Economic Agricultural Conferences
Alamosa, Monte Vista, Rocky Ford, Steamboat Springs, Grand Junction, 1928
Agricultural Conference
Grand Junction
Week 7-8-1928
Cooperative Extension Work in Agriculture and Home Economics

Colorado Agricultural College and U. S. Department of Agriculture Cooperating

Arkansas Valley Agricultural Recommendations

1929

Assembled by

Thos. H. Summers
Farm Management Demonstrator

A report of the agricultural recommendations for the Arkansas Valley made and adopted by the commodity committees at the third annual Arkansas Valley Agricultural Conference at Pueblo, Colorado, February 16th, 1929.
Introduction

In October, 1925, an agricultural conference was held at Rocky Ford, Colorado, for the purpose of discussing the economic problems of the farmers in the Arkansas Valley. In order to cover the situation adequately commodity committees of farmers and others interested in agriculture were appointed. These committees, after making a detailed study of their problems, prepared and submitted definite recommendations. These were published in a bulletin: "An Agricultural Program for the Arkansas Valley of Colorado."

While this program was formulated with a long-time point of view, nevertheless unforeseen changes are bound to occur from time to time so that it becomes necessary to check up at frequent intervals in order to determine whether certain modifications of the recommendations should be made or new ones formulated to replace them. An individual operator must follow such a plan if he expects to obtain maximum profits from his business; likewise, an agricultural region must take stock of its resources at successive periods if it proposes to develop along lines that are fundamentally sound.

The second annual conference was held at Rocky Ford on February 17th and 18th, 1928. A report of the proceedings was subsequently published. The third annual conference was held at Pueblo on February 16th, 1929.

This report deals with what was done at this conference.
PROGRAM

The Third Agricultural Economic Conference
of the
Arkansas Valley

10:30 A. M. Call to order, Horace B. Dye, Manzanola, Chairman.

Address of Welcome. W. L. Rees, Chairman Pueblo County Commissioners

"The Purpose of the Conference." E. D. Smith, District Agent, Extension Service, C.A.C.

"Suggestions on Committee Organizations." T. H. Summers Farm Management Demonstrate, Extension Service, C.A.C.

11:00 A. M. Committee meetings begin.

Noon recess. Lunch at cafeteria, Methodist Church, 11th and Court Streets.

1:00 P. M. to 3:30 P. M. Committees continue sessions. Reports to be completed at 3:30 P. M.

5:30 P.M. Banquet—Methodist Church Dining Hall
Tickets 75¢. H. B. Dye, Toastmaster.

Greeting—W. D. Keen, Chairman Agricultural Committee, Pueblo Commerce Club.

"High Lights of the Committee Reports." Prof. L. A. Moorhouse, C.A.C.

"The Future of Agriculture in the Arkansas Valley." Dr. C. A. Lory, President, Colorado Agricultural College.
REPORT OF PROGRESS SINCE LAST CONFERENCE

It is difficult to measure the effect of economic conferences upon the farm practices of a region. Many changes are directly due to the influence of the conference, others are indirect results of meetings of this kind and cannot be measured with any degree of accuracy. One thing can be said. A better idea of the agricultural problems of a region is obtained and definite objectives are set up.

The Extension Service has outlined its work along the lines of the recommendations made by the committees. A short review of some of the activities since the last conference follows:

Beef Cattle

Emphasis has been placed upon encouraging better quality beef cattle and feeding. A number of demonstrations have been carried on feeding among which were steer and one cow feeding demonstrations. In one county there were 50 percent more cattle fed in 1928 than in 1927.

Quality has been emphasized thru shows and exhibits. County fairs, community fairs, stock shows, exhibit trains, State Fair and the National Western Stock show have all figured in this phase of the work. All of the counties in the Arkansas Valley took an active part in these activities.

Three baby beef clubs were organized and completed the work. This work also demonstrates better feeding and breeding. Twenty-six members finished the project.

Dairying

Dairying has occupied an important place in the plans of work in the valley. Herd improvement, T.B. eradication, calf clubs, shows, schools and feeding demonstrations have all played a part.

Sixty-two herds have cooperated in herd improvement work. Sixty-five herds have been tested for T.B. Thirty-seven herds have been accredited. One county has established a T. B. free area comprising one-half of the county.

Six dairy calf clubs have been organized with 16 members finishing.

Dairy stock has been exhibited at all the fairs and exhibits to emphasize better breeding and four dairy schools of two days each were held in the valley.

Eight cars of dairy cows have been shipped in.

Five new silos have been built to supply succulent feed in the winter months.

Better practices have been demonstrated in 62 herds in the valley.

Much effort has been expended to get the dairymen to organize to meet their problems.
Sheep

Farm flocks have received some attention. Eight farm flocks have been established thru the efforts of the Extension Service. These for the most part are purebred sheep.

Two sheep clubs were organized with ten members finishing the project.

In the eastern part of the valley the number of old ewes fed have decreased while more farm flocks are taking their place.

Three sheep feeding demonstrations were carried. On one farm a new layout of new feeding equipment was made for demonstration purposes.

In another county a culling demonstration was carried. This was to increase the quality of sheep as well as to increase the pounds of wool produced.

Sheep were shown at fairs and exhibits.

Swine

Ten pig clubs were carried last year with a total of fifty members.

Much work was done to improve sanitation and in the control of hog cholera.

In a herd production contest one Arkansas Valley county took first place.

Some purebred boars and gilts were shipped in during the year.

Hogs were shown at the different fairs and exhibits.

Poultry

Poultry is one of the major projects of extension work in the valley. Thirty-eight demonstration poultry flocks were carried to emphasize better feeding, breeding and care.

Twelve culling demonstrations were held.

Five poultry clubs finished their project with fifty-one members.

Twenty-one new type poultry houses were constructed from plans furnished by the Extension Service.

Several counties held poultry shows to emphasize quality stock, while all counties sent poultry to the Egg Laying Contest at Canon City.

Much assistance was rendered in the cooperative marketing of poultry, eggs and turkeys.

Poultry was shown at fairs and exhibits.
Bees and Honey

Most of the work with bees and honey was directed toward control of disease, wintering and marketing. Much progress was made along all three lines.

Sugar Beets

The place of sugar beets in the farming systems of the valley was demonstrated thru complete accounts. About sixty farms cooperated in the farm business analysis project.

Twenty-four growers kept a record of the cost of producing sugar beets, emphasizing worth-while practices.

Crop rotation was an important part of the work. This was emphasized thru demonstrations, exhibit trains and fairs. This not only showed good rotations when beets are included in the cropping system, but had to do with all crops grown in the valley.

Four sugar-beet clubs completed their project with forty-two members.

Grain Crops

Considerable work was done on crop improvement. All counties carried demonstrations in which registered seed was used and the best known cultural practices were employed. These included corn, oats, barley and wheat.

Several hundred demonstrators were included in this work. Some of these ran variety tests on oats, barley, wheat and corn to find out what varieties are best adapted to conditions in different parts of the Arkansas Valley.

Fifteen men kept a record of the cost of producing grain crops, chiefly corn. Worth-while practices were measured financially.

Several corn clubs were reported for 1926.

Forage Crops

One hundred twenty-five demonstrators reported on forage crops. These included field tests as well as small variety tests. The following crops made up the list; for pasture, alfalfa, sweet clover, broom grass, rye and Morton's mixture; for forage, alfalfa, sorghums, sweet clover and sunflowers.

Vine Crops

Quality was stressed. One cantaloupe club was organized. Inspection was encouraged.

Truck Crops

Improved packages and quality were emphasized in the case of celery and onions.

Cooperative marketing of vegetables was encouraged. Cost of production was obtained for celery and onions.
Two clubs of eighteen members finished their project.

Pure Seed

Considerable work was done in connection with the organization of pure seed producers.

Costs of producing red clover were secured from a number of growers.

Variety tests and field demonstrations were carried.

Irrigation and Drainage

Considerable improvement was made in measuring devices. Three large Venturi flumes were installed in 1928 while eight will be installed in 1929.

A number of small flumes have been put in by several ditch companies.

General extension activities have not been listed, many of which have to do with putting the program into practice. The county extension agent is called upon frequently to take part in a number of activities that are directly related to the agricultural extension work in his county. Only a few of the results pertaining to the recommendations have been listed in this part of the report.

Changes in crop acres and numbers of livestock in Pueblo, Otero, Crowley, Bent, and Prowers counties since 1924.

<table>
<thead>
<tr>
<th>Number of livestock on farms</th>
<th>1924</th>
<th>1927</th>
<th>1928</th>
<th>Increase or decrease 1928 vs 1927</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef Cattle</td>
<td>76,000</td>
<td>60,000</td>
<td>67,000</td>
<td>Increase</td>
</tr>
<tr>
<td>Dairy Cows</td>
<td>12,000</td>
<td>13,000</td>
<td>11,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Sheep</td>
<td>43,000</td>
<td>54,000</td>
<td>57,000</td>
<td>Increase</td>
</tr>
<tr>
<td>Swine</td>
<td>25,000</td>
<td>18,000</td>
<td>17,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Poultry</td>
<td>320,000</td>
<td>328,000</td>
<td>327,000</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

Acres in crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>1924</th>
<th>1927</th>
<th>1928</th>
<th>Increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>127,000</td>
<td>144,000</td>
<td>127,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Grain Sorghums</td>
<td>76,000</td>
<td>57,000</td>
<td>47,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Barley</td>
<td>13,700</td>
<td>20,200</td>
<td>15,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Wheat</td>
<td>58,100</td>
<td>39,600</td>
<td>33,000</td>
<td>Decrease</td>
</tr>
<tr>
<td>Oats</td>
<td>12,900</td>
<td>103,720</td>
<td>120,000</td>
<td>Increase</td>
</tr>
<tr>
<td>Corn</td>
<td>40,200</td>
<td>24,100</td>
<td>28,000</td>
<td>Increase</td>
</tr>
<tr>
<td>Beets</td>
<td>8,700</td>
<td>6,700</td>
<td>5,100</td>
<td>Decrease</td>
</tr>
<tr>
<td>Cantaloupes</td>
<td>4,300</td>
<td>3,700</td>
<td>2,600</td>
<td>Decrease</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>300</td>
<td>1,300</td>
<td>1,200</td>
<td>Same</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>24</td>
<td>500</td>
<td>1,200</td>
<td>Increase</td>
</tr>
</tbody>
</table>

Beef Cattle and sheep show an increase while dairy cows, swine and poultry indicate a slight decrease.
In crop production there was a decrease in the acreage devoted to alfalfa, grain sorghums, barley, wheat, oats, cucumbers and cantaloupes. An increase is shown for the acreage planted to beets, corn, and onions. The acreage in tomatoes remained about the same.

RECOMMENDATIONS TO RECEIVE SPECIAL CONSIDERATION IN 1929

Each committee was asked to designate one recommendation which it thought should receive special emphasis in 1929.

A special committee of the committee chairmen, committee secretaries and representatives of the Extension Service met to select a few recommendations from this list to incorporate in a program of work for 1929.

It was found that many of the suggested recommendations overlapped. However, a few were applicable to all parts of the valley. These were selected and have to do with the following lines of work. They are not listed in the order of their importance for all sections of the valley.

1. Crop rotations
2. Pastures
3. Boys and girls clubs
4. Water conservation
5. Winter egg production

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AGRICULTURAL RECOMMENDATIONS

BEF CATTLE

The committee on beef cattle finds that the number of beef cattle in the Arkansas Valley has increased approximately 7,000 head since 1927; that the carrying capacity of the range must be maintained; that it appears to be desirable to carry one or two minor enterprises on farms where the cattle business is small, in order to provide a regular income; that there are many inferior bulls offered for sale just because they are purebred; that the buying public should be educated regarding the better quality of beef. The committee therefore recommends:

1. That recommendation No. 1 of last year be changed to read, "That the present number of beef cattle in the Arkansas Valley be maintained."

2. That a cooperative feeding system be developed between the range cattle-men and the cattle feeders in the valley.
3. That on farms where the cattle business is small one or two minor enterprises be carried to supplement the farm income.

4. That breeders of beef cattle offer for sale only the best type of beef bulls.

That the following new recommendation be added to last year’s report:

5. That a campaign be carried by the various livestock associations in the valley and southern Colorado, for the purpose of encouraging the consumer to demand better beef, and that demonstrations be carried to show the difference between good and poor quality beef.

Recommendation No. 5 was considered the most important recommendation at this time.

Signed
W. S. Marriot, Chairman, Pueblo, Colo.
J. L. Shields, Secretary, Walsenburg, Colo.
J. L. Morris, Rouse, Colo.
R. A. Dilley, Canon City
H. B. Dye, Manzanola, Colo.
L. A. Edmundson, Pueblo
U. Patton, Canon City
Earl Hartman, Pueblo, Route 1
H. D. Rasler, Pueblo.

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DAIRYING

The committee on dairying approves the recommendations made by the committee last year with the following additions and changes:

1. Same as last year. That a gradual increase be made in the dairy industry; that this increase shall come by increasing the efficiency of each individual cow, by weeding out poor producers thru the systematic testing of herds for butterfat, by using only purebred sires from high-producing dams, by better management of herds, and thru a gradual increase in the number of dairy cows, this increase to come thru calf club work, raising of more heifer calves and the importing of a limited number of cows.

2. Same as last year with one addition. That dairying be made a permanent enterprise on the farm; that where dairying is practiced or contemplated the following conditions exist:

(1) That the man be dairy minded.

(2) That he have definite plans for obtaining sufficient feed for the herd throughout the year.

(3) That the indiscriminate crossing of breeds be discouraged.

(4) Added. That adequate shelter be provided for the herd.
3. Changed as follows: That the advantage of dried beet pulp to the farmers who are beet growers be made evident to the sugar companies so that enough dried pulp can be supplied to supplement dairy feeds on these farms.

The committee on dairying feels that the pressng of wet pulp will adequately take care of the need for this feed.

The committee therefore recommends that the word pressed be substituted for dried preceding the word pulp in recommendation No. 3.

4. Same as last year. That an attempt be made thru state representatives to have more funds available for T. B. eradication work and this work be encouraged in the Arkansas Valley.

5. Amended to read: That the practice of producing inferior dairy products, thru careless handling of cows and dairy products be discouraged and an attempt be made by local manufacturers, city health officers, State Dairy Commission and State Dairy Manufacturers Associations to raise the quality of dairy products in Arkansas Valley and the State of Colorado.

6. Same as last year: That the practice of some merchants of advertising and recommending dairy products substitutes be deemed a menace to the dairy industry and such practice be discouraged.

Number one was named as the most important recommendation at this time, emphasis to be placed upon dairy herd improvement associations and calf clubs.

Signed

A. R. Loker, Chairman, Lamar, Colo.
C. A. Smith, Secretary, Ft. Collins, Colo.
K. J. Sinding, Rocky Ford Cooperative Creamery
L. W. Nelson, Pueblo Model Dairy
Vincent Kerwin, Pueblo McClelland Merc. Co.
J. H. Holm, Rocky Ford
G. S. Track, Pueblo
Fletcher Woolsey, Pueblo
V. T. Prevost, Pueblo, Model Dairy
Geo. S. Turner, Canon City, O. K. Dairy
N. L. Burris, Pueblo.
A. A. Bigelow, Pueblo, Route 1, Box 233
F. W. Warner, Pueblo Motor R. A. Box 62
J. K. Sweeney, 401 E. 4th, Red Co.
R. J. Wager, Pueblo Motor R. A. Box 62
F. C. Kay, Pueblo
Edwin P. Haver, Pueblo, Central Block
A. E. Stubblefield, Pueblo U.S. Land Office
Dr. Chas. A. Lory, Ft. Collins
Mrs. Ralph J. Martin, Lamar
John L. Fletcher, Lamar
Dr. A. N. Carroll, Pueblo
D. M. Stone, Pueblo.
SHEEP

The present favorable prices for lambs, wool and breeding sheep and the outlook for continuing favorable prices is sure to stimulate a continuing increase in the numbers of sheep. This means a decided increase in the supply of mutton, lamb and wool on the markets during the next few years.

To meet this possible situation it is recommended:

1. Last year's recommendation is eliminated and this new recommendation is substituted. That the campaigns for increased consumption of mutton be continued.

2. Last year's recommendation changed to read: That farm flocks be encouraged as a means of using surplus feeds on the farm and that the use of better breeding stock and better care be encouraged.

3. Last year's recommendation changed to read: That the buying of old ewes on a conservative basis is a safe investment provided proper pastures and other feeds are available on the farm.

4. Last year's recommendation on increasing pastures for sheep is made to read: That the planting of sweet clover and other pasture crops be greatly increased.

5. The same as last year. That boys and girls sheep clubs be encouraged.

6. Last year's recommendation is made to read: That sheep feeding be increased on the small farms as a means of marketing surplus grains and forage.

7. Last year's recommendation on improved feeding practices is made to read: That particular attention be given to improved methods of feeding and improved equipment.

Two new recommendations are added this year.

8. That county or district wool pools be encouraged whenever practicable.

9. That more attention be given to local and state associations as a means of keeping in touch with economic and other problems.

Signed

T. R. Malone, Boone, Chairman
F. R. Lamb, Lamar, Secretary
F. W. Beier, Jr., Denver.
SWINE

Inasmuch as there is a deficiency in pork production in the Arkansas Valley of Colorado and the eleven western states; and since corn, alfalfa and other feed crops can be produced as cheaply in this region as in any other part of the United States; and since the market demands a hog weighing 180 to 225 pounds, and the grade of hogs kept needs improvement, together with better methods of management as to housing, sanitation, pasturage, and feeding, the swine committee recommends:

1. Same as last year. That the number of hogs kept at present be maintained in the valley.

2. Same as last year with this addition "And crossbreeding be discouraged." That purebred hogs be kept and crossbreeding be discouraged.

3. Same as last year. That all herds be kept immune from hog cholera.

4. That this be changed to read: That enough hogs be kept on every farm for home consumption.

5. Same as last year. That adequate housing facilities be provided.

6. That this be changed to read: That alfalfa or some form of pasture be utilized, where possible and if not available, that alfalfa hay or meal be fed. (Numbers 6 and 7 this year cover No. 6 of last year).

