred twelve girls competed in the state revue entering in one of the following lots: Lined coat or coat dress, suit, dress of wool, winter cotton costume, summer cotton costume, and party dress. Six home agents were assigned to assist with the judging and public revue from Tuesday through Thursday. Two judges working individually and then comparing the results worked quicker and more effectively than in the past. The 1963 revue will have girls within their lot judging their lot. This will require more pre-preparation.

Agent and Leader "Know Your Sewing Machine" Training

The program consisted of the four steps leaders teach to their 4-H members—how to sew, how to stitch, how to thread machines, how to wind bobbins, and sitting pretty. They worked with sewing machine adjustments i.e., tension, needle size vs. thread size vs. fabric, pressure; machine care.

Adult 4-H Leaders Clothing Training Schools

Ziebach, Meade, Harding, Perkins, Corson, and Dewey Counties received assistance in clothing. In most counties this was well received and felt very informative to the leaders. Some counties would have liked more time for judging help.

Work with Summer and New Home Agents

The assistance given was to help meet 4-H problems occurring during the summer months. This included demonstration procedures, setting up judging classes, conducting judging schools, and achievement day suggestions.

National 4-H Dress Revue

This event is held at Club Congress and participated in by the dress revue winner from each state modeling her garment. The girls are not in competition but are receiving modeling experience and the fun of being at Club Congress.

Interstate 4-H Leader Forum Conference

Twenty-eight South Dakota 4-H club leaders have returned from what they agreed was a "truly inspirational" trip to the Nation's Capital to attend an interstate 4-H Leaders Forum.

The chartered bus left Brookings, South Dakota on March 22 and returned Sunday, April 1. In addition to the South Dakotans, three leaders from North Dakota, and four from Minnesota joined the group.

Scholarships

Scholarship awards were made to 18 South Dakota 4-H club members during the annual State 4-H Club Week recognition dinner held on Friday, June 22 at South Dakota State College.

Camp Miniwanca

Four 4-H club members and one alternate have been picked as recipients for Wm. H. Danforth leadership training scholarships for 1962.

Kansas City Judging Team

The high individuals in the livestock judging contest received the honor of judging at the stock show at the American Royal Show. They had a very educational experience even though they did not place in the top ten.

Morrell Barbecue at State Fair

The South Dakota YMW helped serve 4,300 people at the Morrell Barbecue during State Fair. This is a yearly event sponored by Morrells in dedication to 4-H.

4-H Light Horse Program

1962 is the first year we have done anything special with the light horse project. Six district shows were set up, three in East River and three in West River. The three East River were held July 24, 25, and 26. There were

approximately 60 members participating in each show. All contestants were required to enter into the Showing and Fitting class with all horses. They then had a choice of any or all of the five other events outlined in the 4-H Leaders Handbook. Trophies and ribbons were given to top individuals in each event.

Angus Youth Judging Contest

Two hundred and twelve 4-H members and other youth members participated in the judging contest. Three classes of bulls and two classes of heifers were judged. The angus breeders that participated in the show furnished the animals.

The 4-H department took charge of the contest and tabulated the scores. The four high individuals won money certificates that they could use in buying an angus animal.

4-H Tractor Results and Automotive Contest

The State 4-H Tractor Driving Contest was held during State 4-H Club Week in June. Seventeen contestants took part in the contest. The four top winners in the contest are as follows: 1st—Karl Heepner, Stanley; 2nd—Jim Herly, Brule; 3rd—Don Roehr, Marshall; and 4th—Roger Petersen, Turner.

Eight contestants entered the State Automotive Contest at the State Fair in 1962. The winner of the contest was Wendell Morrill from Lake County.