7. That shade and good drinking water be provided.

8. (Number 8 of last year becomes No. 10 of this year.) New recommendation: That sows be bred to farrow in early March and early Sept. and pigs fed six months to 180 to 225 pounds.

9. New recommendation: That a self feeder be used, starting in 19 days to two weeks, and continued throughout the entire feeding period.

10. (Same as No. 8 last year.) That pig clubs be fostered to encourage boys and girls in the production of good livestock and its efficient management.

The most important recommendation has to do with improved methods and practices in hog production.

Signed:

R. H. Cook, Chairman, Olney Springs, Colo.
P. L. Smithers, Secretary, Canon City, Colo.
Geo. Simmuth, Pueblo, Route 2, Box 131
C. J. Rose, Eads, Colo.
The poultry committee endorses the recommendations already made for the poultry raisers of the Arkansas Valley with the following additions and changes:

1. This is changed to read: The quality of chicks be improved and one year old hens be used for breeders.

2. Same as last year. An increase in winter egg production.

3. That not less than 100 laying hens be kept in the farm flock and 1500 laying hens in the commercial flock.

4. A production of not less than 8 dozen eggs per hen in the farm flock and not less than 12 to 14 dozen eggs per hen in the commercial flock.

5. A gradual increase in poultry production to meet the increasing demand in Colorado and outside markets.

6. An increase in the production of turkeys, where abundant range is available, to meet the increasing demand from outside markets.

7. That something definite be done to unify the present confusion relative to the terms accredited and certified that exists among the poultry raisers of the different states.

8. That more exhibits and shows of standard bred poultry be encouraged.

9. That the poultry raisers of the valley produce better stock, and that improvement be brought about through the use of better quality breeding males.

10. That the formation of local poultry associations be encouraged.

11. That this be eliminated: That a State Poultry Board be formed to work in cooperation with the State Agricultural College.

11. Number 12 of last year changed to read: That the movement for cooperative marketing of poultry products be endorsed and encouraged in the valley.

12. Same as No. 13 of last year. That a valley wide educational campaign for better poultry raising be conducted.
The following new recommendations are added:

13. That county demonstration farms be established to help farmers and poultry producers in adopting better practices.

14. That penalties be increased in the punishment of poultry thieves.

15. That more encouragement be given to boys and girls club work.

The most important recommendation at this time is No. 2.

Signed:

Mrs. J. O. Ashley, Chairman, Rye, Colorado
O. C. Ufford, Secretary, Fort Collins, Colo.
C. K. Finnell, Walsenburg
Chas. H. Beecher, Pueblo
Dr. L. A. Dillon, Pueblo
H. H. Young, Canon City
Mrs. Vida M. Fletcher, Lamar
Jefferson M. Hill, Walsenburg
Chas. M. Kaiser, Beulah
Mrs. A. A. Bigelow, Pueblo, Route 1, Box 233
Mrs. W. A. Finlay, Pueblo, Rye Route
Mrs. A. C. Bridgford, Pueblo Siloam Star Route
Mrs. Jas. M. Conrad, Pueblo West of City Park
S. F. Schrumpf, General Delivery, Pueblo
Mrs. R. A. Dilley, Canon City
Mrs. H. H. Killry, Pueblo, 2810 Colfax
Mrs. F. W. Harvey, Canon City
F. W. Harvey, Canon City

BEES AND HONEY

Following extended discussion of vital economic problems facing the production of honey and the care of bees, the committee on bees and honey wish to confine their recommendations to the following:

1. Same as last year. That the beekeepers of the beekeepers of the Arkansas Valley investigate the Colorado Honey Producers Association with a view to cooperative marketing.

2. Same as last year. That the beekeepers of the Arkansas Valley consider carefully winter protection for bees.

3. This has been accomplished and is therefore eliminated. It opposed the passage of the Corn Sugar Bill.

3. Same as No. 4 last year. That a similar conference be held in the Arkansas Valley next year and annually thereafter.
The following new recommendation is made:

4. That as an economic measure, House Bill No. 97, at present before the Colorado Legislature be endorsed and its passage be recommended. No recommendation was designated as being more important at this time than any other.

Signed
Harvey Said, Chairman, 1715 Palmer Ave.
Pueblo.
R. G. Richmond, Secretary, Fort Collins
Louis Dennis, Trinidad, 201 State St.,
Chas. M. Cheek, Las Animas.

FARM HOME

The women at the conference met in committee and adopted the following recommendations:

1. That a women's committee to consider the problems of the farm home be added to the 1920 Arkansas Valley Agricultural Economic Conference.

2. That a survey similar to the one conducted in the San Luis Valley be made in the Arkansas Valley for the purpose of formulating definite projects for each county.

Signed
Mrs. F. Stienmier, Canon City, Chairman, Route 3
Jessie M. Reinholz, Secretary, Pueblo
Mrs. S. F. Schrumpt, Pueblo, General Delivery
Mrs. R. A. Tilley, Canon City
Mrs. F. W. Harvey, Canon City 175 Central
Mrs. H. H. Young, Canon City, Route 2
Mrs. W. H. Allen, Canon City, Dozier Ave.
Mrs. J. C. Wright, Canon City, Route 2.
Mrs. Anna Russel, Route 2, Canon City.

SUGAR BEETS

The sugar beet committee endorses the recommendations which were submitted and passed at the economic conference at Rocky Ford last year.

Whereas, the United States produces only 22 percent of the sugar she consumes, 60 percent of the balance coming from Cuba and the rest from our insular possessions and Europe, and

Whereas, sugar beets are essential to the welfare of this valley, in establishing a workable cropping system; in stabilizing farm operations; in providing better rations for livestock; in providing a crop of known cash value, a crop which is highly hail resistant; and a crop which makes balanced production possible, the committee on sugar beets therefore recommends:
1. The adoption of the following crop rotations which provide for the general
upbuilding of every farm where such a rotation is adopted and put into practice,
and wish to go on record as strongly urging all other commercial interests
connected with agriculture, on insisting that their contracted acreage be solici-
ted on a crop rotation basis. The rotations recommended and endorsed are as
follows:

An 8 or 9 year rotation

1st year  Spring grain and alfalfa
2nd year  Alfalfa for hay
3rd year   " " "
4th year  Alfalfa for hay (If seeding fall wheat, plow under the third
cutting. Otherwise take off all cuttings, and if the
succeeding crop is to be corn or vines, either fall or spring
flow.)
5th Year  Either vines or corn or miscellaneous crops. (Fall plow
whenever practical)
6th year  Beets (Manure should be applied)
7th year  Miscellaneous crops as vines, onions, etc.
8th year  Either beets (if preference is given to an 8 year rotation);
or other miscellaneous crops (which should be manured). or
if grain is planted to be followed by beets next year, use
Hubam clover as a green manure.
9th year  Beets (if a 9 year rotation), otherwise start the rotation
over again.

An 5 year rotation

1st year  Spring grain (barley preferred) with red clover.
2nd "    Red clover for seed.
3rd "    Red clover for seed (sod fall plowed)
4th "    Miscellaneous crops
5th "    Beets manured

A discussion on the merits of commercial fertilizers resulted, and returns
were analyzed, all of which showed that owing to the fact that legumes were
heavy phosphate feeders, and that generally only a small percent of the acreage
was manured, either with barnyard or green manures, that the use of suitable
commercial fertilizers was to be recommended wherever the results justified their
use.

2. We wish to go on record as favoring the extension of the Boys' and Girls'
Beet Club Project work, so that similar records to those of Otero county might
be had for all other counties in and tributary to Arkansas Valley.

3. We sincerely urge each individual member of this conference to take the
sense of these recommendations to his own community so that constructive definite
action in actual farm practice will result this year.

New recommendations:

4. In addition the committee recommends that each individual grower feed
his beet by-products on the farm and apply farm manure regularly in the rotation.
5. That farmers in the valley consult with county agents regarding the most desirable rotation for their district or region.

Recommendation No. 1 was considered the most important at this time, namely the establishing of a good crop rotation on the farms of the Arkansas Valley.

Signed

W. I. Sanford, Chairman, Pueblo
L. A. Moorhouse, Secretary, Fort Collins
Horace E. Knapp, Rocky Ford
John L. Fletcher, Lamar
C. C. Mendell, Avondale
Eugene C. Danielson, Pueblo
C. A. Wilcox, Pueblo
J. E. Vestal, Pueblo, Route 1 Box 160
Ray Hartman, Pueblo, Rt. 1, Box 196
Ralph Blunt, Pueblo, Route 1, Box 108
R. M. Burger, Swink
W. H. Carpenter, Avondale
F. J. Kaspar, Rocky Ford
Will D. Keen, Pueblo, 310 Thatcher Blk.

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SMALL GRAINS

The committee on grain crops approves the recommendations made last year with the following changes and additions:

Since considerable feed is shipped and trucked into the valley; and since corn and barley supplement each other in the crop rotation scheme and provide the requirements for livestock feeding operations; and since wheat only provides a cash crop and does not fit into feeding plans; and since prices at harvest time are discouraging; and since good seed is sometimes hard to get; and since little information is available on the best varieties for certain communities; the committee on grain crops recommends:

1. Same as last year. An increase in corn acreage to more nearly meet consumptive demands of the valley.

2. Same as last year. An increase in the barley acreage to supplement corn in feeding operations and also to fill in as a nurse crop in crop rotations.

3. Same as last year. A decrease in the wheat acreage to the place where it becomes a part of the crop rotation and provides a cash crop in areas where wheat can be grown profitably.

The following new recommendations are made:

4. That adequate farm storage be provided to take care of small grains and allow the grower to market them more favorably.
5. That a list of seeds and feeds available in the county be developed by the county agent's office.
6. That more variety tests be made in more communities to find better varieties to use.
7. That 4-H Boys and Girls Club members be encouraged to grow certified and high quality corn and small grains to make available a greater amount of good seed.

Recommendation No. 6 was designated as the most important at this time.

Signed

W. A. Finlay, Chairman, Rye, Colorado.
Fred Jané, Secretary, Eads, Colorado.
Frank B. Graham, Rye
J. W. Yost, Walsenburg
C. E. Fleenor, Beulah, Star Route

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FORAGE CROPS

The committee on forage crops approves the recommendations made last year with the following changes and additions:

Alfalfa

Since the yield of alfalfa is not as high as it should be, we recommend:

1. Same as last year. That a rotation with alfalfa hay and seed be adopted that will provide for one-third of the alfalfa acreage to be devoted to seed production every third year.

2. A new recommendation. That a definite system of crop rotation be adopted which will tend to stabilize production and prices and stimulate feeding and thereby raise general soil fertility.

3. Same as No. 2 last year. That the quality of the product be improved and all lower grade hay be utilized as feed on the farm in the form of meal or otherwise most economical and advantageous under local conditions.

4. Same as No. 3 last year. That a previous recommendation of this committee to the effect that 35 percent of the irrigated area be devoted to alfalfa production be increased to 40 percent.

5. Same as No. 4 last year. That a sufficient number of livestock be maintained upon each irrigated farm to utilize and consume all forage and any low grade crops not possible to market otherwise advantageously.

Pastures (irrigated)

Same as last year.

Since there is a scarcity of irrigated pastures, we recommend:

1. That one acre of irrigated pasture be maintained for every three animal units on the farm.
2. That land not adapted to the successful production of grains and alfalfa be seeded to pastures with permanent pasture grass mixtures, and white and yellow blossom sweet clover.

3. That the practice of pasturing alfalfa fields continuously be discouraged because destructive to the crop, and dangerous to the livestock pastured.

Pastures (dryland)

Same as last year.

Since a repetition of the splendid native pastures enjoyed during the past two years may not occur frequently, we recommend:

1. That care be exercised that native pastures be not over-grazed.

2. That sudan and sorghum crops be planted to supplement other pastures.

Recommendation No. 2 under Alfalfa was designated as the most important at this time.

Signed

Ralph J. Martin, Chairman, Lamar, Colo.
E. D. Smith, Secretary, Fort Collins

VINE CROPS

The committee on vine crops approves the recommendations made last year with the following changes and additions:

Cantaloupes (commercial)

1. Changed to read: Whereas competition from other shipping states is becoming more pronounced and market gardens near large markets on account of paved roads and fast trucks are supplying large amounts of home grown cantaloupes which come in competition with Colorado melons, the committee recommends that a conservative acreage of 7,000 to 10,000 acres be planted to commercial cantaloupes in the Arkansas Valley.

2. Same as last year. That early and late varieties be planted in order to have a better distribution of shipments throughout the season.

3. Changed to read: That rigid inspection be strictly adhered to, that the U. S. Grade No. 1 be first consideration, and that competent inspectors be employed.

4. Same as last year. That new varieties be thoroughly tested out and proved before they are grown commercially, and only standard proven varieties be grown in quantities for the market.

5. Same as last year. That only select seed of standard varieties be planted and that growers use more care in selecting the kind and quality of seed planted.
This new recommendation is added:

6. In order to improve quality and uniformity of pack, that packing be done by experienced packers under supervision at shipping sheds instead of at the field sheds.

Cantaloupes for Seed

In as much as 85 percent of all cantaloupe seed used in the United States is grown in the Arkansas Valley of Colorado, we recommend:

1. Same as last year. That a sufficient acreage of improved quality seed be produced to retain and increase the demand for this seed.

2. Same as last year. As it is a violation of the Colorado state seed law as well as a detrimental practice to sell seed cut from cull melons, we recommend that such practice be discontinued.

The following new recommendation is made:

3. The committee finds that it requires about 45 cantaloupes of standard size to produce one pound of seed. The average commercial price of this number of cantaloupes packed in flat crates will not the grower around ninety cents after crate expenses are paid. It is therefore recommended that prices of cantaloupe seed be materially increased so that growers can realize a profit.

Pickles

Whereas the outlook for the production of pickles is for a decrease in acreage due to a shortage of labor and the high cost of labor together with the high value of most of our lands we feel that an increased price for pickles is necessary to maintain the industry.

Cucumber and squash for seed

1. A new recommendation. On account of the necessity of expensive equipment to produce and harvest cucumber and squash seeds, the danger from hail, of destructive insect pests and plant diseases and the risk of low germinating seeds, and as these expenses and risks are continually increasing, it is recommended that growers decrease or discontinue growing cucumber and squash seeds unless the price is increased to insure a profit to the grower.

2. Same as No. 1 last year. That new growers refrain from entering into this venture unless they are assured of sufficient acreage and yearly contracts at remunerative prices.

3. Same as No. 2 last year. That quality of seed be the first consideration.

General recommendation:

That a conference of this kind be held annually.
No recommendation was designated as being any more important at this time than any other made by the committee.

Signed

J. E. Barter, Chairman, Pueblo, Colorado.
W. F. Broge, Secretary, Rocky Ford, Colorado.
Will Morrison, Rocky Ford.
Ed. Hoist, Pueblo.
J. W. McBeth, Pease.
W. G. Dutch, Pueblo.
H. H. Hampton, Rocky Ford.

TRUCK CROPS

The committee of truck crops approves the recommendations made last year with the following changes and additions:

Onions

In as much as there is a tendency to increase the acreage of Valencia onions in the Arkansas Valley, the truck crop committee recommends:

1. Same as last year. That growers provide proper storage.

2. Same as last year. That growers ship out only first quality and as much as possible only in fancy or standard packs.

3. Same as last year. That new onion growers first study thoroughly production costs before engaging in onion production.

4. Same as last year. That only the best quality of seed be planted.

5. Changed to read. That onion seed be produced in the valley for local use and not commercially.

The following new recommendations are made:

6. That onion growers do not increase their onion acreage in 1929 more than ten percent above 1928.

7. That all growers who have suitable land, plenty of fertilizer and water, enough available labor at reasonable prices, plant that amount of onions which they can properly grow, harvest and store and that they figure on this acreage in a permanent crop rotation from year to year and not be governed by high or low prices of onions in determining their onion acreage.

Celery

That reference be made specifically to two kinds of celery namely, Pascal and Summer.
Pascal Celery

1. Changed to read: That the celery package be standardized and that an effort be made to quote and sell celery entirely on a pound basis and not by the dozen and further that all celery be tied with a blue ribbon, discarding the red and white ribbons.

2. Same as last year. That a cooperative marketing system be developed to attain more systematized marketing.

3. Same as last year. That when a marketing system is developed there be an increase in acreage so far as permitted by suitable land with abundant water; but that this increase be no faster than the marketing facilities can handle the crop with profit to the grower.

Summer Celery

4. Same as last year. Inasmuch as summer celery is very profitable, that growers be encouraged to grow more of it, in order to make up shipments of mixed cars of vegetables during the summer months.

The following new recommendation is made:

5. That an organization composed of all factors in the celery business be perfected for the purpose of marketing Arkansas Valley celery.

Cauliflower

Inasmuch as there is a tendency to increase the acreage in cauliflower in certain parts of the valley, the committee on truck crops recommends:

1. Same as last year. That growers investigate early cauliflower which is marketed about the first of August, in order to supply a demand which has little competition.

2. Changed to read: That there be no increase in the main crop cauliflower acreage.

Other Truck Crops

1. Same as last year. We recommend the encouragement of cooperative marketing associations for the handling of green vegetables.

2. This is eliminated. Advised no acreage increase at present unless local demands justify.

2. Same as 3 last year. That care be exercised to rotate and fertilize in order to maintain soil fertility and control diseases.

The following new recommendations are made:

3. That there be an increase in acreage of mixed vegetables including carrots, turnips, table beets, green beans, peas, spinach, peppers, etc. This increase to be made in those parts of the valley where demand has been developed.
That the cooperative vegetable marketing association which operated last year be encouraged and continued.

**General Recommendation**

That a conference of this kind be held every year.

Recommendation No. 7 under Onions was designated by the committee as the most important recommendation at this time.

Signed

Tony DeCarlo, Chairman, Pueblo, Route 2
W. J. Broadhead, Secretary, Pueblo, Box 516
Geo. Terwilliger, Avondale
Caesar A. Geraldi, Pueblo, 100 S. Union
N. J. Smith, Rocky Ford, Route 1
John Jacobs, Canon City
G. A. Garberich, Canon City
G. I. Kirkton, Canon City
L. E. Woodward, Pueblo, Rt. 2
Arthur M. Gaide, Pueblo, Rt. 2
W. H. Sawhill, Pueblo
Anton Mocilnikar, Pueblo, Route 2.
John Morris, Golden
Dr. Chas. A. Lory, Ft. Collins

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**PURE SEEDS**

The committee on pure seed approves the recommendations passed last year with the following changes and additions:

The committee on pure seed recommends for all classes of seed the use of seed of the best quality, purity and germination obtainable, certified or approved if possible.

**Cantaloupe and Cucumber Seed**

1. Changed to read: The committee recommends that in as much as the dealer furnishes the stock seed, that the dealer be very careful in the selection of the stock seed.

**Red Clover and Alfalfa**

1. Changed to include alfalfa seed and to read as follows: In view of the large importations of clover and alfalfa seed into the United States and the benefits of these crops on our soils, we recommend that the acreage of red clover and alfalfa for seed production be gradually increased, as economic conditions justify, and for those sections of the valley where either is best adapted. *THE AGRICULTURAL OUTLOOK* recommends this gradual increase for 1929.

2. Same as last year. We urge the production of approved clover seed.
Small grains (corn, wheat, oats, barley, rye)

1. Same as last year. We urge that every grower of small grains for seed have it registered or certified by the proper agency.

2. Same as last year. That registered or approved seed be used on every farm thereby securing better quality crops and increased yields.

The following recommendations are added:

3. That all small grain seed be cleaned and treated before planting.

4. That the use of registered seed be promoted thru the organization of small grain clubs such as corn clubs, etc.

5. A greater interest in and attendance at the Pure Seed Show at Colorado Springs.

No. 4 under Small Grains is designated as the most important at this time.

Signed
J. G. Erion, Chairman, Pueblo
H. Fauser, Secretary, Rocky Ford
Frank Strain, Lamar
H. D. Russler, Pueblo
Gus Center, Lamar
J. C. Weisel, Pueblo.

IRRIGATION AND DRAINAGE

The committee on irrigation and drainage accepts the recommendations made last year.

Whereas the appropriation of water for irrigation from the streams of the Arkansas Valley is far in excess of the natural supply; that the amount of water required for a single irrigation depends on the character of the soil; that the factor of depth of soil from which the crop absorbs its moisture is important and further the element of the water holding capacity of the soil; the committee on irrigation and drainage recommends:

1. An increase in reservoir storage capacity as a flood prevention in favorable location by individual ditches or units.

2. That the pumping plants be installed where low cost of operation or high price of crop products prevail.

3. That the following rules be adopted for the use of irrigation water and a concerted effort be made by each individual water user to correlate his operations with these rules:

A. Store the rainfall in your soil. Deep thorough fall plowing enables the soil to absorb and retain rain and snow water. The more natural precipitation stored in the soil, the less irrigation water will be needed.
B. Cultivate frequently and thoroughly. It is cheaper to cultivate than to irrigate and stirring the top soil reduces evaporation. Systematic cultivation will reduce the water needed in irrigation.

C. Fertilize your soil. The more fertile your soil the less irrigation required for producing a pound or a ton of the crop.

D. Plant in moist soil. Well moistened soil at planting time permits better root development and delays the time of first irrigation thus saving water during the summer. This may necessitate fall or early spring irrigation in moderation.

E. Do not irrigate too early after planting. A better root development is secured and less irrigation water is needed to produce a crop.

F. Irrigate by the correct method. Where water is plentiful flooding may be used, if scarce, the furrow method should be employed exclusively. Lead your waste water to other fields.

G. Irrigate at the proper time. Withhold water until the crop is in real need. By this is meant when corn is shooting or filling, or like cycles in other crops.

H. Use water in moderation. Acre yields are increased by irrigation up to a certain limit, beyond which, more water may cause a decrease in yield. Irrigation expensive and more water than the soil will hold available to the crop is a waste of time, money and water.

I. Kill the weeds. Weeds use as much water as many profitable crops.

J. Repair leaky ditches. Nearly 50 percent of the available water is lost by seepage and leaky farm ditches.

K. Measure the water. Land is carefully measured. Water supplies the value to land, therefore water should be used efficiently in order to supply a maximum area.

L. Rotate your crops so that all the crops grown do not require water at the same time. Some crops require more water than others, thus a balanced relation is maintained between area and water right.

M. Fall irrigation is beneficial and should be practiced where conditions so warrant.

N. Do not attempt long runs on lands in furrow irrigation; 500 feet is the maximum distance recommended.

O. Limit the quantity of water applied to the land at each irrigation to that extent where the capillary capacity of the soil will supply the crop and avoid the waste of water by deep percolation.

4. That all diversion ditches from main streams be equipped with the most accurate measuring devises.
5. The restriction of denuding the forest cover in the mountain areas.

6. To improve the management and distribution of water it is recommended that there be held annually at some convenient place in the valley a school for superintendents, headgate men, ditch riders and others interested.

A motion was passed not to support any activity in West Slope Water development, it being thought that such development would be too expensive and is not warranted at this time.

It was further recommended that a copy of the recommendations of the committee be sent to every water user in the Arkansas Valley of Colorado.

Section 3 of the recommendations was designated as the most important at this time.

Signed

S. W. Cressy, Chairman, Rocky Ford
R. L. Parshall, Secretary, Fort Collins
Chas. White, Penrose
J. W. McBeth, Penrose
C. A. Kelsc, Howard
John Morris, Golden
Dr. C. A. Lory, Ft. Collins
G. W. Bentley, Pueblo
E. H. Baker, Pueblo
Jas. Peabody, Pueblo
P. R. O. G. R. A. M.

THE THIRD AGRICULTURAL ECONOMIC CONFERENCE
of the
ARKANSAS VALLEY

****

10.30 A. M. Call to order,
Horace B. Dye, Manzanola, Chairman.
Address of welcome. W. L. Rees, Chairman
Pueblo County Commissioners.
"The Purpose of the Conference". E. D. Smith,
District Agent, Extension Service, C.A.C.
"Suggestions on Committee Organization".--
T. H. Summers, Farm Management
Demonstrator, Extension Service, C.A.C.

11.00 A.M. Committee meetings begin.
Noon recess. Lunch at cafeteria, Methodist
Church, 11th & Court Sts.

1.00 P. M. to 3.30 P. M. Committees continue sessions.
Reports to be completed at 3.30 P. M.

5.30 P. M. Banquet - Methodist Church Dining Hall.
Tickets 75c. H. B. Dye, Toastmaster.

Greeting. W. D. Keen, Chairman Agricultural
Committee, Pueblo Commerce Club.

"High Lights of the Committee Reports".
Prof. L. A. Moorhouse, C. A. C.

"The Future of the Agriculture in the
Arkansas Valley". Dr. C. A. Lory,
President, Colorado Agricultural
College.
Cooperative Extension Work in Agriculture and Home Economics
Colorado Agricultural College and U. S. Department of Agriculture Cooperating.

Arkansas Valley Agricultural Recommendations
1928

Assembled by

Thos. H. Summers
Farm Management Demonstrator

A report of the agricultural recommendations for the Arkansas Valley made and adopted by the commodity committees at the second Arkansas Valley Agricultural Conference at Rocky Ford, Colorado, Feb. 17 and 18, 1928.
Introduction.

In October, 1925, an agricultural conference was held at Rocky Ford, Colorado, for the purpose of discussing the economic problems of the farmers in the Arkansas Valley. In order to cover the situation adequately commodity committees, consisting of men who were directly interested in the production and marketing of particular crops or classes of livestock, were appointed. These men, after making a detailed study of their problems, prepared and submitted definite suggestions and recommendations. These suggestions and recommendations were published in a bulletin entitled "An Agricultural Program for the Arkansas Valley of Colorado."

While the program which was finally adopted in 1925 was developed from the long-time point of view, nevertheless unforeseen changes are bound to occur from time to time and it becomes necessary to check up at frequent intervals in order to determine whether certain modifications should be made and adopted in place of the original recommendations. An individual operator must follow some such plan if he expects to obtain maximum profits from his business; likewise, an agricultural region must take stock of its resources at successive periods if it proposes to develop along lines that are fundamentally sound.

Accordingly, a follow-up conference was held at Rocky Ford on February 17th and 18th when the former committees and some in addition came together and did three things. First, agricultural changes occurring since the former conference were considered; second, progress of work on the 1925 recommendations was taken up; and third, the national outlook for 1928 was discussed in terms of its effect upon the agriculture of the Arkansas Valley. Finally, a set of agricultural recommendations were made and approved, incorporating most of the recommendations of 1925 with certain additions and modifications.
Changes in crop acres and numbers of livestock in Pueblo, Otero, Crowley, Bent and Prowers counties since 1924.

<table>
<thead>
<tr>
<th>Numbers of livestock on farms</th>
<th>1924</th>
<th>1927</th>
<th>Increase of decrease</th>
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<tbody>
<tr>
<td>Beef cattle</td>
<td>76,000</td>
<td>59,000</td>
<td>decrease</td>
</tr>
<tr>
<td>Dairy cows</td>
<td>12,000</td>
<td>13,000</td>
<td>increase</td>
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<tr>
<td>Sheep</td>
<td>48,000</td>
<td>54,000</td>
<td>&quot;</td>
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<tr>
<td>Swine</td>
<td>25,000</td>
<td>18,000</td>
<td>decrease</td>
</tr>
<tr>
<td>Poultry</td>
<td>320,000</td>
<td>275,000</td>
<td>&quot;</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Acres in crops</th>
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</thead>
<tbody>
<tr>
<td>Alfalfa</td>
</tr>
<tr>
<td>Grain sorghums</td>
</tr>
<tr>
<td>Barley</td>
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<tr>
<td>Wheat</td>
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<tr>
<td>Oats</td>
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<td>Corn</td>
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<tr>
<td>Beets</td>
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<tr>
<td>Cantaloupes</td>
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<tr>
<td>Cucumbers</td>
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<tr>
<td>Canning tomatoes</td>
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<tr>
<td>Onions</td>
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</tbody>
</table>

1/ Figures for 1926

Several noticeable changes have taken place in the numbers of livestock and crop acres. Beef cattle and swine have decreased, due largely to unfavorable prices compared with prices of other agricultural commodities. On the other hand, sheep and dairy cows show some increase on account of relatively favorable prices for wool, lambs and dairy products during this period.

Wheat, beets, corn, sorghums and alfalfa have decreased in acreage while barley, cantaloupes, cucumbers and truck crops have shown an increase.

In the case of cantaloupes, it appears that the expansion has been so great as to approach a dangerous situation especially with such a highly speculative crop.

Further development of the canning industry in the valley has lent encouragement to the expansion of the truck crop acreage since 1924.
Celery, string beans and cauliflower have each occupied a relatively small acreage in the valley. The tendency has been, however, to increase the production of these crops.

While figures for Fremont, Las Animas and Huerfano counties are not included in this list, each county sent representatives to the conference and assisted in making the various recommendations. It was felt that conditions in these counties were fairly comparable with those in the other five counties for most commodities produced.

At the general meeting held Saturday afternoon, February 18th, of which Mr. Horace Dye of Manzanola was chairman, Mr. J. B. Ryan of Rocky Ford gave a talk on the work of the State Agricultural College in cooperating with the Arkansas Valley farmers in their efforts to work out their agricultural problems.

It was voted by the conference to hold a similar meeting every year, the place for the meeting in 1929 to be decided upon by a special committee appointed by the chairman.
AGRICULTURAL RECOMMENDATIONS

BEEF CATTLE

The committee on beef cattle finds that the number of beef cattle in the Arkansas Valley has decreased about 2,000 head during the last two years; that the carrying capacity of the range has increased slightly; that livestock feeding tends to increase soil fertility, provides winter employment and furnishes a market for surplus feed; that it appears to be desirable to carry one or two minor enterprises on farms where the cattle business is small in order to provide a regular income and that there are many inferior bulls offered for sale just because they are purebred.

The committee therefore recommends:

1. That the number of beef cattle be increased in the Arkansas Valley on a conservative basis.

2. That a cooperative feeding system be developed between the range cattlemen and the cattle feeders in the valley.

3. That on farms where the cattle business is small one or two minor enterprises be carried to supplement the farm income.

4. That breeders of beef cattle offer for sale only the best type of beef bulls.

L. A. Moorhouse, Chairman
Fort Collins, Colo.
J. L. Shields, Secretary
Walsenburg, Colo.
W. S. Marriott, Pueblo
D. A. Bole, La Junta
R. A. Dilley, Canon City
H. B. Dye, Manzanola

DAIRYING

That the recommendations of the dairy committee at the last economic conference be continued with the exception that Nos. 1 and 2 be amended so as to read:

1. That a gradual increase be made in the dairy industry; that this increase shall come by increasing the efficiency of each individual cow, by weeding out poor producers thru the systematic testing of herds for butterfat, by using only purebred sires from high-producing dams, by better management of herds, and thru a
gradual increase in the number of dairy cows, this increase to come thru calf club work, raising of more heifer calves and the importing of a limited number of cows.

2. That dairying be made a permanent enterprise on the farm; that where dairying is practiced or contemplated the following conditions exist:

   (1) That the man be dairy minded.

   (2) That he have definite plans for obtaining sufficient feed for the herd thruout the year.

   (3) That the indiscriminate crossing of breeds be discouraged.

3. That the advantage of dried beet pulp to the farmers who are beet growers be made evident to the sugar companies, so that enough dried pulp can be supplied to supplement dairy feeds on these farms.

The following additional recommendations are made:

4. That an attempt be made thru state representatives to have more funds available for T. B. eradication work and this work be encouraged in the Arkansas Valley.

5. That the practice of producing inferior dairy products, thru careless handling of cows and dairy products be discouraged and an attempt be made by local manufacturers, city health officers, and state dairy commission to raise the quality of dairy products in the Arkansas Valley.

6. That the practice by some merchants of advertising and recommending dairy products substitutes be deemed a menace to the dairy industry and such practice be discouraged.

C. Stocker, Chairman, Lamar
C. A. Smith, Secretary, Fort Collins
A. R. Locker, Lamar
J. F. Karst, Lascar
E. D. Wight, Trinidad

O. D. Good, Fort Collins
J. E. Harman, Pueblo, M. R. A.
K. J. Sinding, Rocky Ford
J. H. Holm, Rocky Ford
J. E. Schock, Swink

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SHEEP

The gradual increase in the number of sheep during the past few years, the limited demand for mutton and lamb and local factors affecting the sheep industry, show that the industry should not be expanded at the present time but should be stabilized on the basis of more efficient production.
The following recommendations are made:

1. That range sheep production be not increased in the Arkansas Valley.
2. That farm flocks be started with purebred sheep.
3. That the buying of old ewes be not expanded.
4. That more pastures and better sheep equipment be established on every farm.
5. That boys and girls sheep clubs be encouraged.
6. That the number of sheep feeders be increased without increasing the number of sheep fed.
7. That feeding practices be improved.

P. G. Scott, Chairman
Las Animas, Colo.

F. R. Lamb, Secretary
Lamar, Colo.

Lewis Swink, Rocky Ford
Stanley Lee, Las Animas
A. S. Tolton, Las Animas
W. H. Harkrader, Las Animas

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**SWINE**

Inasmuch as there is a deficiency in pork production in the Arkansas Valley of Colorado and the eleven western states; and since corn, alfalfa and other feed crops can be produced as cheaply in this region as in any other part of the United States; and since the market demands a hog weighing 180 to 225 pounds, and the grade of hogs kept needs improvement, together with better methods of management as to housing, sanitation, pasturage and feeding, we recommend:

1. That the number of hogs kept at present be maintained in the valley.
2. That purebred hogs be kept.
3. That all herds be kept immune from hog cholera.
4. That enough hogs be kept on every farm to consume available by-products or roughage from the farm dairy, feedlot and farm crops.
5. That adequate housing facilities be provided.

6. That alfalfa pasture with shade and good drinking water be provided.

7. That hogs be marketed at from 180 to 225 pounds in the shortest possible time.

8. That pig clubs be fostered.

Alvin H. Said, Chairman
Model, Colo., Box 122
P. L. Smithers, Secretary
Canon City, Colo.
Frank Stienmier, Canon City
R. H. Cook, Olney Springs
T. F. Simpson, Manzanola
Lixon Birkett, Pueblo

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POULTRY

The poultry committee endorses the recommendations made for the poultry raisers of the Arkansas Valley at the meeting in 1925 and recommends their continuation.

1. An increase in the production of baby chicks to supply the state demand now being met by other states.

2. An increase in winter egg production.

3. That not less than 100 laying hens be kept in the farm flock and 1500 laying hens in the commercial flock.

4. A production of not less than 8 dozen eggs per hen in the farm flock and not less than 12 to 14 dozen eggs per hen in the commercial flock.

5. A gradual increase in poultry production to meet the increasing demand in Colorado and outside markets.

6. An increase in the production of turkeys, where abundant range is available, to meet the increasing demand from outside markets.

The committee further recommends:

7. That something definite be done to unify the present confusion relative to the terms accredited and certified that exists among the poultry raisers of the different states.

8. That more exhibits and shows of standard bred poultry be encouraged.

9. That the poultry raisers of the valley produce better stock, and that improvement be brought about through the use of better quality breeding males.
10. That the formation of local poultry associations be encouraged.

11. That a State Poultry Board be formed to work in cooperation with the State Agricultural College.

12. That the present movement for cooperative marketing of poultry products that is being promoted by the Colorado Bureau of Markets be endorsed and encouraged in the valley.

13. That a valley wide educational campaign for better poultry raising be conducted.

Jas. A. Clovenger, Chairman
Rocky Ford, Colo.