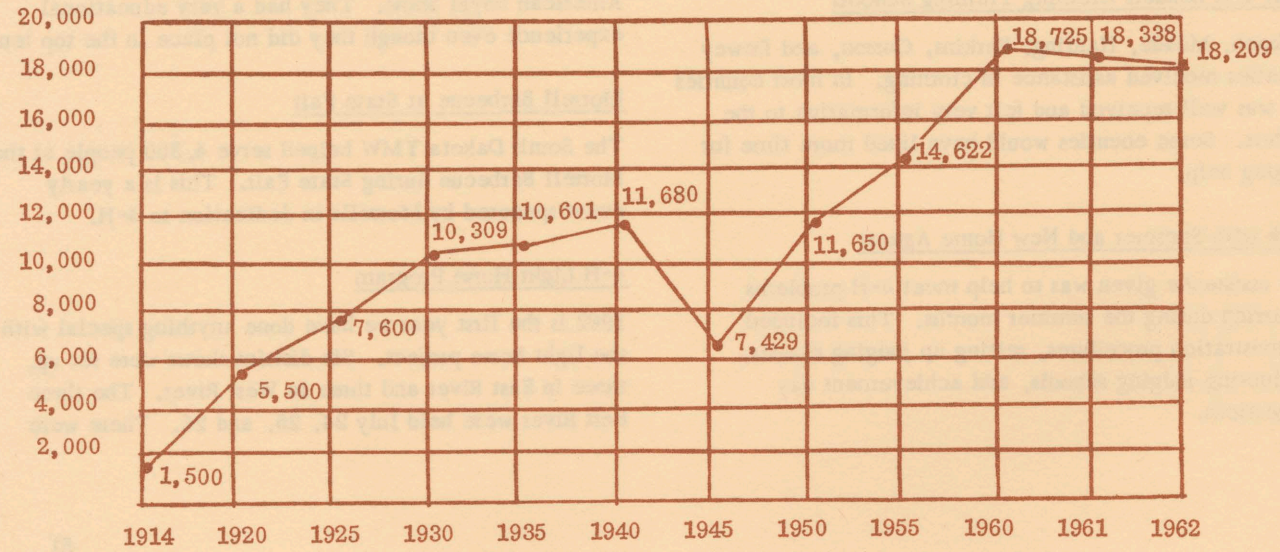
4-H Camps

The two district 4-H camps were used for camp again this year. The camps were Box Elder at Nemo, South Dakota and Camp Lakodia near Madison, South Dakota. A 1-day workshop was held at the Union Building to familiarize the camp staff with their responsibilities.

Camp Lakodia was in operation from June 11th through July 28th. There were a total of 1,975 campers in 1962. The people attending were: 1,325 girls, 593 boys, 67 leaders, and 73 home and county agents.

Camp Box Elder was in operation from June 11 through July 11. A total of 982 4-H members attended camp. The groups included 672 girls, 593 boys, 109 leaders, and 35 home and county agents.

1962
SOUTH DAKOTA ENROLLMENT
and
PROGRESS ACCOMPLISHMENT REPORT



ENROLLMENT FIGURES

	Boys	Girls	Clubs
Aurora	57	75	9
Beadle	285	357	41
Bennett	77	128	21
Bon Homme	54	139	18
Brookings	193	334	49
Brown	323	338	48
Brule	75	109	19
Butte	105	157	25
Campbell	50	61	10
Charles Mix	121	196	20
Clark	109	114	20
Clay	186	235	30
Codington	157	236	31
Corson	156	161	21
Custer	93	121	21
Davison	92	120	21
Day	124	189	26
Deuel	107	126	17
Dewey	55	71	12
Douglas	72	102	11
Edmunds	73	125	14
Fall River	102	175	23
Faulk	143	192	28
Grant	169	238	35
Gregory	127	185	25
Haakon-Jackson - Washabaugh	82	118	14
Hamlin	116	172	19
Hand	140	138	19
Hanson	79	147	17
Harding	41	57	9
Hughes	55	122	15
Hutchinson	109	182	23
Hyde	76	117	14
Jerauld	133	126	18
Jones	27	43	6
Kingsbury	171	246	33
Lake	208	111	23
Lawrence	71	83	12
Lincoln	213	301	41
Lyman	67	95	17
McCook	169	260	36
McPherson	59	66	11
Marshall	148	182	25
Meade	113	180	28
Mellette	36	68	10
Miner	135	156	23
Minnehaha	420	520	62
Moody	128	133	17
Pennington	168	399	53
Perkins	139	140	20
Potter	42	94	14
Roberts	154	108	22
Sanborn	97	129	15
Shannon	75	107	9
Spink	175	201	32
Stanley	60	74	12
Sully	80	65	13
Todd	104	82	10
Tripp	191	228	33
Turner	182	251	34
Union	100	90	16
Walworth	60	125	18
Yankton	132	174	25
Ziebach	30	51	6
Lower Brule Crow Creek Reservation	22	49	6
Cheyenne River Agency	85	138	20
TOTAL	7,797	10,412	1,445

1962

STATE-WIDE 4-H ENROLLMENT REPORT

Number of Clubs: 1,445 Enrollment—Girls: 10,412 Boys: 7,797

Number of Leaders—Organizational: 2,339 Project: 1,036 Jr. Leaders: 2,339

4-H Club Members from—	Girls	Boys
a. Farm Homes	7,147	6,883
b. Rural Non-farm	2,076	601
c. City over 2500	1,016	225

4-H Club Members Enrolled by Years in Club Work:

	Girls	Boys
1st year	2,920	1,825
2nd year	2,200	1,616
3rd year	1,755	1,253
4th year	1,223	1,023
5th year	976	860
6th year	543	529
7th year	364	297
8th year	196	194
9th year	99	96
10th year	49	66
11th year	28	31
12th year	8	4

4-H Club Members Enrolled by Ages:

	Girls	Boys
9 years	1,351	880
10 years	1,575	1,080
11 years	1,673	1,069
12 years	1,571	1,087
13 years	1,399	967
14 years	1,064	898
15 years	735	699
16 years	462	419
17 years	282	336
18 years	111	141
19 years	56	100
20 years	34	46

Project Enrollment:

Beginners H. E. Project	2,956	Poultry	924	Feeder	677
Clothing	5,094	Crops	1,087	Sheep:	
Home Life	3,846	Range Management	351	Purebred Ewe	466
Horticulture:		Forestry	307	Grade Ewe	398
Vegetable Garden	5,450	Entomology	257	Market Lamb	1,802
Small Fruit Garden	104	Automotive	379	Western Lamb Feeding	216
Beautification of Home Grounds	1,695	Tractor	633	Swine:	
Indoor Gardening	406	Light Horse	1,481	Purebred Sow Litter	430
Electric	1,344	Beef:		Market Barrow	929
Handicraft	9,673	Fattening Beef	3,282	Dairy	953
Food & Nutrition	4,938	Purebred Female	564		
		Grade Female	721		

Activity Enrollment:

Music & Recreation	7,273	Courtesy & Grooming	6,829	Dairy Foods	1,716
Health	8,198	Community Service	6,919	Bread Baking	2,732
Safety	7,771	Frozen Foods	1,782	Citizenship	6,215
Conservation	841	Canning	2,524		

Rural Development and Public Affairs

During 1962 significant progress has been made in this state-wide effort to stimulate the economic growth and development of South Dakota. While many other agencies of the Department of Agriculture, the state agency for industrial development, chambers of commerce, the Greater South Dakota Association, the livestock expansion group, the U. S. Department of Commerce, and other state agencies have worked cooperatively on this effort, the Extension Service has played a key role. The Extension Service provided leadership in organizing the State Rural Area Development Committee and local development groups in over 40 counties.