O. C. Ufford, Secretary
Fort Collins, Colo.

Oscar Huston, La Junta
Carl Sharp, Rocky Ford
A. McDonald, Hoehne

J. M. Conrad, Pueblo, West City Park
Herman Lipe, Pueblo, R. 1, Box 185

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BEES AND HONEY

The committee on bees and honey wish to recommend:

1. That the beekeepers of the Arkansas Valley investigate with a view to cooperative marketing the Colorado Honey Producers Association.

2. That the beekeepers of the Arkansas Valley consider carefully winter protection for bees.

3. That the beekeepers of the Arkansas Valley oppose the passage of the Corn Sugar bill at present pending in the United States Congress.

4. That a similar conference be held in the Arkansas Valley next year and annually thereafter.

C. S. Miller, Chairman
Manzanola, Colo.

R. G. Richmond, Secretary
Fort Collins, Colo.

D. B. Hersperger, Ordway
Mrs. D. B. Hersperger, Ordway
Mrs. Nellie Warren, Ordway
Harvey Said, Pueblo, 1715 Palmer Ave.

T. E. Gray, Ordway, Box 152
Charles M. Cheek, Las Animas
SUGAR BEETS

Whereas, the United States produces only 22 percent of the sugar that she consumes, 60 percent of the balance coming from Cuba and the rest from our insular possessions and Europe, and

Whereas, Sugar Beets are essential to the welfare of this valley, in establishing a workable cropping system; in stabilizing farm operations; in providing better rations for livestock; in providing a crop of known cash value, a crop which is highly hail resistant; and a crop which makes balanced production possible; we therefore recommend:

1. The adoption of the following crop rotations which provide for the general upbuilding of every farm where such a rotation is adopted and put into practice, and wish to go on record as strongly urging all other commercial interests connected with agriculture, on insisting that their contracted acreage be solicited on a crop rotation basis. The rotations recommended and endorsed are as follows:

**An 8 or 9 year rotation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Spring grain and alfalfa</td>
</tr>
<tr>
<td>2nd</td>
<td>Alfalfa for hay</td>
</tr>
<tr>
<td>3rd</td>
<td>Alfalfa for hay</td>
</tr>
<tr>
<td>4th</td>
<td>Alfalfa for hay (If seeding fall wheat, plow under the third cutting. Otherwise take off all cuttings, and if the succeeding crop is to be corn or vines, either fall or spring plow.)</td>
</tr>
<tr>
<td>5th</td>
<td>Either vines or corn or miscellaneous crops. (Fall plow whenever practical)</td>
</tr>
<tr>
<td>6th</td>
<td>Beets (Manure should be applied)</td>
</tr>
<tr>
<td>7th</td>
<td>Miscellaneous crops as vines, onions, etc.</td>
</tr>
<tr>
<td>8th</td>
<td>Either beets (if preference is given to an 8 year rotation); or other miscellaneous crops (which should be manured). Or if grain is planted to be followed by beets next year, use Hubam clover as a green manure.</td>
</tr>
<tr>
<td>9th</td>
<td>Beets (if a 9 year rotation), otherwise start the rotation over again.</td>
</tr>
</tbody>
</table>

**A 5 year rotation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Spring grain (barley preferred) with red clover.</td>
</tr>
<tr>
<td>2nd</td>
<td>Red clover for seed.</td>
</tr>
<tr>
<td>3rd</td>
<td>Red clover for seed (and fall plowed)</td>
</tr>
<tr>
<td>4th</td>
<td>Miscellaneous crops</td>
</tr>
<tr>
<td>5th</td>
<td>Beets manured</td>
</tr>
</tbody>
</table>

A discussion on the merits of commercial fertilizers resulted, and returns were analyzed, all of which showed that owing to the fact that legumes were heavy phosphate feeders, and that generally only a small percent of the acreage was manured, either with barnyard or green manures, that the use of suitable commercial fertilizers was to be recommended wherever the results justified their use.
2. We wish to go on record as favoring the extension of the Boys' and Girls’ Beet Club Project work, so that similar records to those of Otero County might be had for all other counties in and tributary to the Arkansas Valley.

3. We sincerely urge each individual member of this conference that he take the sense of these recommendations to his own community so that constructive definite action in actual farm practice will result this year.

W. I. Sanford, Chairman
Pueblo, Colo.
A. K. Skuderna, Secretary
Rocky Ford, Colo.
G. Bishop, Pueblo
R. Hartman, Pueblo
J. E. Vestal, Pueblo
J. Peabody, Pueblo
F. Smith, Ordway
G. Shank, La Junta
B. A. Shelton, Cheraw
C. A. Marshall, Cheraw
P. Madden, Cheraw
W. W. Spencer, Manzanola
A. P. Griffitts, Rocky Ford
G. M. Pratt, Rocky Ford
H. E. Knapp, Rocky Ford
E. H. Garecke, Rocky Ford

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SMALL GRAINS

Whereas an average of 623 cars of feed crops (a large quantity of which is corn) is shipped into the region annually, and in addition a considerable amount of such crops is trucked into the territory; and since corn and barley supplement each other in the crop rotation scheme and provide the requirements for livestock feeding operations; and since wheat only provides a cash crop and does not fit into feeding plans, we recommend:

1. An increase in corn to more nearly meet consumptive demands of the valley.

2. An increase in the barley acreage to supplement corn in feeding operations and also to fill in as a nurse crop in crop rotations.

3. A decrease in the wheat acreage to the place where it becomes a part of the crop rotation and provides a cash crop in areas where wheat can be grown profitably.

Herman Heatwole, Chairman
La Junta, Colorado.
Chas. W. Stocker, Secretary
Trinidad, Colo.
A. Cleeve, Rocky Ford
C. J. Cover, Jr., Rocky Ford
FORAGE CROPS

Alfalfa

Since the yield of alfalfa is not as high as it should be, we recommend:

1. That a rotation with alfalfa hay and seed be adopted that will provide for one-third of the alfalfa acreage to be devoted to seed production every third year.

2. That the quality of the product be improved and all lower grade hay be utilized as feed on the farm in the form of meal or otherwise most economical and advantageous under local conditions.

3. That a previous recommendation of this committee to the effect that 35 percent of the irrigated area be devoted to alfalfa production be increased to 40 percent.

4. That a sufficient number of livestock be maintained upon each irrigated farm to utilize and consume all forage and any low grade crops not possible to market otherwise advantageously.

Pastures (irrigated)

Since there is a scarcity of irrigated pastures, we recommend:

1. That one acre of irrigated pasture be maintained for every three animal units on the farm.

2. That land not adapted to the successful production of grains and alfalfa be seeded to pastures with permanent pasture grass mixtures, and white and yellow blossom sweet clovers.

3. That the practice of pasturing alfalfa fields continuously be discouraged because destructive to the crop, and dangerous to the livestock pastured.

Pastures (dryland)

Since a repetition of the splendid native pastures enjoyed during the past year may not occur frequently, we recommend:

1. That care be exercised that native pastures be not over-grazed.

2. That sudan and sorghum crops be planted to supplement other pastures.

C. R. Strain, Chairman
Lamar, Colo.

E. D. Smith, Secretary
Fort Collins, Colo.
Cantaloupes (commercial)

As the acreage of commercial cantaloupes is being constantly increased in other shipping states and there is also a large increase in acreage near the eastern markets on truck farms, the Colorado melons often meeting with too much competition at these markets which often results in serious loss to the valley growers, we therefore recommend:

1. That a conservative acreage of from seven to ten thousand acres be planted to commercial cantaloupes, the amount to be determined by the acreage in other localities.

2. That early and late varieties be planted in order to have a better distribution of shipments throughout the season.

3. That rigid inspection be strictly adhered to and that the U. S. grade No. 1 be the first consideration.

4. That new varieties be thoroly tested out and proved before they are grown commercially, and only standard proven varieties be grown in quantities for the market.

5. That only select seed of standard varieties be planted and that growers use more care in selecting the kind and quality of seed planted.

Cantaloupes for Seed

Inasmuch as 85 percent of all cantaloupe seed used in the United States is grown in the Arkansas Valley of Colorado, we recommend:

1. That a sufficient acreage of improved quality seed be produced to retain and increase the demand for this seed.

2. As it is a violation of the Colorado state seed law as well as a detrimental practice to sell seed cut from cull melons, we recommend that such practice be discontinued.

Pickles

Whereas the outlook for the production of pickles is for a decrease in acreage due to a shortage of labor and the high cost of labor together with the high value of most of our lands we feel that an increased price for pickles is necessary to maintain the industry.
umber and Squash for seed

Inasmuch as the equipment to properly produce and handle cucumber seed is expensive and that securing of seed contracts is uncertain from year to year, we recommend:

1. That new growers refrain from entering into this venture unless they are assured of sufficient acreage and yearly contracts at remunerative prices.

2. That quality of seed be the first consideration.

General Recommendation

That a conference of this kind be held annually.

Wm. Morrison, Rocky Ford, Colo.
W. F. Droge, Secretary,
Rocky Ford, Colorado.
D. H. Ernest, Trinidad
J. A. Sprengle, Pueblo
Wm. McKee, Penrose
Tony De Carlos, Pueblo
N. D. Bristol, Rocky Ford
K. D. Van Wagenen, Pueblo

TRUCK CROPS

Onions

Inasmuch as there is a tendency for an increase of the Valencia onions, we recommend:

1. That growers provide proper storage.

2. That growers ship out only first quality and as much as possible only in fancy or standard packs.

3. That new onion growers first study thoroughly production costs before engaging in onion production.

4. That only the best quality of seed be planted.

5. That onion seed be produced in the Arkansas Valley.
Celery

1. That the celery package be standardized.

2. That a cooperative marketing system be developed to attain more systematized marketing.

3. That when a marketing system is developed there be an increase in acreage so far as permitted by suitable land with abundant water; but that this increase be no faster than the marketing facilities can handle the crop with profit to the grower.

4. Inasmuch as summer celery is very profitable, that growers be encouraged to grow more of it, in order to make up shipments of mixed cars of vegetables during the summer months.

Cauliflower

Inasmuch as there is a tendency for increased acreage in cauliflower in certain parts of the valley, we recommend:

1. That growers investigate early cauliflower which is marketed about the first of August, in order to supply a market which has little competition.

2. That late cauliflower be increased only as an increased demand justifies.

Other Truck Crops

1. We recommend the encouragement of cooperative marketing associations for the handling of green vegetables.

2. No further increase in acreage at present, unless local demands justify.

3. That care be exercised to rotate and fertilize in order to maintain soil fertility and control diseases.

The committee also recommends that a conference of this kind be held every year.

Wm. Morrison, Chairman
Rocky Ford, Colo.

K. D. Van Wagonen, Secretary
Pueblo, Colo.

D. H. Ernest, Trinidad
J. A. Sprengle, Pueblo
Wm. McKee, Penrose
Toby De Carlos, Pueblo

N. D. Bristol, Rocky Ford
W. F. Droge, Rocky Ford
PURE SEED

The committee on pure seed recommends for all classes of seed the use of seed of the best quality, purity and germination obtainable, certified or approved if possible.

Seed Crops

Cantaloupe Seed

1. Due to over supply of cantaloupe seed we recommend the curtailment of cantaloupe seed production with a continuance of selection for quality.

Cucumber Seed

1. Due to over supply of cucumber seed we recommend the curtailment of cucumber seed production with a continuance of selection for quality.

Red Clover

1. In view of the large importations of clover seed into the United States and the benefits of the crop on our soils, we recommend that the acreage of red clover for seed production be gradually increased as economic conditions justify.

2. We urge the production of approved clover seed.

Small Grains (corn wheat, oats, barley)

1. We urge that every grower of small grains for seed have it registered or certified by the proper agency.

2. That registered or approved seed be used on every farm thereby securing better quality crops and increased yields.

J. C. Erion, Chairman
Pueblo, Colo.
Homer A. Knapp, Secretary
Rocky Ford, Colo.
Frank Strain, Lamar
Justus Ward, Rocky Ford
Herman Fauber, Rocky Ford
Lester Hallows, Rocky Ford
H. D. Russler, Pueblo
L. G. Kurtz, Las Animas
Feb. 8, 1929

Mr. R. L. Parshall,  
Campus.

Dear Mr. Parshall:

We are asking you to act as secretary of the irrigation committee at the San Luis Valley Agricultural Conference which will be held at La Jara on Saturday, February 23. The chairman of this committee is Mr. John Fultz. It might be a good plan for you to write to Mr. Fultz.

We are making a special effort this year to get more men to serve on the irrigation committee. Each county agent will have a good representation from his county. We hope that you will not feel that your trip to the valley will be in vain.

There are several things which should be considered by the committee this year:

1. Review the charts and information available, noting changes in trends since the last conference.

2. Consider the progress report furnished by the county agents.

3. Consider the national outlook for the various commodities concerned.

4. Make any changes or additions to recommendations.

5. Designate the recommendation which the committee would like to have considered in planning work for 1929.

I am enclosing a copy of the recommendations made by the committees last year.

There will be a banquet at La Jara on Saturday evening. A program will be given at the banquet.

Very truly yours,

Thos. H. Summers  
Farm Management Demonstrator.
Cooperative Extension Work in Agriculture and Home Economics
Colorado Agricultural College and U. S. Department of
Agriculture Cooperating

San Luis Valley Agricultural Recommendations
1928

Assembled by
Thos. H. Summers
Farm Management Demonstrator

A report of the agricultural recommendations for the San Luis Valley made and adopted by the commodity committees at the second San Luis Valley Agricultural Conference, Monte Vista, Colorado, Feb. 10 and 11, 1928.
Introduction

An agricultural economic conference was held in February, 1927, at Alamosa, Colorado, for the purpose of discussing the economic problems of the farmers of the San Luis Valley. In addition to the discussion by the various commodity committees, a number of agricultural suggestions or recommendations were made, looking toward the solution of these problems. These suggestions were published in a bulletin entitled, "An Agricultural Program for the San Luis Valley of Colorado."

The recommendations were formulated with the idea of a long-time program for agriculture that would give a basis for work that could be built upon from time to time as the needs indicated. In fact, agriculture is continually changing and with these changes new problems appear and the old problems take on new aspects.

Accordingly, it was decided to hold a similar conference each year in the valley to review the recommendations, to check up on the progress of the work and to make adjustments that seemed advisable. The first follow-up conference was held at Monte Vista, February 10 and 11, 1928, at which these various phases were taken up. In addition the national agricultural outlook for 1928 was discussed in terms of how it affects the agriculture of the San Luis Valley.

This report takes up what was done at this follow-up conference and gives the recommendations made at that time.
Changes in crop acres and numbers of livestock in the
San Luis Valley from 1926 to 1927

<table>
<thead>
<tr>
<th>Numbers of livestock on farms</th>
<th>1926</th>
<th>1927</th>
<th>Increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horses and mules</td>
<td>12,800</td>
<td>12,300</td>
<td>decrease</td>
</tr>
<tr>
<td>Beef cattle</td>
<td>59,000</td>
<td>52,800</td>
<td>&quot;</td>
</tr>
<tr>
<td>Dairy cows</td>
<td>4,700</td>
<td>6,100</td>
<td>increase</td>
</tr>
<tr>
<td>Sheep</td>
<td>204,100</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Swine</td>
<td>7,700</td>
<td>8,700</td>
<td>increase</td>
</tr>
<tr>
<td>Poultry</td>
<td>47,700</td>
<td>(1)</td>
<td></td>
</tr>
</tbody>
</table>

| Acres in crops                |        |        |                      |
| Wild hay                      | 106,400| 119,300| increase             |
| Alfalfa                       | 70,500 | 60,500 | decrease             |
| Oats                          | 23,300 | 22,700 | "                    |
| Barley                        | 17,500 | 21,100 | increase             |
| Peas (field)                  | 67,100 | 66,800 | decrease             |
| Clover                        | 9,000  | (1)    |                      |
| Wheat                         | 20,200 | 22,400 | increase             |
| Lettuce                       | 4,300  | 6,400 (est) | "   |
| Cauliflower                   | 470    | 284    | decrease             |
| Garden peas                   | 640    | 2,000 (est) | increase |
| Potatoes                      | 31,000 | 37,600 | increase             |

(1) Figures not available at time this report was written.
Beef cattle continue to decrease in numbers while dairy cows and swine show an increase. Figures on sheep would likely show an increase over 1926.

The rise in cattle prices has been too recent to have had much effect on the number of beef cattle on farms January first. In a few cases, however, liquidation has continued for fear that the price recovery might be only temporary.

The relatively favorable prices for lambs, wool and dairy products have caused some expansion in sheep and dairy cows. Favorable hog prices during 1926, caused largely by the expanding markets on the Pacific coast, have brought about some increase in the number of hogs on farms Jan. 1, 1927.

Noticeable changes in crop acres have occurred in wild hay, (increase); alfalfa, (decrease); barley, (increase); wheat, (increase); cauliflower, (decrease). Lettuce, garden peas and potatoes show an increase. This increase in potatoes which is in line with the increase in the total United States acreage has contributed to potato prices this year of about 50 percent of the average price received for the 1926 crop.

It is safe to say that the acreage of clover in the valley is on the increase, taking a prominent place in the cropping systems of the San Luis Valley.
REFF CATTLE

The committee on beef cattle endorses the recommendations made last year with some modifications and additions, as noted.

1. That the beef cattle industry continue to hold an important place in the development of agriculture in the San Luis Valley.

2. That there be no increase in the total number of beef cattle in the San Luis Valley, but that more pounds of beef be produced. This was modified to read "but slight increase."

3. That more purebred herds be established in the valley to furnish foundation stock for our beef industry.

4. That these breeders strive to produce a desirable type of bull that will improve the quality of our beef cattle. Purebred herds are not recommended to men who are not qualified livestock breeders.

5. That the feeding of beef cattle be developed to some extent in the valley.

6. This recommendation was modified to read: That baby beef clubs be continued and enlarged. The following suggestions are given for these clubs:

(a) That producers be urged to furnish suitable calves for baby beef clubs.

(b) That an effort be made to secure calves of high quality and uniform type.

(c) That boys and girls be discouraged from starting in baby beef clubs with inferior calves.

(d) That only the best finished and high quality steers be shown at the National Western Stock Show.

(e) That an effort be made to establish the following classification at the National Western Stock Show:

- Junior calf
- Senior calf
- Junior yearling

(f) That a club steer auction be established at the National Western Stock Show and that club auction days be established on the Denver market.

7. Whereas during the spring months there is a period of from four to six weeks between the time that cattle take readily to dry feed and the date that they should go onto the higher ranges at which time there is often a loss in weight, the committee recommends that more feed be provided during this period; that where feasible seeded pastures be used.
8. That the farm herd be limited to the number of livestock that the farm will care for during the entire year.

9. That the farm herd be kept on the farm thruout the year and that sufficient summer pasture be supplied at home.

10. That public grazing lands be regulated thru states or federal authorities together with local aid.

11. As a result of this recommendation made last year, committees were appointed and meetings held where plans were worked out and a feeder auction sale was held at Alamosa in November, 1927.

Chas. Keck, Jr.  Del Norte
Leslie Getz    Monte Vista
J. J. Schecter Alamosa
Ross Johnson   La Jara
D. D. Green Alamosa
Max Grandy
Bruce Schecter " (Beef·Club member)

Earl Linger Hooper
Chas. E. Gibson "
A. C. Lawton Center
A. L. Carruthers Del Norte
L. H. Rochford, Secy., Fort Collins

SHEEP

This committee endorses the recommendations made in 1927 with the following modifications and additions:

1. That there be no increase in the total number of range sheep in the San Luis Valley.

2. That an operator have 1800 to 2200 head before engaging in the range sheep business.

3. We recommend the following husbandry practices which will increase production without increasing overhead expense and thereby increase net returns, all of which will be adhering to the economic principle of mass production:

(a) We wish to emphasize as follows: Whereas many farm flock masters are raising bucks from grade ewes by crossing with purebred rams, we wish to discourage the tendency to raise rams from such breeding as a detriment to the sheep industry as a whole and we further recommend that any one wishing to engage in the raising of rams start with only purebred ewes and registered rams and only where the conditions and inclination exists, establishing such as a permanent business.

(b) That this recommendation be emphasized during 1928, believing that at least three sheepmen in each county of the San Luis Valley, for his own and general information, should weigh each fleeces at shearing time and mark all light shearing ewes so that they can be disposed of if found unprofitable. A report should be made of this wa-
(c) We wish to amend as follows: That breeding be done in smaller bunches and that greater discrimination be used in selecting rams both for farm and range flocks, and that no rams be used except purebred or registered.

(d) That we endorse the forest policy of bedding out and open herding systems as a means of range conservation and increased production.

Additional Recommendation

(e) That better business practices be followed in preparation of wool for market; that all fleeces be tied with paper twine, tags and "blacks" sacked separate and all wool kept clean and clean from corral sweepings. We suggest that the practice of allowing the ewes to run to hay stacks be discouraged.

4. That flockmasters realize that diseases cause about four percent loss and that this could be reduced fifty percent by the practicing of inexpensive preventive measures.

5. We believe should be amended as follows: "That we endorse any legislation that will assist in the control of predatory animals and rodents and suggest that all flockmasters both on farm and range give active support to the industry by becoming members of local associations in the county in which they are located."

6. That we request the county commissioners to cooperate financially to the fullest extent possible in control of predatory animals and rodents.

7. That the size of the farm flock be limited to the feed resources of the individual ranch.

8. That these flocks be handled so as to be independent of public ranges at all times.

9. That suitable equipment such as coyote-proof fences, etc., be provided.

10. That the business be conducted largely on an old-ewe basis with an annual turnover of both ewes and lambs.

11. That any excess of feed and forage crops be marketed in the valley by:

(a) Fattening lambs and cattle
(b) Farm flocks
(c) Swine production

New Recommendation

12. That boys and girls lamb feeding clubs be encouraged, ten lambs to be the proper size unit to be fed.

R. E. Sellers, Chm. 
E. R. King 
Olin Pordew 
C. A. White 
L. C. Anderson 

Alamosa 
Alamosa 
Monte Vista 
Monte Vista 
Monte Vista
Most of the recommendations made last year were approved, while others were modified and some additional recommendations made. Those remaining the same are:

1. A 50 percent increase in the total production of dairy products in the valley; 10 percent of this from an increase in the total number of dairy cows; 10 percent thru the improvement of feeding, pasture and housing conditions; and 30 percent thru the use of purebred sires and higher producing cows.

2. On every farm where dairy cattle are kept at least one-half acre of permanent irrigated pasture be maintained per dairy cow, and sunflower silage on each farm where eight or more cows are kept. In the case of small farm herds that most of the feed for dairy cattle be produced on the farm.

3. This recommendation was modified to read: Where milk is a minor source of income, at least five cows be kept for economical production. Where milk is the main source of income, from 10 to 20 cows constitute a herd, and where milking machines are used there be more than 15 cows. That one cow be kept on every farm in the valley and two cows where there are children in order to supply the family with milk and dairy products.

4. That no cow producing less than 200 pounds of butterfat per year be kept in a small farm herd and none producing less than 250 pounds per year be retained in any commercial herd.

5. That young dairy animals be vaccinated for blackleg in areas having shown previous blackleg infection. That tuberculin tests be required of producers for city milk supplies. That accredited herds be encouraged and all milk used by the farm family be from TB-tested cows.

6. That open sheds, tree and lumber windbreaks be provided, and the construction of adequate barns for housing stock on extremely cold nights and during storms, where the finances for this construction are available.

7. That no change be made in the dairy manufacturing and shipping facilities but that a considerable increase be made in dairy products storage facilities.

8. That as many dairy cows as possible be bred to freshen during the months of October, November and December.

9. The use of sires from high-producing purebred registered herds of the same breed as the cows on which they are used.

10. That no dairy cattle of any age be put on open national forest-reserve ranges.
11. That bull calves from grade dairy cows be vealed at ages under six months.

12. That producers of dairy products market these products thru their home manufacturing plants.

13. On farms where the increase or introduction of dairying is contemplated,

(a) That the farmer be dairy minded.

(b) That sufficient feed be produced to supply the contemplated production as follows: one acre of barley, one-half acre of oats, three acres of alfalfa, one-half acre of permanent irrigated pasture and one-fifth acre of tame sunflowers for silage for each dairy cow.

(c) That adequate sheds, windbreaks, shelters and equipment be provided.

The following additional recommendations are made:

14. That dairy calf club work in the San Luis Valley be encouraged and increased.

15. That a San Luis Valley Cow Testing Association be encouraged and an effort be made by the Extension Service and the State Dairy Commission to establish same throughout the valley.

16. That individual bull pens be constructed for all herd sires. That proven sires be exchanged between owners rather than slaughtered. That herd sires be given proper care.

17. That manufacturers of dairy products cooperate with the farmer in an effort to raise the quality of dairy products in the valley by advising him as to the quality of product delivered. And that the dairy association fieldman spend some time in an effort to raise the quality of San Luis Valley dairy products.

18. That an annual dairy day be held in the San Luis Valley each summer, the time and place to be set by a committee composed of the Valley extension agents, the dairy association fieldman and the state dairy commission fieldman.

L. A. Maupin, Chr., Mosca
Jas. Mortensen, Manassa
Vernell Gilleland, Romeo
Carl J. Seavy, Del Norte
Fred Sierie, South Fork
Luther E. Bean, Blanca
C. T. Myers, Alamosa
C. W. Brandborg, Monte Vista
C. Caldwell, Monte Vista
T. B. Myers, Monte Vista
C. A. Smith, Fort Collins
Max Granby, Secy., Alamosa

SWINE

The committee on swine endorses the recommendations made last year with changes and additions as noted.

1. With surplus feeds and with increased yields of peas on the present acreage, the valley could produce more hogs, even in the face of a lower market.
It should at least produce its own stock hogs of which ordinarily about one-fourth to one-third of the present supply is shipped in.

2. That cost of production be lowered by saving more pigs per litter, by feeding local grain and mill products to hogs and by fattening shoots upon pasture; also thru the introduction of more new blood and provision for shelter with individual farrowing houses.

3. On account of large farm units and the adaptability of the pear crop to the valley with its suitability for hogging off, making valley conditions favorable for hog raising, that hog raising be a staple practice on most farms.

4. Altho the valley is in a favorable position for marketing due to its location relative to California markets, there is need for a more direct outlet to the thru lines. (To this recommendation has been added) "Therefore, those interested in raising and marketing hogs should unite their efforts with other stockmen and organizations towards securing this result."

The following recommendations have been added to those of last year.

5. That the Agricultural College put on a hog feeding demonstration in the valley for the purpose of ascertaining the best methods of feeding.

6. That all pigs be vaccinated within two weeks of weaning time as a method of reducing disease among swine to a minimum.

A report of losses in swine herds shows that early vaccination reduces the death loss from disease. Of twelve herds early vaccination was practiced in five with a loss ranging from 4 to 25 percent. In the seven late vaccinated herds the loss was 60 to 85 percent.

7. That boys and girls pig clubs be encouraged as an incentive to the breeding and producing of better hogs.

8. That the county extension agents, stockmen and farm bureaus of the valley be encouraged to organize a valley-wide livestock shipping association under the state cooperative marketing laws, with the view of reducing to a minimum the spread between the producer and consumer.

Frank L. Fair, Chr. Romeo
P. E. Harney, Secy. Monte Vista
J. E. Diel " "
Bert Mathias " "
W. M. Decker " "
Jesse Stephenson " "
Harry Asay Alamosa
Art Robinson Monte Vista

POULTRY

The committee on poultry approves the recommendations of the conference held in Alamosa last year which are:

1. That there be a slow but gradual increase in numbers of birds raised but that any material increase in numbers of eggs produced should be brought
about thru improvement in quality of stock raised and improved methods of management rather than thru an increase in the numbers of birds raised.

2. That more attention be given to the securing of higher quality stock for the valley.

3. That the establishment of baby-chick hatcheries be encouraged to take care of the valley's needs.

4. That the average farmer purchase baby chicks to maintain his flock under present conditions rather than to attempt to do his own hatching.

5. That the production of early chicks be encouraged.

6. That poultry-breeding farms be encouraged.

7. That a desirable farm flock unit be 100 to 150 hens, and 500 or more hens for commercial production.

8. That a production of not less than 100 eggs per hen be secured in farm flocks and 150 eggs in commercial flocks.

9. That there is sufficient feed produced and available for the needs of poultry in the valley.

10. That milk be fed to supply animal protein for egg production when it is available.

11. That more attention be given to sanitation.

12. That turkey raising be encouraged.

13. That a cash market be developed in the valley for poultry and eggs.

14. That the shed type of poultry house be adopted for the valley and that adobe be used wherever possible.

15. Due to the high quality of grains produced in the valley, that the poultry raisers mix and feed a standard ration of home-grown feeds.

The committee further recommends that the poultry producers of the San Luis Valley cooperate with the county agents and the poultry specialist of the Colorado Agricultural College in carrying out the following:

(a) Testing out artificial incubation with an idea of establishing a hatchery in the valley.

(b) Requesting the Colorado Agricultural College to furnish a list of reliable sources of baby chicks within the state.

(c) Demonstrating the use of valley foods for raising chickens and for egg production.

(d) Demonstrating the proper type of poultry houses for valley conditions and securing the cooperation of the Smith-Hughes teachers, pupils and lumber dealers.
(e) Demonstrating the culling of chickens, and spreading this practice.

(f) Stimulating the formation of a turkey marketing pool.

(g) Securing instruction from the Colorado Agricultural College in the preparation of turkeys for market.

(h) Studying the present methods of marketing poultry and eggs with the idea of developing a cash market.

(i) Organizing the poultrymen of the valley into local poultry associations looking towards the federation of these locals.

Mrs. O. F. Diller, Chr. Center
Mrs. Harry Assay Alamosa
Ralph Caldwell Monte Vista
Amelio Gonzales Monte Vista
Dr. A. G. Wadleigh Monte Vista
Eugene Merritt, Secy., Washington D.C.

The committee on horses and mules did not meet this year. The recommendations adopted last year were:

1. That more colts be raised in order to maintain farm work stock.

2. That the alfalfa farms are most favorably situated for raising colts.

J. E. Roberts, Chr., Hooper, Colo.  
Eugene Merritt, Secy., Washington, D. C.

BEES AND HONEY

The committee on bees and honey endorses the recommendations made last year which are:

1. The cooperation of the county commissioners in checking the spread of bee diseases from Rio Grande and Saguache counties.

2. The appointment of a competent county apiary inspector for the five counties, the expense of such inspector to be borne by the counties in proportion to the number of colonies in each county.

3. Winter protection as a better method of wintering bees.

4. An inquiry into the possible reduction of freight rates on honey from the San Luis Valley.

Winter protection has increased throughout the valley during the year.

Satisfactory progress has been made toward the appointment of a valley apiculturist in accordance with recommendation No. 2. Plans are almost complete to make such an appointment.

The committee wishes to make the following additional recommendations:
5. (a) That a race or strain of bees be chosen, thru selection and breeding, whose queens cease egg laying early in the autumn and commence brood rearing later the following spring; but which comes thru the winter with a good supply of bees and honey, due to inactivity during the unproductive season.

(b) That the Colorado State Experiment Station or State Entomologist be requested to conduct an experiment during the winter of 1928-29 on winter protection of bees in the San Luis Valley, provided funds are available for packing cases and packing material, the bees and other equipment to be furnished by the beekeepers of the valley. To assist in an advisory capacity and to make reports and information available to all interested, the following beekeepers be appointed:

Frank Belt, La Jara  
Edward Haefeli, Monte Vista  
Arthur McClintock, Mosca  
F. G. Rauchfuss, La Jara  
Fred Christensen, Manassa

6. That all beekeepers or persons having bees place bran, chop, sweepings or flour in apiaries or near the hives to prevent the bees from frequenting the stock feeding troughs in spring months.

7. The completion of action toward the appointment of a valley apiculturist instead of county apiculturists.

8. That beekeepers investigate cooperative sales agencies now operating with a view to better marketing of their product.

9. That the people of the valley oppose, thru their United States senators and representatives, the passage of the Corn Sugar bill, Senate Bill 2806 and H. R. 10022, since it defeats the purpose of the present pure food law, regulating the labeling of food products.

10. That an economic conference be held annually in the valley.

F. G. Rauchfuss, Chrm,  
C. E. Wolfe  
A. A. Rolling  
P. C. Bilt  
Chester McClintock  
Arthur McClintock  
Edward Haefeli  
Cecil Bledsoe  
R. G. Richmond, Secy.  

La Jara  
Monte Vista  
Alamosa  
La Jara  
Mosca  
"  
"  
"  
Fort Collins

POTATOES

The potato committee endorses the following recommendations made last year with modifications and additions as noted:

1. A rotation as follows:
   1st year - potatoes
   2nd " - small grain
   3rd " - peas and sweet clover seeded, together,
   4th " - sweet clover for pasture, hay, seed or silage crop.
The following was added to No. 1

Where alfalfa is used in the farm rotation, the following plan is recommended:

Alfalfa - 5 to 6 years
Potatoes - 2 years
Grain - 1 year
Peas - seeded in stubble, 1 year
Peas - land plowed before seeding, 1 year
Potatoes - 1 year
Alfalfa - reseeded to remain 5 to 6 years

2. Along with the first rotation, we recommend a liberal use of barnyard manure, where convenient, for the rotation, together with a more liberal amount of water.

3. That all potato producers practice seed treatment and field roguing of diseased hills.

4. That all potato producers be interested in maintaining a seed plot.

5. That a few qualified potato growers in each locality be encouraged to make a business of certified seed production.

6. That there be an increase in the potato acreage in the San Luis Valley only in proportion to the increase of the population in its trade territory.

This recommendation was modified and restated as follows:

(a) We recommend that in determining the acreage to be planted in 1928, growers take into consideration the fact that government outlook reports indicate a large national increase in potato acreage this year, and consequently another year of low potato prices.

(b) In a probable low price year like 1928, we recommend that growers give special attention to planting none but the best seed and that they endeavor to produce an especially high grade product which can be merchandized at premium prices.

7. That complete standardization of potatoes and marking of containers as to grades be given attention.

H. C. Heny, Chm., Monte Vista
L. A. Moorhouse, Socy., Fort Collins

J. W. Prentice, Monte Vista
A. O. Miner, Monte Vista
G. E. Mathias, " "
Roy McConnell, " "
John Drake, " "
Victor Olsen, " "
C. P. Goff, " "
Oscar Lindstrom, Center
Chris. Selters, " "
Clarence Mathias, Del Norte
Jas. R. Sheely, " "
Robin Hood, Memphis, Tenn.
O. A. Cunningham, " "
Jess Davis, Monte Vista
Floyd Kirk, " "
1. Anticipating the addition of new crop areas from reclamation and irrigation projects, the committee suggests that the seeding of alfalfa be confined to the needs of those new farms and that sweet clover be used for soil building purposes on the remaining part of such areas brought under cultivation.

2. Since there has been a decrease of 10,000 acres in alfalfa in the valley during the year we recommend that sufficient alfalfa acreage be maintained to meet the livestock requirements.

3. That the additional fertility requirements be met by the use of sweet clover.

4. That the additional feed requirements resulting from the increased development of the livestock industry be supplied thru increased yields upon the present acreage by means of better cultural methods.

5. That the pasturing and fattening of livestock in localities where alfalfa production is the major enterprise be encouraged as a solution of the surplus feed problem.

6. That demonstrations in alfalfa improvement be established in each community.

7. That alfalfa variety tests be established in each county to determine the best strains adapted to this region.

L. B. Foley, Chr. Mosca
E. D. Smith, Secy. Fort Collins
Chas. Mahl Monte Vista
C. E. Gibson Hooper
A. C. Lawton "
Clem Smith Alamosa

SUGAR BEETS

The sugar beet committee endorses the recommendations made at the Alamosa meeting last year without change. They are as follows:

1. That the beet acreage be increased as fast as the farmers realize the need of this crop in their crop rotations, and the benefits of its by-products in the feeding of livestock.