Based on the judgment of the State RAD Committee the highest priorities were assigned to (1) the development of the potential water resources of the Missouri River,(2) the expansion of livestock feeding, (3) sugar beet expansion in southeastern South Dakota, and (4) community improvement through educational programs to stimulate local interest, understanding, analysis, and action. The Extension Service has taken the lead in the intensive educational and organizational task involved in each of these programs aimed at economic prosperity, new job opportunities,and a larger tax base. They are vital to the future of South Dakota as the second most rural state in the nation experiencing a serious out-migration of its young people and a decreasing number of farmers resulting in a loss of tax base and business particularly in the smaller towns.

Three years ago the first organized steps were taken by Extension to stimulate people's imagination and interest in the opportunities of rural development in South Dakota. It was recognized that one of the problems that had to be overcome was people's apathy. As a result of an all-out educational effort we have seen a remarkable upsurge of enthusiasm and positive action by people looking to the future with new confidence. Concurrent with this general educational work on the opportunities of the state, and ways local communities could organize themselves for action, specific area, and state-wide programs were initiated. Brookings County was set up as a pilot RAD county. The livestock expansion group was organized. Career exploration was incorporated into the 4-H Club program. RAD planning groups were organized in five Indian reservation areas involving the surrounding counties and OEDP's were developed with the assistance of Extension agents working with the Bureau of Indian Affairs. The challenge of developing a new sugar beet industry was accepted. The most ambitious undertaking was the educational and organizational program that led up to the formation of the Oahe Conservancy Sub-district by a favorable vote of the people in 15 1/2 counties. In each of these counties a water development committee was organized and trained. They carried the necessary petitions and a very intensive educational program. This organization has formed the nucleous for the organization of over-all RAD committees in these counties. With this experience and interest a similar organizational and educational effort was undertaken this year in 26 1/2 additional counties in eastern South Dakota. The results are described later in detail but this outlines in brief the tremendous undertaking the Extension Service engaged in to help people develop the human and physical resources of the state through individual and group action.

EXTENSION AND USDA STAFF TRAINING IN RAD

In order to put local USDA personnel in the best possible position to assist county RAD committees a series of in-service training meetings were held for all of the field employees of FHA, ASCS, SCS, REA, Extension, and other USDA agencies, Bureau of Indian Affairs, Department of Commerce, Labor, and other state agencies. Intensive in-service training meetings have been held for Extension agents throughout the state. The Annual Extension Conference program emphasized RAD.

A flannel board presentation explaining what RAD is, why it is important, and the nature of the organizational structure has been used extensively. A 45-minute television film was prepared largely from this flannel board presentation. This was shown over all the TV stations in South Dakota and has also been shown at several county and other local meetings of various types. This presentation has also been developed on slides with a script and a set has been made available for use in every county.

TECHNICAL ACTION PANELS

The State Technical Action Panel has discussed various techniques that might be used to assist county RAD committees and have suggested ways in which they might operate most effectively. RAD County Technical Action Panels have been organized in every county in South Dakota

and have held one or more meetings.

ASSISTANCE TO RAD COMMITTEES

A fact and opinion survey form has been prepared in a cooperative effort between the State Industrial Development Expansion Agency, Bureau of Indian Affairs, and the Cooperative Extension Service. These survey forms are being used by local groups in community development programs which will take place in 1963. At the present time we are in the process of making a list of many different types of economic development projects that appear feasible in the wide range of social and economic conditions in South Dakota. These materials are being used by county Extension workers to assist county RAD committees.

Eight economic newsletters have been prepared on economic development in South Dakota and have been given widespread distribution. They are:

A Plan for Economic Development in South Dakota

The Need of Rural Areas Development in South Dakota

Economic Growth in South Dakota

The New Areas Redevelopment Program—A Brief Digest

Areas Competition and Rural Areas Development

Education and Rural Areas Development

Trend and Project Studies—A Valuable First Step in RAD

Opportunities for South Dakota Farm Youth

ONE COUNTY'S RESULTS

RAD meetings resulted in local farmers raising about 500 acres of sweet corn. The businessmen cooperated with the farmers in "proof plots" showing the value of fertilization. Over 50 farmer-businessmen teams participated in this activity. A new fertilizer plant resulted. Cattle feeding has increased 10% in a single year. The county committee has been studying the curriculum of the school system and have been working on a county-wide reorganization plan. Several of the small towns in the county have staged a "fix up, clean up, and paint up program" to make them more attractive. A vacant building was converted into a local recreation center with roller skating for the young people of the community.