2. That the acreage be increased as more land is leveled and put in condition to grow sugar beets successfully.

3. That demonstrations be conducted in the feeding of sugar beet by-products to livestock in order to show the value of the sugar beet as a means of promoting the fattening of livestock in the valley.

4. That the yield of sugar beets be increased thru the better use of water; better use of cultural practices such as proper method of spacing and cultivating, and better crop rotation.
5. That sugar beets be planted after potatoes when potatoes are put on sweet clover or alfalfa ground.

The committee submits the following for the consideration of the farmers of the San Luis Valley:

A. Since the beet sugar industry has been the foundation upon which the most highly developed agricultural district of the Rocky Mountain states has been built, both industrially and agriculturally, the sugar beets as a crop is recommended to the farmers of the San Luis Valley.

B. The beet industry has so many angles that some of the important ones are often overlooked.

C. The San Luis Valley, because of its proximity to ideal ranges and with its climatic conditions could and should be made the greatest livestock finishing district in the state. To do this it needs only a few things to balance up the feeds that are so abundantly produced.

D. It has been stated repeatedly by good authorities that beet growing districts of eastern Colorado are making beef and mutton as much as two cents per pound cheaper than is now being done in the San Luis Valley.

E. The feeding of livestock and the production of beet sugar are so closely related that to attempt to separate them is impossible. There are, however, sufficient reasons for seriously considering this crop without mentioning the livestock industries. This statement seems to be particularly true in a community where there is only one extensively cultivated crop.

F. A crop requiring deep tillage and clean cultivation will be of very material benefit to the agriculture of the valley in that it would be a means of holding up to a high standard of production all of the grain or now cultivated crops and free them from many of the weed troubles now so prevalent.

G. To produce beets at a profit on a large scale in the Valley it is necessary to continue as rapidly as possible the leveling of land and the building up of the fertility of the soil thru the use of more sweet clover, alfalfa and manure.

W. D. Gorst, Chr., Monte Vista
A. J. Stoeber "
J. J. Schecter Alamosa
A. J. Hamman, Secy. "

SEED CROPS

That the recommendations of last year be approved with exceptions and additions as noted below.

Those recommendations remaining the same are:

Sweet Clover (seed)
3. That the production of seed from other varieties and strains be given attention.

Potatoes (seed)

2. That the production of high quality seed of adapted varieties and high-yielding strains be given more attention.

3. That every commercial potato grower be interested in seed plot development.

Small Grains (Wheat, barley, oats for seed)

2. That the production and marketing of seed of high quality and high-yielding varieties and strains be given more attention.

Field Peas (Seed)

1. That the production of seed from high-yielding varieties and strains be given more attention by the Agricultural Experiment Station.

Garden Peas (Seed)

1. That the acreage of garden peas for seed be increased to supply local demand.

Miscellaneous seeds

That the possibilities of growing the following seed be investigated by the Agricultural Experiment Station: Red Clover, alsike clover, orchard grass, brome grass and timothy.

The recommendations of last year that were modified are:

Sweet Clover (seed)

1. That the present acreage of sweet clover be maintained but used more for green manure and pasture instead of so much for seed.

Potatoes (seed)

1. That an increase be made in Bliss Triumph and Irish Cobbler acreage for certified seed to supply the local demand and the demand from the South.

Small Grains (seed)

1. That the acreage of small grains for seed be increased.

Garden Peas (seed)

2. That the acreage of garden peas for seed remain the same.

The committee adds the following recommendations:

1. That grain seeds grading plants be installed in various communities:
2. That a valley marketing utility man be employed.

3. That the Seed Growers organization be urged to get more members.

4. That all agricultural organizations and commercial organizations in the valley cooperate with the Seed Growers organization to produce better seed.

R. H. Chisholm, Chairman, Del Norte
Arthur Speiser, Secr. Hooper
C. F. Diller Center
A. I. Maloney Monte Vista
A. G. Monroe Alamosa
Chas. Speiser Hooper

TRUCK CROPS

We, the truck crop committee of 1928, are in accord with the recommendations of the 1927 committee and believe the program should be followed. Those are:

1. No increase in the lettuce acreage at the present time.

2. That the Agricultural Experiment Station give aid by furnishing more definite information on cultural methods, irrigation, seed supply and tipburn.

3. Experience has shown that the best lettuce land is located on the river bottoms and in the higher valleys. That the open valleys of a sandy nature are, as a rule, not adapted to the production of head lettuce.

4. That there be no decrease in the acreage of cauliflower.

5. That there be no increase in the pod-pea acreage.

6. No material increase in the truck crop acreage at the present time, but more devoted to quality production and efficient marketing.

7. That the truck growers adopt a definite system of crop rotation in order to maintain soil fertility, and that they diversify their crops so as to guard against crop losses.

8. That truck growers take immediate steps to form a valley wide organization with a local organization in each district.

The following modifications and additions to the 1927 recommendations are emphasized.

(a) That the Agricultural College carry on in the valley special investigations on tipburn and cutworm control.

(b) We recommend a truck crop rotation as follows: Peas; lettuce; small grain (with sweet clover 2 years or alfalfa 5 years); potatoes; peas; lettuce.

(c) We report progress in organization of a valley wide truck marketing association in a successful year's operation of the Del Norte Vegetable Grower's Association and plans for similar marketing associations in other sections of the valley.
(d) We especially recommend and urge that the County Farm Bureau, Commercial Clubs, County Extension Agents, Smith-Hughes teachers and marketing associations in the valley get behind the recommendation; that the Agricultural College put a man in the valley this season to carry on experiments for the benefit of the truck farmer relative to control of disease and insects and best cultural methods to be used in fostering this new industry.

H. R. Crow, Chrm., Romeo
H. C. Carr                      Del Norte
M. I. Chenoweth                  "  "
J. T. Eskridge                  La Jara
D. Salazar                      San Luis
D. A. Feitz                      Antonito
N. D. Sanborn Socy., Denver

SMALL GRAINS

The committee on small grains approve the recommendations made last year with such additions as are noted below.

The last year's recommendations are:

Wheat

1. That no increase be made in the wheat acreage.
2. That Marquis wheat be the standard variety grown.
3. That tests be made in the growing of Early Bart wheat.
4. That the following rotation for wheat or small grain be considered:

   Alfalfa, 5 years
   Potatoes, 1 year
   Wheat or small grain, 1 year, seeded with sweet clover
   Sweet clover - pasture, and fall plowed, 1 year
   Peas, 1 year
   Potatoes, 1 year
   Small grain seeded to alfalfa or sweet clover.

Oats

1. An increase of 20 percent in the production of oats, thru increased yields per acre, this increase to be brought about by the use of the best varieties having local sources of registered seed, by the general use of good seed, by proper seed treatment, by planting oats on good soil, and by the use of a good crop rotation.

Barley

1. An increase of 25 percent in the production of barley from the same present acreage, by the use of good seed, by planting on better land and thru a good crop rotation.
2. That the following crop rotation, including barley where alfalfa is not grown, be given some consideration:

   Barley seeded to sweet clover, 1 year
   Sweet clover pastured and fall plowed, 1 year
   Peas, 1 year
   Potatoes, 1 year

   The following recommendation is added for barley:

3. That Trebi barley be the standard variety grown.

   It is further recommended:

   1. That more farmers grow registered and approved seed to supply seed for local demand.

   2. That farmers take advantage of the offer to have their seed grain cleaned free of charge by the mills.

   Chas. Pusch, Chr., Mosca
   R. E. Kiley, Secy., Romac
   H. E. Lague, Monte Vista.

IRRIGATED PASTURE CROPS

Permanent Irrigated Pastures

1. That each farm plant a sufficient acreage of permanent pasture grass to meet the demands of the dairy stock and sheep kept thereon.

2. That pasture demonstrations be established in each community.

3. That pasture variety tests be established in each county.

Sweet Clover

1. That sweet clover be included in the crop rotation until at least twenty percent of the cultivated land is thus occupied, permanent pasture and alfalfa land being excluded from the rotation.

2. That this crop be used as pasture, green manure, hay or seed as the needs of the individual farmer may require.

Field Peas

1. That unless the number of hogs and sheep to be carried on field peas be increased, the acreage of field peas be decreased.

2. That any larger amounts of peas needed for seed be secured from increased yields per acre obtained thru better seed and better cultural practices.

3. That variety tests be established in each county.

4. That demonstrations be established in each community.
IRRIGATION AND DRAINAGE

1. Under present normal conditions of the available water supply with the present duty of two acre-feet of water per acre, no increase in the irrigated area of the San Luis Valley is warranted.

2. The consolidation in units of the various irrigation systems in the several areas of the valley; these organizations to create sufficient storage facilities to provide an ample supply of both early and late water. (The following modification): In view of the present urgent outlook to immediate action in connection with creating additional storage it is strongly recommended that all phases of this important problem be investigated.

3. In the consolidation of ditch systems delivering water to all lands served by the same watershed, we strongly recommend, where possible, the consolidation of irrigation and drainage interests serving the same area.

4. (Modified to read): Because of the immediate need of definite information on the use of water in the valley, it is recommended that a careful investigation be made in each representative soil and crop section of the valley as to the most practical quantity of water necessary to produce the best crop, and that thereafter, other conditions being equal, no more water be used than the practical optimum so determined.

5. That excessive amounts of water applied from flood flows in order to secure ground storage be eliminated through additional reservoir storage.

6. That the present water supply be increased, wherever possible, thru the use of water developed by means of drainage.

7. A more efficient use of water thru:

   (a) Leveling of land.

   (b) The installation of proper headgates for diversion and of proper measuring devices.

   (c) The reduction of waste in application and prevention of avoidable leakage and loss from carrying channels.

8. That the practice of sub-irrigation be generally discouraged and that the more general practice of flooding and row method of irrigation be encouraged.

9. That pumping for supplemental irrigation be used only for specialized crops in favorable localities.

10. That crops demanding early and late water be encouraged in areas where storage water is available and discouraged where early and late water is not available.
11. The study of artesian wells with a view of throttling or closing down wells during the time when they are serving no useful purpose.

12. The organization of new drainage districts where economic conditions very strongly warrant this new development.


14. To improve the management and distribution of water, it is recommended that there be held annually at some convenient place in the valley a school for superintendents and ditch riders.

15. We earnestly submit: That the time is at hand for immediate action for the creation of supplementary water supply by means of storage reservoirs and that the people of the San Luis Valley exhaust every available resource in soliciting the aggressive cooperation of every possible agency in assuring immediate development.

John Fultz, Chrs., Hooper
R. L. Parshall, Secy., Fort Collins
N. E. Morgan, Center
J. D. Brazie, Antonito
W. N. Evans, Del Norte

RODENTS AND PREDATORY ANIMALS

No separate meeting of the committee on rodents and predatory animals was held. Representatives met with other committees. The following report, however, on the work last year is submitted by D. D. Green of the U. S. Biological Survey, Denver, Colorado.

Summary of Expense - 1927 Prairie Dog Campaign
San Luis Valley, Colorado

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<th>Area</th>
<th>Labor &amp; Trucking</th>
<th>Poison</th>
<th>Total</th>
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<tr>
<td>Rio Grande County</td>
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<td>Saguache County</td>
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Summary of Area Treated - 1927 Prairie Dog Campaign
San Luis Valley, Colorado.

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<th>Mineral</th>
<th>Saguache</th>
<th>Conejos</th>
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Total acres  | 38,355     | 37,095   | 52,090   | 25,945   | 153,485|
Public, total | 20,580     | 32,555   | 46,740   | 21,335   | 121,210|
Private,     | 17,775     | 4,540    | 5,350    | 4,610    | 32,275|
Feb. 6, 1929

Mr. R. L. Parshall,
Campus.

Dear Mr. Parshall:

You have been assigned the secretaryship of the irrigation committee in connection with the agricultural conference which is to be held in Pueblo on Saturday, February 16th. Mr. W. H. Sawhill is the chairman of this committee.

There are several things which should be considered by the committee this year:

1. Review the charts and information available, noting changes in trends since the last conference.

2. Consider the progress report furnished by the county agents.

3. Consider the national outlook for the various commodities concerned.

4. Make any changes or additions to recommendations.

5. Designate the recommendations which the committee would like to have considered in planning work for 1929.

I am enclosing a copy of the Recommendations made by the committees last year. You will want to review these before the conference.

If possible I wish you could be in Pueblo Friday evening before the conference so that you can check up on the plans and procedure for the following day. At least we should like to have you there as early as possible on Saturday morning.

Very truly yours,

Thos. H. Summers
Farm Management Demonstrator.
IRRIGATION AND DRAINAGE PROJECT COMMITTEE
MINUTES OF MEETING HELD DECEMBER 14, 1928

The Irrigation and Drainage Project Committee held a meeting on December 14th. There were present Messrs. Ralph Parshall, Luke Storey, W. E. Code, R. W. Booze, G. W. Thomas, and H. S. Sands.

Messrs. Code and Parshall presented in preliminary form manuscript of proposed bulletin on irrigation which is to be distributed to the farmers. Mr. Code read this and it was discussed in detail by the members of the committee. A number of suggestions were made and it was agreed that Mr. Code would rewrite the manuscript embodying the suggestions and forward either one or six copies to the Chairman of the committee by December 19th. The Chairman will then immediately forward copies to each member of the committee who will be requested to carefully check it and make suggestions and comments. The question of the length and the size of the bulletin was discussed and it was agreed that in all probability the reading matter would take approximately fourteen pages; that three pages would be devoted to schematic diagrams illustrating the context of the reading matter and suggesting methods of installation, and that it would be desirable to have about three pages devoted to illustrations of existing installations and that Mr. Code would proceed to get these illustrations at once.

It was agreed that the next meeting would be held on January 16th at 10:00 o'clock in the morning and that the meeting would be devoted to the question of the distribution of the bulletin and to the details of the proposed campaign for 1929 setting out specific dates upon which certain progress could be expected.

The committee expressed their appreciation of the manner in which Messrs Parshall and Code had prepared the manuscript of the bulletin as well as the comprehensive manner in which they had covered the subject.

Meeting adjourned until January 16th.

H. S. Sands

Chairman.
REPORT OF COMMITTEE ON IRRIGATION AND DRAINAGE

The committee on irrigation and drainage finds:

Under present marketing and transportation facilities and crops grown no large irrigation development be encouraged.

Excessive costs of development of large irrigation projects would be expected because of the general typography of the country.

Extensive irrigation of bench lands under present economic conditions now largely cropped without irrigation, would entail the construction and maintenance of ditches of considerable length subject to relatively high operation cost. Steep sloping fields would require constant attention in application. Numerous materials and structures would be required in the distribution of the water.

Pumping for irrigation is only feasible where conditions are most favorable.

It is estimated that the cost of irrigation development under present economic limitation which exceeds $25.00 per acre is not warranted. Varying conditions existing in northwestern Colorado such as climate, rainfall and altitude with present marketing and transportation facilities leaves the warranted price of development a varying figure. However, should the railroad be extended to Salt Lake City the advantages will be sufficiently improved to warrant the expenditure of double the above amount per acre.

Extension and improvements to present ditch systems will provide for more than 50,000 acres.

In most localities under present irrigation demands there is an excess water supply.

In view of this your committee recommends:

1. In certain localities where shortage in water is likely to occur small storage reservoirs be provided to assure a supplemental water supply.

2. Advantage in the consolidation of small ditches in a common carrier is questionable at this time.

3. Continued application of water to hay meadows is believed not to produce best results.

4. More conservative use of water to prevent injury to land and promote increase of yield.

5. Leveling of fields where possible is recommended as a means of more uniform distribution of water and better yield of crop.
6. Alkali and drainage problems are of little importance at this time.

7. Large hay farms when divided into smaller holdings and more intensively farmed will probably require more water than is now used.

8. The approximate gross duty of water is 2 Acre Feet and restrictions in use to conserve the supply in the majority of the irrigated area is not warranted.

9. Improvement of headworks and control of diversion.

10. Some study be made as to best use of water in the present irrigated areas.

11. Water Commissioners be paid a nominal salary during the off season period and be required to meet with the Division Engineer spring and fall to discuss administration problems.

12. The importance of administration of water and the importance of more complete irrigation records be impressed upon the minds of the various boards of County Commissioners, thereby creating a closer co-operation between County Commissioner bodies and water commissioners.

[Signatures]
What about waste water from one farm upon another. Appears to be no law covering this point.
- 14 - Increase 25%
- 15 - Very material increase 20 to
- 16 - Drainage increase 25 to
- 17 - Better use of water increase 30%

For Irrigation
- 1 - Irrigate less and cultivate more

Sec. Plata - Clean ditches in the fall
fall flowing - spring storage

- 2 - Better maintenance of canals.
- 3 - Consolidation in Surface Channel.
Sec. Plata River - ditches and pumps.
- 4 - Line out defective headgates and structures
- 5 - Pumping of no importance at present
- 6 - Measurement to determine actual use.
- 7 - Water official empowered to regulate flow in
ditches to prevent excess use and seepage.
- 8 - Farmers to provide storage for domestic
supply to eliminate run off of water in winter
through ditch-causes floods to flood lands
Grand Junction Agri Conference

Excess water
Seepage menace largely due to careless
irrigation

Cold water in spring

Drainage

-1- Decrease - Delta Mesa
-2- Decrease -
-3- Irrigated pastures - range being restricted
-4- More conservation decrease orchards increasing
-5- 10% to 15% variation
-6- Not important
-7-  
-8- Water reg. 1/2 acre-foot
-9- Seepage due to irrigation
-10- Small percentage of new development
-11- Flooding lower ditches than now
-12-  
-13- Seeped near Grand Junt 30% new land under irrigation
Report of Committee on Irrigation & Drainage

The Committee on Irrigation & Drainage recommends:

1. A more conservative use of water. Excessive use aggravates seeped conditions of land and prevents maximum yields of crops.

2. Irrigate less and cultivate more.

3. Systematic maintenance of canals and ditches to prevent loss and waste water escaping from faulty structures and pouring out upon the lands for no useful purpose.