AREA REDEVELOPMENT ACT AND INDIAN RESERVATION AREAS

Following the inclusion of all Indian reservations of the nation under the Area Redevelopment Act in 1961 Overall Economic Development Plans were developed for each South Dakota Indian Reservation under the direction of the Industrial Development Branch of the Bureau of Indian Affairs. These were broadly written to include most kinds of physical and human resource development projects that local committees would consider.

Tribal councils of each respective reservation appointed a local planning commission to carry the program forward. In most cases these local planning groups looked to Extension agents and specialists for both technical and educational assistance. Some agents were requested to develop and assist with organizing surveys of the human resources of the reservation area.

New Housing

Surveys were made of the existing family housing conditions which have encouraged the developing of plans for low cost housing projects for six reservations in South Dakota. The housing program on the Pine Ridge Reservation is an example of community resource development that has received considerable attention in 1962. From the OEDP submitted by the Nekota Redevelopment Commission funds were made available to construct 150 housing units. Fifty were scheduled for construction during 1962. Construction work was started in early spring with all 50 enclosed and 9 occupied by families by the end of the year. As a direct benefit about 60 Indian workers were provided an average of 6 months gainful employment.

The home demonstration agent at Pine Ridge worked closely with the first 20 families selected to occupy the first new homes. She assisted the local housing authority to develop application forms to aid them in making selections. Each applicant family was visited to verify their needs for housing and to determine their immediate needs if selected.

This resulted in several meetings and workshops to help them prepare for their move. Family living records of income and expenditures were initiated. Home management specialists and family relations specialists were involved in educational meetings to prepare the families for new community living experiences. Furniture renovation workshops were conducted and over 60 pieces of

essential furniture were reconstructed and recovered by the first 10 families. Used furniture was purchased in quantity from local dealers and all refinishing materials were purchased through local suppliers and paid for by the individual families.

As a result of the meetings and workshops held the home agent wrote, "We now feel that these families are much better prepared. They have learned to know each other and discuss problems more freely with us and each other. They have begun to feel like neighbors before moving in and I feel this is the most important feature of our family preparation program."

Youth Employment Training

In April the second annual 3-day Motel-Hotel-Household Workers Training School was conducted by the Rapid City Home Agent working with Indian families. One hundred forty-six participated with fifty-nine completing the course work and received certificates. Seventeen who were unemployed immediately secured employment as a result of the course program. One motel operator stated, "I am just new in the motel business, but I wouldn't hire anyone who hasn't had this course."

In May a Restaurant Workers Training School was conducted for Indian girls. One hundred eight participated with thirty-six completing this course and receiving certificates. Most of these found employment immediately.

Considering the heavy tourist traffic in the Black Hills area these schools have contributed to gaining employment for many women of the area, better trained job applicants for the motel-hotel and food industry and a better service to the traveling public.

Other types of vocational training work conducted by home demonstration agents have been in nursing for nurses aides, baby sitting, car hopping, and general housework.

NEW WATER CONSERVANCY SUB-DISTRICTS

In 1961 the Extension Service debated whether or not the educational effort should be extended to include the remaining 26 1/2 counties lying east of the Missouri River. Agents felt that they were not well enough informed on the subject to evaluate its worth for their counties and requested a workshop. Such a workshop was held in April, 1961 after which agents were still reluctant to speak for their counties and it was decided that county committees should be formed to speak for the people. This was accomplished by January 1, 1962 and all counties except 3 1/2 had voted to proceed with the educational effort.

The objective of the program was to acquaint the 91,602 families of the participating counties with the purposes of a conservancy sub-district, its benefits, and costs so that they could vote intelligently on sub-districts formation at the general election on November 6, 1962.

As a result the vote of the people favored the sub-district formation with the required 60% majority in all but one county.

County Water Resource Committees played a large part in the formulation and conduct of the educational program. They were solely responsible for setting the district boundaries and determining director districts within the proposed sub-districts. This was accomplished in four area meetings held in January and February and attended by county committees of all counties concerned. The questions of boundary determination and director districts were debated at great length. At times it appeared that counties were in a hopeless deadlock but due to the perserverance and dedication of the committeemen, boundaries were finally agreed on for a 12 1/2 county East Dakota Sub-district, a 7 1/2 county Lower James District, and the 2 county Big Bend District.

Two fact sheets, "Staking Our Claim to Water" and "Water in South Dakota for South Dakota" prepared for the 1960 program, were revised in 1962. In addition, the following fact sheets were written and used in the 1962 program:

What Recreation Means to South Dakota
Developing Small River Basins in Eastern South Dakota
Remember Wildlife When You Plan Water Development
Water Conservancy Sub-district and Your Tax Dollar
Why We Need Special Purpose Water Districts
Wildlife Management on Farms and Ranches

Teaching Methods Used in New Water Conservancy Sub-district Organization

Meetings held specifically for explaining the program. Number—349; Attendance—13,116

Other meetings at which the program was discussed

briefly. Number—261; Attendance—6,553

Percentage of meetings held by county committeemen without agents being present (varied from 0 to 75%)-11%

Number of radio programs aired that were 4 minutes or more in length—127

Number of spots, 1 minute or less in length, used on radio—480

Percentage of these spots that were public service time—70%

Number of TV programs 4 minutes or more in length given on the subject—62

Number of meetings in which films were used—15

Number of circular letters mailed out—115,300

Average number of different circular letters per county—6

Number of fact sheets distributed—103,400

Number of sponsor-paid ads appearing in newspapers—36

Number of hand bills distributed—52,900

Amount of money raised by committees for educational work—$1,500

Number of news stories published—315

Number of charts prepared and used in meetings and on TV—145

Number of slide series prepared and used in meetings (24 slides per series)—40

Local committees assume the major responsibility in carrying out this program with the Extension Service giving educational leadership. However, it was truly a cooperative program with many agencies and groups working together. The State Water Resources Commission and its staff actively assisted Extension with the educational program. Other agencies and organizations who gave active support were the REA cooperatives, home demonstration clubs, service clubs, chambers of commerce, crop and livestock improvement associations, the Soil Conservation Service, soil conservation districts, junior chambers of commerce, and South Dakota Department of Game, Fish and Parks. Cooperation from newspapers, radio, and TV stations was also outstanding.

The Oahe Irrigation District

The next step after the creation of the Oahe Conservancy Sub-district is the formation of irrigation districts before contracts for surveys and construction contracts can be negotiated with the Bureau of Reclamation. During 1961 the preparatory planning, organization and training of initiating committees, educational materials, fact sheets, maps and slides were prepared and presented at meetings throughout the area. During the months of January to April the initiating committee members in each of the counties conducted local community meetings on the proposed project. The Extension Service agents also prepared news items, radio talks, and TV shows on water development.

The following major accomplishments can be cited at the end of 1962.

The first stage of an intensive educational program of water resource development on the proposed Oahe Irrigation Project has been completed.

The Oahe Conservancy Sub-district Board is in the final stage of drafting the master contract with the United States Government.

Petitions for the first of several irrigation districts in the Pollock-Herreid Pumping Unit District were circulated and signed by a majority of the landowners of the unit. At the November election this irrigation district was voted into being by an 85 to 5 vote of the landowners.

The Oahe Conservancy Sub-district Board recommended a watershed study in the conservancy sub-district. Federal funds have been allotted for this survey. The Soil Conservation Service is currently securing personnel to carry out the study.

At the request of the Conservancy Sub-district Board, the Sanitary Division of the State Department of Health conducted a survey and issued a report on water supply needs, purity, and quality of water of municipalities in the sub-district.

The city of Huron has signed a contract with the federal government for the use of the water impounded by the James River Diversion Dam. The dam is scheduled to be constructed during 1963. This dam is one of the features included in the proposed Oahe Irrigation Project.

The Irrigation Development Farm at Redfield has been expanded as a research demonstration farm. One project involves feeding cattle to show how much beef can be produced from an acre of irrigated land. The project is organized to utilize the crops produced on the farm using a minimum amount of feed storage.

The Corps of Engineers are in the process of developing proposals for flood control on the James River. They have consulted with the Oahe Conservancy Sub-district Board.

The Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have been counseling with the Oahe Conservancy Sub-district Board on the effect that water developments may have on fish and wildlife. They have also observed the interest of local people in fish and wildlife developments as views were expressed at meetings of the Conservancy Sub-district Board. People are kept informed on what is being planned and the progress in water development through newspaper releases, radio programs, and public meetings held throughout the area.

SUGAR BEET INDUSTRY IN SOUTHEAST SOUTH DAKOTA

The Extension Service and State College have been a major force in stimulating the development of a new sugar industry in southeastern South Dakota. It has been one of the major RAD projects involving irrigation, training farmers in beet production, cooperation with the industry and other USDA agencies. Sugar beets, a non-surplus crop of good economic return per acre of production, fit well in replacing some of the acreage of surplus feed grain crops. It fits well in this area where underground water aquifers make irrigation possible and economically feasible if high value crops such as sugar beets can be grown. County agents and specialists worked closely with farmers, many of whom were growing beets for the first time. Only through this intensive effort were the many grower problems overcome. Heavy spring rains seriously delayed plantings. Continued wet weather hampered cultivation and had not chemical weed control been encouraged by Extension agents, in many instances the crop could have been written off to experience. Later followed leaf spot, a disease new to the sugar company fieldmen, that would have caused even more serious damage had it not been for the efforts of the Extension plant pathologist and the county agents. In spite of the many setbacks 7,000 acres were harvested bringing over 1 million dollars in new farm income.

Assuming that a beet processing plant will be operational by 1965, if we project the same price per ton and near national average yields of 15.3 tons per acre, which can be expected, the 26,700 quota acres in South Dakota in 1965 could well gross over 5 million dollars to growers each year. This cash income from a new crop will further diversify the agriculture of South Dakota, provide a large number of new jobs and create industrial activity. It is estimated that the construction costs of a new sugar beet plant will be at least 20 million dollars. This means construction jobs for many kinds of laborers as well as the employment of a permanent operational staff contributing to the growth of South Dakota's economy. Extension education and agricultural research are public investments that pay dividends by stimulating vision of economic opportunity supported by feasibility studies which hand in hand contribute to progress.

RECREATION AND WILDLIFE

Income to South Dakota from recreation and wildlife now ranks second only to agriculture. The relations between sportsmen groups and non-sportsmen groups, especially farmers, have at times been strained. All farmers do not appreciate the economic importance of recreation and wildlife and not all sportsmen are sympathetic toward problems created among farmers by the trespassing of hunters on private land. South Dakota farmers have almost uniformally adopted the practice of posting their land. Some have contract arrangements with both out-of-state hunters and local hunters. This irritates other resident hunters and "letters to the editor" are quite common.