4. The water user to measure amount of application to crops as a means of preventing over irrigation.
- 5 - Water officials to be empowered by law to regulate amount of diversion as a means of preventing excess use and damage to lands.

- 6 - Farmers to provide storage for domestic water supply to eliminate the running of water during the winter. Excess water floods lands, making which adds to the seepage menace and retards spring work in fields.

- 7 - In some localities where shortage of water occurs it is recommended that consideration be given to the construction of storage reservoirs.
Recommened on the average 3.5 ft.

School for irrigation men.

- For drainage farm

The drainage of lands in many places in the Western Slope is becoming a serious menace and it is strongly recommended that immediate steps be taken to reclaim these areas by individual effort or by the means of organized drainage districts. Reclamation by drainage is more economically done at a time before the lands are totally unproductive.
REPORT OF COMMITTEE ON IRRIGATION AND DRAINAGE

The committee on Irrigation and Drainage recommends:

1. A more conservative use of water. Excessive use aggravates seeped conditions of land and prevents maximum yield of crops.

2. Irrigate less and cultivate more.

3. Systematic maintenance of canals and ditches, to prevent loss and waste water escaping from faulty structures and pouring out upon the lands for no useful purpose.

4. The water user to measure amount of application to crop as a means of preventing over irrigation.

5. Water officials to be empowered by law to regulate amount of diversion as a means of preventing excess use and damage to lands.

6. Farmers to provide storage for domestic water supply to eliminate the running of water in ditches during the winter. Excess water floods lands, which adds to the seepage menace and retards spring work in fields.

7. In some localities where shortage of water occurs it is recommended that consideration be given to the construction of storage reservoirs.

8. The drainage of lands in many places on the Western Slope is becoming a serious problem and it is strongly recommended that immediate steps be taken to reclaim these areas by individual effort or by means of organized drainage districts. Reclamation by drainage is more economically done at a time before the lands are totally unproductive.

Chairman

P.L. Marshall

Secy.
List of Committees

Western Slope Agricultural Economic Conference

Grand Junction, Colorado

December 7-8, 1928

Robt. Rockwell, Paonia, Colo.  T. W. Monnel, Montrose, Colo.
Chairman of Conference  Secretary of Conference

---

Cattle Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>City</th>
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<tbody>
<tr>
<td>Carl Wilson, Chairman</td>
<td>Olathe</td>
</tr>
<tr>
<td>L. H. Rockford, Secretary</td>
<td>Fort Collins</td>
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<tr>
<td>J. H. Rankin</td>
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<tr>
<td>Tom McKelvie</td>
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<tr>
<td>Oscar Turner</td>
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<td>Max Rettig</td>
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<td>J. J. Tobin</td>
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<td>Horace Joseph</td>
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<td>Claud Roos</td>
<td>Rifle</td>
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Sheep Committee

Clair Hotchkiss, Chm.
H. A. Ireland, Secy.
R. D. Blodgett
Roe M. Lyons

Allen C. Nash
Robert Loss
Fred Donnelly
A. H. McAnally
J. G. Brown
D. C. Allison

H. Scott
Wm. Pruitt
A. J. Smith
Leon Hotchkiss
Paul Swisher
Murray S. Bennett
L. L. Jordon
Walter January
Bruce Ferguson

Al Herndon
Stokes Bros.
Howard Davis
Geo. Young
Frank Morgan
Whitely & Whitely
Edgar Bray
Harry Brown
Jas. Bullington
Clyde Porter
John McKnight

D. S. Bruce
Bert C. Taylor
E. H. Mahaffee
Geo. Jenkins

Hotchkiss
Montrose
Grand Junction
Colbran

Montrose, R. 1
" R. 1
"

Olathe

Delta
"

Hotchkiss
"

Cedaredge

Eckert

Norwood
"

Placerville

Redvale

Cedar

Naturita

Telluride

Glenwood Springs, R. F. D.
Silt
Grand Valley
New Castle

Dairying

Otis Clymer, Chm.
C. A. Smith, Secy.

M. M. Due
Harry Jones
H. A. Collins
G. V. Gimple
Leo Ryan

Grand Junction
Fort Collins

Grand Junction
"
"

Clifton
Plateau City
Dairying continued

C. H. Hinman
Geo. La Grange

W. W. Price
Joe Brown
W. T. Ferguson
R. C. Nash
John C. Bell
Chester Blackburn
W. A. Brewer
J. A. Daly

Carl Karlin
W. F. Wismer
Mel Springer
Dr. A. E. Millar
H. E. Wilson
Wm. Duling
Allen Bros.
Ralph Kinnear
O. T. Glenn
Mathis & Heinot
Hiram Burritt
Roy Ratlgen
B. O. Hallar
Wm. Norton
H. G. Garrison

Frank Sullivan
Lane Cornforth
Robert Adie
M. G. Davis
E. S. Chamberlain
Ed. Nygriin
Mr. Lundahl
E. E. Dixon
Kenneth Jacobs

W. A. Holgate
H. O. Brown
Dan Sullivan

Grand Junction (Western Slope Progress)
Colbran

Montrose, R. 1

" R. 4
" R. 1
" R. 1
" R. 2
" R. 1

Delta

" Hotchkiss
" Crawford

Eckert

Paonia

" (The Paonian)

Norwood

" Nucla

" Placerville

Redvale

Carbondale

Glenwood Springs

DeBeque

Swine

Lynn Guy, Chr.
A. C. Allen, Secy

E. A. Burch
W. D. Finch
Frank Shuger

Redvale

Fort Collins

Fruita

Grand Junction
### Swine

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### Poultry

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<tr>
<td>Edwin Weckel</td>
<td>Fruita</td>
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<tr>
<td>E. T. Barber</td>
<td>Grand Junction (The Daily Sentinel)</td>
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<tr>
<td>Geo. Clair</td>
<td>Montrose, R. 2</td>
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<tr>
<td>Mrs. W. S. Howey</td>
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<td>P. E. Manuel</td>
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<tr>
<td>Ernest Hedgecock</td>
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<tr>
<td>Lee McLaren</td>
<td>R. 2</td>
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<tr>
<td>Harlan Duncan</td>
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<td>Mrs. Geo. Ripley</td>
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<td>L. Q. Lewis</td>
<td>Delta</td>
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<td>John W. Mack</td>
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<td>John Francis</td>
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<td>Frank Stearns</td>
<td>(The Delta Independent)</td>
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<td>Philip Yonge</td>
<td>Cedaredge (Smith-Hughes Teacher)</td>
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<td>Fred Leonard</td>
<td>Paonia</td>
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<td>Commodore Wilson</td>
<td>Lazear</td>
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<td>Jake Layman</td>
<td>Cory</td>
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<td>Carl Davis</td>
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Poultry

Mrs. E. J. Chamberlain
Mrs. J. M. Mix
Stockton Smith

T. A. Gibbons
R. F. Bowles
G. S. Swygert
Superintendent Baum
C. H. Butler

Nucla
Norwood
Telluride

Grand Valley
Silt
Carbondale
Grand Valley
Rifle

Turkeys

Mrs. Howard Lathrop, Chr.
T. E. Leiper, Secy.

Mrs. Frank Dessert
John Carr
Geo. Wettrick
J. W. Cline
Mrs. Nat Hart

Delta
Grand Junction

Grand Junction
Hotchkiss
Cedaredge
Hotchkiss
Austin

Range

Virdie Hotchkiss, Chr.
C. A. Scott, Secy.

Ray Peck
E. J. Currier, Jr.
Maitland Webb

J. L. Hallock
Herbert Hillman
Wm. Schoolfield
Gordon S. Stoneburner
Lee Gray
Richard Hartman
Chas. Hamilton
R. L. Taylor
Jas. A. Monohan

Colona
Fort Collins

Grand Junction

Colbran

Delta
Hotchkiss

Austin
Paonia
Hotchkiss (Hotchkiss Herald)

Norwood

Glenwood Spgs. (Forest Supr.)
Hay and Forage

Fred Clymer, Chr.
A. A. Goodman, Secy.

J. F. Shultz
Frank Anderson
Roy Case
A. P. McIntyre
B. C. Marchbanks

John Hazelett
C. B. Elliott
L. W. Sweitzer
John Shelladay
E. C. Peyton
M. H. Hallock
Mr. Kirkpatrick
V. A. Phillips

Baxter & Allen
Geo. Bursch

Otto Hanawald

Grand Junction
San Miguel
Norwood

Loma
Montrose, R. 2
" R. 2
Olathe R. 2
" R. 2

Delta
"
"
Austin
Read
Olathe, R. 1
Cedaredge
Norwood
Radvale

Rifle

Fruit

H. G. Crissey, Chr.
W. H. Lauck, Secy.

Harry Younger
Robert Fender
N. J. Brown

Geo. Brown
A. K. Elicker
Earl Rulz
J. L. Feighner
Chad. Eckman
Julius Protengeier
Geo. Broughton
Irving Shaefer

Ferris Green
H. B. Fetz
A. A. Blakely
Ed. Divelbiss
John McKune
Jas. Annand
Jas. W. Wells

Palisade
Grand Junction

Grand Junction
"
"

Olathe
" R. 1
Montrose, R. 1
" R. 1
" R. 1
" R. 2
" (Smith-Hughes Instructor)

Delta
Hotchkiss
" 
" 
" (Smith-Hughes Instructor)
Fruit
A. L. Goess  Paonia
John Beasley  "
John Curtis  "
Jas. Horton  "
Ralph Miller  "
Eugene Hubbard  "
W. T. McMurry  "
Henry Stolte  Cedaredge
Al Stolte  "
Henry Wick  "
Frank Hirt  "
Starr Bros.  "
Ed. Mathews  "
Clyde Brewer  "
J. M. Fredricks  Nucla
Rice Bros.  "
W. F. Lovely  Grand Valley
Mr. Eams  "
C. H. Butler  "
Mr. Barrack  "
R. Thoman  "

Potatoes
Frank Sweet, Chr.  Carbondale
Carl Metzger, Secy.  Fort Collins
D. W. Apperlie  Grand Junction
Grover Stout  Fruitia
Howard Finch  " (Smith-Hughes Instructor)
Mr. Wilson  " (The Mesa County Mail)

Tom Lytle  Montrose
Douglas Lytle  " R. 4
Frank Heath  " R. 4
Curtis Moberly  "
Jack Bass  "
Verner Dahlin  "

King L. Banks  Delta
Dale Evans  "
Ed Day  "
Fred L. Martin  "
R. H. Burrias  "
Geo. Hammond  "
J. R. Newton  "
H. A. Hutchins  "
E. K. Davis  "

Hotchkiss
Crawford
Paonia
Ragged Mountain
Read
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### Truck Crops and Onions

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<td>Sinton Bros.</td>
<td>Dove Creek</td>
</tr>
<tr>
<td>C. A. Krabbi</td>
<td>Egnar</td>
</tr>
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### Grain

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>Alvin McGraw, Chr.</td>
<td>Montrose, R. 4</td>
</tr>
<tr>
<td>Waldo Kidder, Secy.</td>
<td>Fort Collins</td>
</tr>
<tr>
<td>W. W. Campbell</td>
<td>Grand Junction</td>
</tr>
<tr>
<td>R. B. Dessert</td>
<td>&quot;</td>
</tr>
<tr>
<td>Gus Olsen</td>
<td>&quot;</td>
</tr>
<tr>
<td>E. M. Goodrich</td>
<td>&quot; Juanita Mills</td>
</tr>
<tr>
<td>John Howell</td>
<td>Montrose, R. 1</td>
</tr>
<tr>
<td>J. J. Ross</td>
<td>&quot; R. 3</td>
</tr>
<tr>
<td>A. H. House</td>
<td>&quot; R. 4</td>
</tr>
<tr>
<td>R. E. Diemer</td>
<td>&quot;</td>
</tr>
<tr>
<td>Henry McAuliff</td>
<td>&quot;</td>
</tr>
<tr>
<td>M. H. Patnode</td>
<td>Delta</td>
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<tr>
<td>Clarence A. Smith</td>
<td>&quot;</td>
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<tr>
<td>W. F. Blaine</td>
<td>&quot;</td>
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<tr>
<td>Chas. Olson</td>
<td>Hotchkiss</td>
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<tr>
<td>Gilbert Doughty</td>
<td>Austin</td>
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<td>Harry Sanburg</td>
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<tr>
<td>Andrew Hulteen</td>
<td>Crawford</td>
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<tr>
<td>Fred Anderson</td>
<td>Norwood</td>
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<tr>
<td>M. M. Blair</td>
<td>&quot;</td>
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<tr>
<td>Mr. Randle</td>
<td>Nucla</td>
</tr>
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</table>
Grain

H. E. Dill,  Leonard
H. C. Pulver  Norwood

F. D. Moore  Carbondale
D. Everett  Rifle

Seed Crops

A. B. Critchlow, Chr.  Crawford
Vance Lough, Secy.  Glenwood Springs

J. M. Newlan
R. B. Dessert

Ralph Hogan  Olathe
T. O. Anderson  "  R. 2
A. W. Beveridge  "  "
Ralph Wilson  "  (Smith-Hughes Instructor)
Harold McGraw  Montrose

Roy Dowd  Delta
J. H. Winter  "
Carl Daughtt  "
Harry Talbott  "
C. H. Dixon  "
Chas. Harshman  "
R. L. Saunders  "
C. C. Bipple  "

Carlos Cornforth  Norwood
Nelson Warren  "
J. F. Morganson  "
Walter Gramlick  Paradox
Joe Riddle  "
Chas. Burbridge  "
E. L. McKee  "

Ralph Quackenbush  Carbondale
J. Fuller  Silt
Tom Collins  Rifle
C. Lushbaugh  "

Irrigation and Drainage

✓ H. C. Getty, Chr.
✓ R. L. Parshall, Secy.

✓ J. W. Page
✓ Bruce Claybaugh
✓ R. E. Turpin
Wm. Frey
Fred Jens
Chas. Harp

Montrose  Fort Collins

Grand Junction  "
"  "
Clifton  "
Palisade
Irrigation and Drainage

L. J. Foster
Herman Elliott

Homer Graham
Geo. Conklin
J. E. Henderson
Dudley Nickson
Chas. Lewellyn
Abnor McKee
W. H. Thomas

J. W. Landford
Chas. Jacobs
Asa Perry
W. H. Nelson
A. M. Browning
P. Zunich

H. A. Dickson
Geo. Becker

Montrose
" 

Delta
" 

Eckart
Paonia
Cory

Norwood
" 

Glenwood Springs
Silt

Bees and Honey

Frank Drexel, Chr.
R. S. Richmond, Cecy.

J. A. Green
J. S. Saunders

Geo. Nichols
Lee Willis
J. C. Mathews
W. S. Corbut
W. H. Kendle
J. Roscoe Miller
T. C. Veirs

Ross Conklin
W. H. Patterson
Gus Martenheit
Clarence Drexel

Guy Hulburt
G. H. Patterson

K. Corthell
A. J. Dickerson
Elmer I. Reed
J. D. Caldwell
S. E. Fralick

Crawford
Fort Collins

Grand Junction
Colbran

Montrose, R. 3
" R. 2

Olathe

Delta
" 

Crawford
Norwood

Carbondale
Glenwood Springs
New Castle
Rifle
DeBeque
Rodents and Predatory Animals

Carl W. Osborn, Chr.
L. L. Laythe, Secy.

W. S. Moek
Geo. Trickel
L. E. Ross
Frank Burritt
Ernest Lowell

J. P. Galloway
Eugene Galloway
R. S. McNutt
Harold Priestly
George Hendricks
J. A. Wilcoxson
W. H. Grandeell

Insect Pests and Diseases

Will Yetter, Chr.
Harry Newton, Secy.
Otto Forrey
Geo. Eyer

Agricultural Finance

D. T. Stone, Chr.
L. A. Moorhouse, Secy

Wm. Weiser
J. G. McKinney
O. C. Fellows
W. A. Porter
F. H. Lischke

C. B. Akard
R. R. Cowdy
N. J. Darrow

C. D. Wagoner
Thornton Harman
G. H. Bell
Mr. McCarty
F. D. Cooley
Linn Kennedy

Leslie Savage
W. C. Hillman
Mel Springer
Walt Thomas
M. H. Crissman
H. H. Adams
S. A. Sylvester
Clarence Overhultz

Fruitia
Denver
Grand Junction
Grand Junction
Grand Junction
Norwood
"Nucla
Redvale
Grand Valley
DeBque

"Cedaredge

"Cedaredge

"Cedaredge

Grand Junction
Paonia
"Cedaredge

Grand Junction
Fort Collins
Grand Junction
"Fruitia
Colbran
Palisade
"Montrose
Olathe
Telluride
Norwood
Glenwood Springs
"Grand Valley
Rifle
"Delta
"Paonia
"Hotchkiss
"Cedaredge

(9815)
Ralph,

Here are some figures on crops on West Slope. I wish you charts of these data.

Also, here is a set of photographs marked out. Questions marked out similar to those in other areas.

If you get over early, I'll be at the La Courtois.