Technicians of the State Department of Game, Fish and Parks are aware of these feelings and are trying to do what they can to ease the situation. Some sportsmen groups have taken a public relations approach, others have not.

The objective of the 1962 program in this field was to create awareness on the part of the general public of the economic value of recreation and wildlife, the rights of property owners, and to incorporate recreation and wildlife consideration into all water resource developments where it was feasible. Involved in this effort are the South Dakota Department of Game, Fish and Parks,

the Wildlife Commission, county agents, and various college staff members.

Accomplishments resulted from integration of recreation and wildlife with the conservancy sub-district program. This was an integral part of the slide series and chart sets prepared by Extension. Three fact sheets were prepared and used as handout brochures in the sub-district program as well as for other distribution. These included "Remember Wildlife When You Plan Water Developments," "What Recreation Means to South Dakota," and "Wildlife Management on Farms and Ranches." The distribution of 21,000; 10,400; and 2,050 respectively was carried out.

WATERSHED DEVELOPMENT PROGRAM

The timing of the educational work to assist landowners and other local people interested in watershed development projects in South Dakota was a challenge in 1962 to the Extension staff members who were involved. The committees of landowners who had sponsored watershed organization were quite well informed but this represented less than 10% of the people who would have a concern. The major objective then of this area of water and land resource development in 1962 was to acquaint all landowners of each watershed as to the necessary steps in organization and the obligations of local people pertinent to organization. Ten watersheds seeking organization were involved.

Upper Deer Creek (30,000 acres, Brookings and Deuel Counties)

Several meetings were held during the year with the organization committee and the landowners of this watershed. Meetings were conducted cooperatively by the county agents and the SCS technicians. The organization work was completed and a request sent to the South Dakota Secretary of State to make the watershed a legal sub-division of the state and to give it a corporate name.

Lower Big Sioux River (26,000 acres, Union County)

Meetings were held with landowners and committees of landowners in cooperation with the county agent, the Army Corps of Engineers, and landowners from the flood plain on the Iowa side of the river (the flood plain on the Iowa side covers an area of about 10,000 acres of land). The landowners on the South Dakota side (26,000 acres) completed circulating their petition for organization, with a very heavy sign up, and took other steps to complete the request to the South Dakota Secretary of State for final organization papers. The State Game, Fish and Parks Department put in requests for game reservoirs and fish ponds that would include more land than the landowners were, at that time, willing to set aside for that purpose. Disagreements resulted which brought the organization work on the Iowa side of the river to a standstill. A number of differences have to be ironed out before organization and other essential work can continue.

Lower Vermillion River (82,000 acres, Clay, Lincoln, Turner, Union Counties)

Educational work among landowners in this watershed progressed very well for the first part of 1962. As the work progressed the fact was called to the attention of the organization committee that only 10 to 20% of the landowners concerned were reached with the information. Little consideration was given to the 80% or more of the landowners who were not being reached. The committee proceeded to circulate the petition requesting organization under the State Watershed Act. In place of getting a good sign up, it fell short of the necessary 60% of the landowners needed. The sign up remains below what is necessary. The project now seems to be at a standstill.

Brule (142,000 acres, Union and Lincoln Counties)

This watershed is now in the construction stage. Some educational work was done in 1962 to call landowners' attention to the fact that there was some overlap between the boundaries of the Brule and the Lower Big Sioux where the Brule entered the Sioux. This problem has been corrected and eliminates the possibility of double taxation.

Turkey Ridge (130,000 acres, Turner and Hutchinson Counties)

This watershed is now organized and approaches construction work. Some educational work was done during the past year to get proper information to landowners who were on the fringe areas of interest in the watershed. Assistance was also given in the final stage of district organization.

Spring Creek (25,000 acres, Bon Homme and Charles Mix Counties)

Assistance was given the county agents and soil conservationist who were working with landowner committees on this watershed. Two meetings of landowners were attended and a plan for education and organization of landowners in the watershed were arranged. The county agents and SCS are well informed on procedures in this watershed.

Ponca Creek (375,000 acres, Gregory and Tripp Counties)

Limited educational work with committees, the county agents, and the SCS was done during 1962. More educational work is necessary before organization is undertaken. Arrangements for working jointly with the Nebraska part of the watershed still needs to be worked out.

East Branch Vermillion (235,000 acres, Lake and McCook Counties)

An education and organization program was planned for this watershed in cooperation with the county agents, SCS, and landowners. Final plans were made for circulation of organization petitions early in 1963.

Middle Fork Vermillion (130,000 acres, Lake and McCook Counties)

The same plan and procedure was followed in this watershed as was followed in the East Branch Vermillion.

Union Creek (29,000 acres, Union County)

A steering committee has been selected, an informal field review held, and an Application for Planning Assistance was approved by the SCS Committee.

Educational work was performed in cooperation with the SCS on all watersheds except the Lower Big Sioux and Lower Vermillion River Watersheds. In these two watersheds cooperation was largely with the Corps of Army Engineers. In all cases the local Extension offices worked with the State Water Resources Commission and the State Game, Fish and Parks Departments. In the Lower Big Sioux Watershed coordination with Iowa was an important part of the program. In the Ponca Creek Watershed cooperation with the state of Nebraska was necessary.

Cooperation has been effective and very good. The Game, Fish and Parks Department of Iowa held out for more game area development on the Big Sioux than the landowners thought necessary. This has delayed the program. Similar demands by the South Dakota Game, Fish and Parks Department slowed progress in the Lower Vermillion Watershed.

PUBLIC AFFAIRS

The lives of people living in rural America are now more directly affected by actions in foreign lands than has been true before. Rural people in South Dakota are feeling the impact of changes in international trade, the common market, Communist threats, and the general attitude of foreign people toward us. It is important that an explanation be given to foreign people on how our social and economic conditions operate in this country, and what actions might be taken by the under-developed countries to contribute to a stronger free world.

A mid-point conference of IFYE students was held at South Dakota State College in July. This was followed by an International Seminar on Water and Soil Utilization, July 18 to August 10. These conferences provided a real opportunity to explain, formally and informally, various techniques which have been useful in the U. S. that might be of value in other countries. Our economic and social system and its relation to the "world community," was presented and discussed. Equally as important, it enabled us to better understand the problems of other people in other parts of the world. An example of how we might help other countries in developing their economy can be found in a paper entitled "Developing and Using Local Leadership." The RAD experiences and other economic development techniques used by Extension in other parts of the nation and in South Dakota formed the basis for this presentation.

South Dakota has participated in several discussions with the Upper Midwest Study Group studying agricultural policies, agricultural adjustments, and agricultural changes in the state and in the area. The information released by this regional group will be very valuable for county agents and other county leaders.

The tax situation in South Dakota with alternatives that might be used to relieve the increasing burden of the real and personal property tax in this state and in facilitating school district reorganization was presented and discussed with 15 different county study groups.

A good deal of interest has been shown in regard to the Agricultural Act which was passed in 1962. Six economic newsletters have been prepared summarizing the main provisions of the Act that directly affect the farmers of South Dakota. Five radio tapes have been made and aired on this same subject.

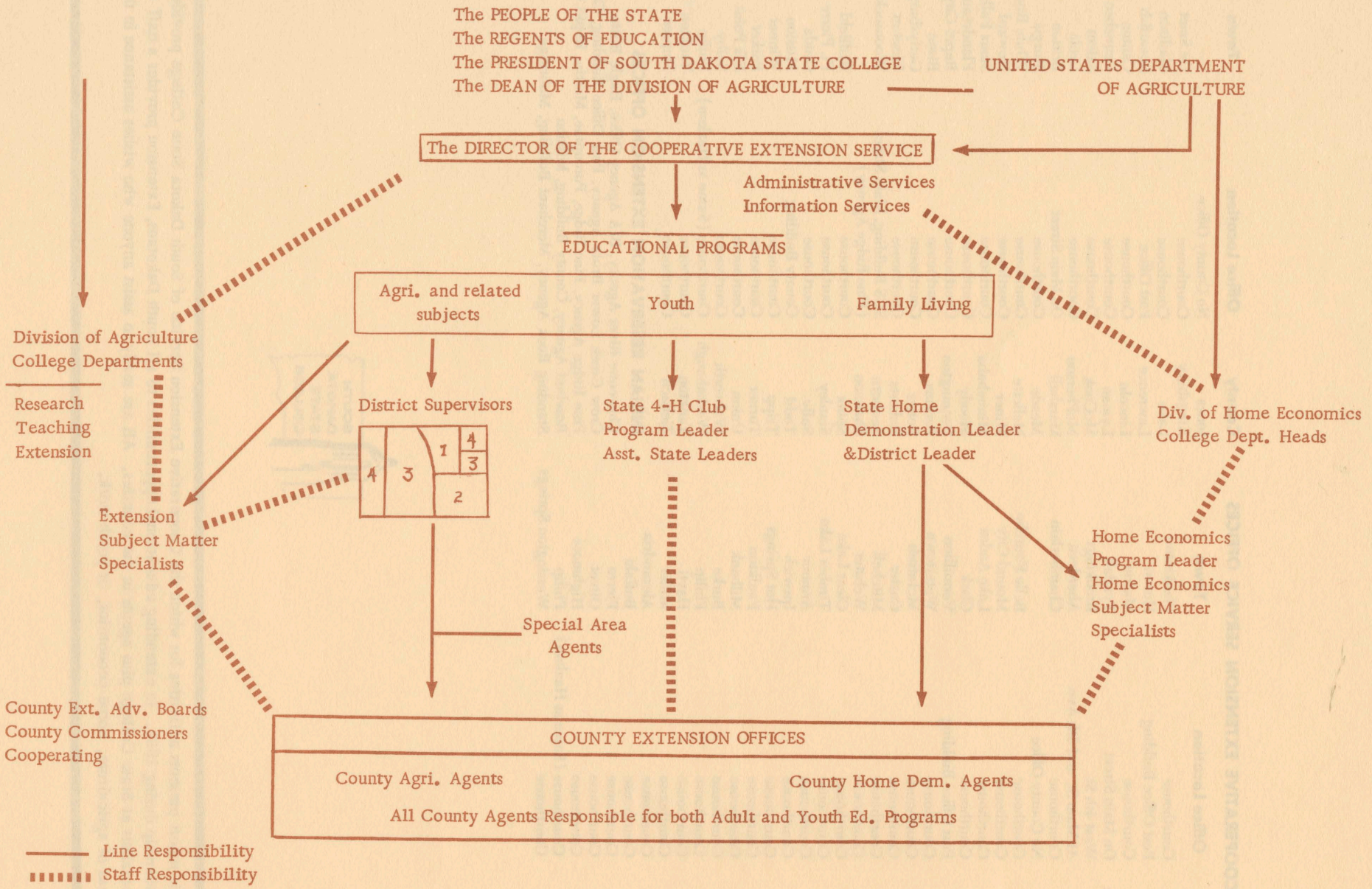
Suggestions are being given on a study underway pertaining to trend and projection studies for South Dakota. It is expected that this kind of information will be very valuable in helping local people make policy decisions in regard to agriculture and related fields in South Dakota in the future.