Yours,

[Signature]

Be sure to get there on time.
<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat</th>
<th>Oats</th>
<th>Barley</th>
<th>Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917</td>
<td>39,700</td>
<td>21,200</td>
<td>9,700</td>
<td>6,600</td>
</tr>
<tr>
<td>1918</td>
<td>Reports not available for this year</td>
<td></td>
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</tr>
<tr>
<td>1919</td>
<td>31,100</td>
<td>21,000</td>
<td>7,900</td>
<td>13,300</td>
</tr>
<tr>
<td>1920</td>
<td>30,400</td>
<td>21,900</td>
<td>7,200</td>
<td>14,000</td>
</tr>
<tr>
<td>1921</td>
<td>36,400</td>
<td>22,500</td>
<td>8,500</td>
<td>12,600</td>
</tr>
<tr>
<td>1922</td>
<td>32,400</td>
<td>17,500</td>
<td>4,900</td>
<td>14,200</td>
</tr>
<tr>
<td>1923</td>
<td>28,300</td>
<td>16,900</td>
<td>7,400</td>
<td>18,400</td>
</tr>
<tr>
<td>1924</td>
<td>26,400</td>
<td>16,700</td>
<td>4,900</td>
<td>17,100</td>
</tr>
<tr>
<td>1925</td>
<td>30,500</td>
<td>14,900</td>
<td>6,200</td>
<td>18,300</td>
</tr>
<tr>
<td>1926</td>
<td>32,400</td>
<td>12,400</td>
<td>7,500</td>
<td>17,900</td>
</tr>
<tr>
<td>1927</td>
<td>36,300</td>
<td>13,900</td>
<td>9,700</td>
<td>19,500</td>
</tr>
</tbody>
</table>
# Trend in Acreage of Cultivated Crops

**Western Slope Colorado**

1917 to 1927

<table>
<thead>
<tr>
<th>Year</th>
<th>Corn</th>
<th>Dry Beans</th>
<th>Beets</th>
<th>Potatoes</th>
<th>Onions</th>
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</thead>
<tbody>
<tr>
<td>1917</td>
<td>6,600</td>
<td>5,900</td>
<td>5,300</td>
<td>12,100</td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td>13,300</td>
<td>400</td>
<td>6,300</td>
<td>17,700</td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>14,000</td>
<td>300</td>
<td>14,200</td>
<td>13,700</td>
<td>421</td>
</tr>
<tr>
<td>1921</td>
<td>12,600</td>
<td>---</td>
<td>4,600</td>
<td>21,400</td>
<td>487</td>
</tr>
<tr>
<td>1922</td>
<td>14,200</td>
<td>600</td>
<td>4,800</td>
<td>30,500</td>
<td>1,176</td>
</tr>
<tr>
<td>1923</td>
<td>18,400</td>
<td>1,300</td>
<td>10,000</td>
<td>19,900</td>
<td>1,816</td>
</tr>
<tr>
<td>1924</td>
<td>17,100</td>
<td>3,700</td>
<td>15,700</td>
<td>22,700</td>
<td>2,639</td>
</tr>
<tr>
<td>1925</td>
<td>18,300</td>
<td>3,900</td>
<td>11,800</td>
<td>14,900</td>
<td>2,661</td>
</tr>
<tr>
<td>1926</td>
<td>17,900</td>
<td>3,800</td>
<td>10,200</td>
<td>14,300</td>
<td>2,909</td>
</tr>
<tr>
<td>1927</td>
<td>19,500</td>
<td>4,300</td>
<td>8,300</td>
<td>20,300</td>
<td>3,237</td>
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</table>
### Trend in Feed Crop Acreage

West Slope of Colorado  
1917 to 1927

<table>
<thead>
<tr>
<th>Year</th>
<th>Corn</th>
<th>Oats</th>
<th>Barley</th>
<th>Alfalfa</th>
<th>Other hay</th>
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<td>21,200</td>
<td>9,700</td>
<td>109,600</td>
<td>4175</td>
</tr>
<tr>
<td>1918</td>
<td>(no reports available for 1918)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td>13,300</td>
<td>21,000</td>
<td>7,900</td>
<td>100,900</td>
<td>5601</td>
</tr>
<tr>
<td>1920</td>
<td>14,000</td>
<td>21,900</td>
<td>7,200</td>
<td>124,000</td>
<td>6545</td>
</tr>
<tr>
<td>1921</td>
<td>12,600</td>
<td>22,500</td>
<td>8,500</td>
<td>130,900</td>
<td>6016</td>
</tr>
<tr>
<td>1922</td>
<td>14,200</td>
<td>17,500</td>
<td>4,900</td>
<td>126,400</td>
<td>8631</td>
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<tr>
<td>1923</td>
<td>13,400</td>
<td>16,900</td>
<td>7,400</td>
<td>121,100</td>
<td>8119</td>
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<tr>
<td>1924</td>
<td>17,100</td>
<td>16,700</td>
<td>4,900</td>
<td>141,900</td>
<td>5880</td>
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<tr>
<td>1925</td>
<td>18,300</td>
<td>14,900</td>
<td>6,200</td>
<td>157,700</td>
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<tr>
<td>1926</td>
<td>17,900</td>
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<td>7,500</td>
<td>167,800</td>
<td>1935</td>
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<tr>
<td>1927</td>
<td>19,500</td>
<td>13,900</td>
<td>9,700</td>
<td>154,400</td>
<td>20590</td>
</tr>
</tbody>
</table>
AREA IRRIGATION AND DRAINAGE INFORMATION

To determine what changes should be made in the irrigation and drainage status.

Western Slope, Colorado.

H. C. Gentry, Ckt.
Montrose, Colo.

R. L. Parshall, Secretary
Fort Collins, Colo.

PAST TRENDS (1917-1927)

1. What has been the trend in the number of acres that the systems have been capable of irrigating?

2. What has been the trend in the number of acres irrigated?

3. What has been the trend in the acreage of various crops and pasture grown under irrigation?

4. What has been the trend in the percentage of the total acreage of each of these crops?

5. What has been the annual variations in the amount of available water?

PRESENT CONDITIONS

6. What is the total number of available acre feet in the Western Slope, Colorado?

7. What is the present acreage of irrigated crops and pastures?

8. What are the water requirements of these crops and pastures?

9. Under what conditions have lands been brought under irrigation?

10. Under what conditions have lands been brought under irrigation?

11. What is the duty of water in relation to the various methods of irrigating?

12. What is the result of present methods of irrigating on the condition of the soil?
POSSIBLE FUTURE DEVELOPMENT (next five years)

13. How many acres not now irrigated but capable of being irrigated under the present systems will probably be irrigated in the next five years? Water logged? Raw land?

POSSIBLE FUTURE DEVELOPMENT (long time development)

14. How many acres could be irrigated with the present methods of irrigating?

15. How many additional acres could be irrigated thru the establishment of storage systems?

16. How many additional acres could be irrigated thru proper drainage?

17. How many additional acres could be irrigated thru better use of irrigation water?
Grand Junction Agri. Conference
Dec 748-1928

-1- For the most part the systems have experienced no increase in the irrigated areas. Economic conditions have limited expansion. More lands can be irrigated when markets are more favorable.

-2- Since 1920 no great effort to extend the irrigated area. Cultivated cropos-field have increased and orchards area decreased.

-3- More or less constant.

4 No correlation seem evident from inspection of tabulated cropped areas.

-5- As a general statement the annual variation in the amount of available for irrigation has little or no effect upon the extent of the irrigated area.

- 7. Consult records. 

- 8. Crop demands depend upon soil and exposure. As a general statement the duty may be assumed to be that of other localities.

- 9. Seepage and soil conditions.

- 10. Favorable development and favorable markets.

- 11. Not definitely known for the Western slopes.

- 12. Probably is resulting in raising the water table. May be prevented in some cases while in others the general applicability, even economically and with care, will finally cause seepage to occur in the lower areas.
- 13 - No definite data
- 14 - Methods not restricting development
- 15 - No answer now
- 16 - Can be estimated
- 17 - Other areas indicate possibly 20 to 25% Where water is plentiful there is no incentive to improve methods
December 17, 1928.

Mr. R. L. Parshall,
Campus.

Dear Mr. Parshall:

I am enclosing a copy of the recommendations of committee on irrigation. Will you please review this to see if I have included all of the items having to do with the recommendations? The results and recommendations of the different committees will be taken up in the bulletin dealing with this conference.

Very truly yours,

Thos. H. Summers

T. H. Summers,
Farm Management Demonstrator.

THS-P
Enc.

Returned with attendance list 12/21/28
Successful Farms on the Western Slope of Colorado.

R. T. Bardick and T. H. Summers.

In 1927 the United States Department of Agriculture cooperated with the Colorado Agricultural College in making a study of farming in Western Colorado, as a part of a nation wide study of the apple industry. One hundred four farm records for the 1926 year's business were secured in Mesa, Delta, Montrose and San Miguel counties. In 1926 the Colorado Agricultural College continued this study and secured ninety-eight farm records in the same area together with fourteen more in the Palisade peach area.

Acreage, production and sales of crops; numbers, values, sales and purchases of livestock; sales of livestock products and miscellaneous sales; expenses, depreciation, value of family labor, value of food raised for family use; investment in farm, machinery, livestock, feed etc., were secured for each farm.

From these records the net farm income has been calculated. Six per cent interest on the investment when subtracted from the farm income leaves the net returns for the operator's own time or what is called his labor income.

There were seventy-nine farms whose records were secured for both 1926 and 1927. Of this number thirty-one men paid all expenses including depreciation, and had income enough to set aside an amount equal to the value of unpaid family labor and six per cent on their investment and then have over six hundred dollars left to pay for their own labor. The thirty-one farms were located as follows; four in Mesa County, six in Delta County, thirteen in Montrose County and eight in San Miguel County. In addition to these thirty-one farms there were twenty-five more that showed labor incomes of over six hundred dollars for one year either 1926 or 1927. These are not included in the following discussion.

Mesa County: In 1926 the four men who made over six hundred dollars labor income had $1445 to pay for their time and for interest on their investment. Six per cent interest on an investment of $12,448 was $747 leaving $698 for their own time. In addition to this they have $321 worth of farm products consumed in the house.

In 1927 these same four men had $2498 farm income. After setting aside $747 interest on their investment there was $1751 labor income and $298 in addition towards the family living.

The average for the two years gave these men $1225 labor income apiece or slightly over $100 per month while the entire thirty farms in Mesa County averaged for the two years only $183 labor income or about $15 per month.

Delta County: In 1926 the six men paid all expenses including depreciation and six per cent on an investment of
In 1926 they had a labor income of $1686 and had left a labor income of $1687 plus $270 value of farm products used by the family.

In 1927 these same men had a labor income of $401 and farm food worth $268.

The average for the two years shows labor income of $2350 each plus $269 farm food. This compares with an average labor income of $687 for all the farms for the two years with $302 value of farm food.

Montrose County: The thirteen farms in Montrose County made labor incomes of $2290 in 1926 after setting aside $807 interest on an investment of $13443. In addition they had $383 worth of farm products used in the house.

In 1927 these thirteen men made labor incomes of $1640 and had $377 worth of farm food.

For the two years they averaged $1965 labor incomes and $380 worth of farm food compared to $782 labor income and $367 value of food, average for all farms studied in Montrose County for the two year period.

San Miguel County: The eight farms selected in San Miguel County made labor incomes of $5161 in 1926 after allowing $1188 interest on an investment of $19,792. The value of farm foods used in the house was $398.

In 1927 these same eight men made labor incomes of $4882 and had $326 worth of farm foods.

For the two years they averaged $4022 labor incomes and had $362 worth of farm foods.

The entire thirty-one farms for the two years averaged $2572 labor incomes per farm per year or over $200 per month per operator. They had $344 additional values of farm products used in the home.

Compare this with $924 average labor income for the entire number of farms studied in all counties for the two years.

Distribution of income: Further study of the incomes of the thirty-one farms for the two years shows the following distribution of receipts.

<table>
<thead>
<tr>
<th>County</th>
<th>No. Farms</th>
<th>Per cent of Total Receipts from</th>
<th>Livestock</th>
<th>Cash</th>
<th>Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesa</td>
<td>4</td>
<td></td>
<td>70.4%</td>
<td>25.3%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Delta</td>
<td>6</td>
<td></td>
<td>70.6</td>
<td>19.3</td>
<td>9.8</td>
</tr>
<tr>
<td>Montrose</td>
<td>13</td>
<td></td>
<td>66.3</td>
<td>25.2</td>
<td>3.0</td>
</tr>
<tr>
<td>San Miguel</td>
<td>8</td>
<td></td>
<td>2.1</td>
<td>94.2</td>
<td>1.1</td>
</tr>
<tr>
<td>All 31</td>
<td>45</td>
<td></td>
<td>48.6</td>
<td>44.6</td>
<td>4.1</td>
</tr>
</tbody>
</table>
The farmers in Mesa, Delta and Montrose counties secured most of their income from fruit and other crops while the men in San Miguel County secured almost their entire income from livestock. The column "livestock, net increase" is not all cash income. There are several sources of income and expense that have been combined to give this net increase. For example, the San Miguel farmers had $7,804 average net increase from livestock. They sold $6,995 of livestock and livestock products, but paid $2,723 for livestock purchases, leaving $4,266 net cash income from livestock. Then the value of their livestock increased largely due to better market prices giving them $3,538 increase at the end of the year. In their case only 54.7 per cent of their livestock income was cash, the balance was increased value of livestock on the farms. For all farms, the net cash income from livestock was 58.1 per cent and the balance of 41.9 per cent was increased inventory. In Mesa County 3.9 per cent of the net stock increase was increased inventory; in Delta County 18.6 per cent; in Montrose 52.7 per cent; in San Miguel 45.3 per cent and for all thirty-one farms 41.9 per cent.

This means that the labor incomes shown above were not all cash. Part of this income was in the form of livestock that was still on the farm. By considering only the cash receipts and cash expenses one can arrive at a net cash income which is available for family living expenses, or payment on interest on mortgages, or for investment and saving. For each county this "net cash" figure as an average for the two years was as follows.

Mesa County $2,185, Delta $3,990, Montrose $2,353, San Miguel $2,331 and the average for all $2,654.

In addition to this they had the value of food raised on the farm which reduced the cash living expenses by more than the values shown as the values are based on farm sale prices rather than retail prices.

In conclusion, these men were making a comfortable living. The fact that men are making money in this area is encouraging to those who are striving to improve farming conditions. To a certain extent what one man has done can be duplicated by another.

The complete report on this survey will discuss in more detail the systems of farming that are to be recommended for this section of Colorado. The results of one or two years are not sufficient from which to draw conclusions. Figures that cover a period of five years are more conclusive and can be followed with a greater degree of dependence.
### Distribution of cropped land

**Western Slope, Colorado, 1927**

<table>
<thead>
<tr>
<th>Crops</th>
<th>No. of acres</th>
<th>Total acres</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>36,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>14,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td>10,000</td>
<td>60,000</td>
<td>19.17%</td>
</tr>
<tr>
<td>Cult. crops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>20,000</td>
<td></td>
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<tr>
<td>Potatoes</td>
<td>20,000</td>
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<tr>
<td>Beets</td>
<td>8,000</td>
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</tr>
<tr>
<td>Beans</td>
<td>4,000</td>
<td></td>
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</tr>
<tr>
<td>Onions</td>
<td>3,000</td>
<td></td>
<td></td>
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<tr>
<td>Misc.</td>
<td>4,000</td>
<td>59,000</td>
<td>18.85%</td>
</tr>
<tr>
<td>Fruit</td>
<td></td>
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<tr>
<td>Fruit</td>
<td>19,000</td>
<td>19,000</td>
<td>6.07%</td>
</tr>
<tr>
<td>Hay</td>
<td></td>
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<tr>
<td>Alfalfa</td>
<td>154,000</td>
<td>175,000</td>
<td>55.91%</td>
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<tr>
<td>Other</td>
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<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>313,000</strong></td>
<td><strong>313,000</strong></td>
<td><strong>100.0</strong></td>
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PROGRAM
OF THE
AGRICULTURAL ECONOMIC
CONFERENCE

GRAND JUNCTION, COLORADO
DECEMBER 7–8, 1928

Robt. Rockwell, Paonia, Chairman.
T. W. Monell, Delta, Secretary.

Friday—High School
10:00 a.m.—General Meeting.
“Purpose of Conference,” Director McCann.
10:30 a.m.—Assignment of Committees.
10:45 a.m.—Committee Meetings.
12:15 p.m.—Luncheon, High School Cafeteria.
1:30 p.m.—Committee Meeting.

Saturday—High School
10:00 a.m.—Committee Meetings.
12:15 p.m.—Luncheon, High School Cafeteria.
1:30 p.m.—General Meeting.
Music by Grand Junction 40-Piece High School Band.
“What’s Ahead in Agriculture,”
Dr. Chas. A. Lory.
Music by Grand Junction 40-Piece High School Band.
Reports of Committees.

The DAILY SENTINEL PRESS
## United States Reclamation Service

### Use of Water Tables

#### Grand Valley Project - Colorado

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Total Area Irrigated</th>
<th>Total Quantity of Water Delivered</th>
<th>Total Quantity of Water Wasted - Acrew-feet</th>
<th>Acree Feet per Acrew Delivered to Farms</th>
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<tbody>
<tr>
<td>1916</td>
<td>1842</td>
<td>308,192</td>
<td>9829</td>
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<td>1917</td>
<td>5289</td>
<td>549,271</td>
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<td>43,917</td>
<td>37,626</td>
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#### Percentage of Area in Different Crops

- Corn and Sorghum Seed
- Alfalfa, Winter Wheat, etc.
- Hay and Forage
- Vegetables and Truck
- Nuts, Fruits, and Acreage

- Area that could have been supplied by the constructed system

<table>
<thead>
<tr>
<th>Year</th>
<th>Corn and Sorghum Seed</th>
<th>Alfalfa, Winter Wheat, etc.</th>
<th>Hay and Forage</th>
<th>Vegetables and Truck</th>
<th>Nuts, Fruits, and Acreage</th>
<th>Area that could have been supplied by the constructed system</th>
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<td>30%</td>
<td>10%</td>
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<td>15%</td>
<td>7%</td>
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</tr>
<tr>
<td>1918</td>
<td>30%</td>
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<td>20%</td>
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<tr>
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<td>9%</td>
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</tr>
<tr>
<td>1920</td>
<td>40%</td>
<td>50%</td>
<td>30%</td>
<td>10%</td>
<td>10%</td>
<td>50%</td>
</tr>
<tr>
<td>1921</td>
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<td>11%</td>
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<td>55%</td>
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<tr>
<td>1922</td>
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<td>12%</td>
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<td>60%</td>
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<tr>
<td>1923</td>
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<td>65%</td>
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<tr>
<td>1924</td>
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<td>80%</td>
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<tr>
<td>1927</td>
<td>75%</td>
<td>85%</td>
<td>65%</td>
<td>17%</td>
<td>17%</td>
<td>85%</td>
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