CIVIL DEFENSE

Rural people of South Dakota are not well informed on community, family and farm civil defense. Much of the information in newspapers and magazines is aimed at city audiences, and the problems anticipated in predominantly rural South Dakota are different. Many recent comments on civil defense and fallout have been emotionally charged and do not lead to good constructuve effort.

Work this past year has been devoted mainly to securing a basic understanding of the anticipated situations as they particularly concern rural people and supplying the basic understanding to persons who are interested. Two South Dakota Extension Service personnel attended a 3 1/2 day workshop in Denver in February which was designed for Extension workers. A considerable quantity of civil defense literature has been relayed to county offices as it has become available. Each county office has a film strip and script presentation for use with rural audiences, furnished by the office of Civil Defense. These have been used in almost all counties this past year. The agricultural engineering specialist developed a slide-script on "Understanding Fallout" which is being used by county offices, rural electric power suppliers, and the State SCS Office. This script, with illustrations, has also been made into a mimeographed circular with distribution to all counties in 1962.

ORGANIZATION OF THE COOPERATIVE EXTENSION SERVICE IN THE STATE OF SOUTH DAKOTA



COUNTY COOPERATIVE EXTENSION SERVICE OFFICES

County	Office Location	Town
Aurora	Courthouse	Plankinton
Beadle	Post Office Building	Huron
Bennett	Courthouse	Martin
Bon Homme	On Main Street	Tyndall
Brookings	West 4th St.	Brookings
Brown	At Main St. and 5th Ave.	Aberdeen
Brule	Courthouse	Chamberlain
Buffalo	No County Office	
Butte	Courthouse	Belle Fourche
Campbell	Courthouse	Mound City
Charles Mix	Courthouse	Lake Andes
Clark	Courthouse	Clark
Clay	Post Office Building	Vermillion
Codington	Courthouse	Watertown
Corson	Courthouse	McIntosh
Custer	Courthouse	Custer
Davison	Courthouse	Mitchell
Day	Courthouse	Webster
Deuel	Courthouse	Clear Lake
Dewey	Courthouse	Timber Lake
Douglas	Courthouse	Armour
Edmunds	Courthouse	Ipswich
Fall River	Courthouse	Hot Springs
Faulk	Courthouse	Faulkton
Grant	Courthouse	Milbank
Gregory	Courthouse	Burke
Haakon	Courthouse	Philip
Hamlin	Courthouse	Hayti
Hand	Courthouse	Miller
Hanson	Courthouse	Alexandria
Harding	Courthouse	Buffalo
Hughes	Courthouse	Pierre
Hutchinson	Courthouse	Olivet
Hyde	Courthouse	Highmore
Jackson	Courthouse (Same as Haakon)	Philip
Jerauld	Courthouse	Wessington Springs
Jones	No County Office	
Kingsbury	Courthouse	De Smet
Lake	Courthouse	Madison
Lawrence	Post Office	Spearfish
Lincoln	Courthouse	Canton
Lyman	Courthouse	Kennebec
McCook	Courthouse	Salem
McPherson	Courthouse	Leola
Marshall	On Main Street	Britton
Meade	Courthouse	Sturgis
Mellette	Courthouse	White River
Miner	Courthouse	Howard
Minnehaha	Courthouse	Sioux Falls
Moody	Courthouse	Flandreau
Pennington	Courthouse	Rapid City
Perkins	Courthouse	Bison
Potter	Courthouse	Gettysburg
Roberts	Courthouse	Sisseton
Sanborn	SCS Building, Main Street	Woonsocket
Shannon	(Pine Ridge Agency)	
Spink	Courthouse	Redfield
Stanley	Courthouse	Ft. Pierre
Sully	Courthouse	Onida
Todd	County Building	Mission
Tripp	Courthouse	Winner
Turner	Courthouse	Parker
Union	Courthouse	Elk Point
Walworth	Courthouse	Selby
Washabaugh	Courthouse (Same as Haakon)	Philip
Yankton	Courthouse	Yankton
Ziebach	Courthouse	Dupree

INDIAN RESERVATION EXTENSION OFFICES

Cheyenne River Agency, BIA Agency Office, Eagle Butte
Crow Creek Lower Brule Agency, Post Office Building, Chamberlain
Pine Ridge Agency, Pine Ridge, Porcupine, Martin, Rapid City
Rosebud Agency, County Building, Mission
Standing Rock Agency, Merchant Building, Mobridge

SOUTH DAKOTA STATE COLLEGE

This report presents activities for which the Cooperative Extension Service of South Dakota State College provided leadership during 1962. In extending educational opportunities to all South Dakotans, Extension provides a staff of specialists at State College plus agents in the counties. All are ready to assist anyone who wishes assistance in the areas of agriculture, home economics, or youth work.