



*1948 Report of  
Harney County's*

AGRICULTURAL  
PLANNING CONFERENCE

COMMITTEE REPORTS  
APPROVED BY CONFERENCE  
HELD IN BURNS, FEBRUARY 21, 1948

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# Forward

Agriculture planning conferences have been responsible for many major agricultural developments in Oregon. The first Harney County Planning Conference held in 1938 likewise has served as a background for many improvements in the agricultural enterprises of this area. Recommendations set up at the 1938 conference have served as a constant guide to ranchers for the past 10 years. However, because of changing conditions and a desire to reappraise the post-war agriculture of the county, planning committee members decided in September of 1947 to conduct an agricultural planning conference. Four planning committees were set up to study the needs and assemble facts pertaining to local and national phases of agriculture. After several meetings and considerable study, the committees were able to work out sound recommendations-

The committee reports were presented and approved at a general conference held in Burns on February 21, 1948. They are hereby recorded to serve as a guide in developing a sound agricultural program for the county.

Funds necessary for the publication of these reports were provided by the following organizations:

Harney County Court  
Harney County Chamber of Commerce  
Poison Creek Grange  
Harney County Stockgrowers' Association

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COVER PICTURE — Cattle and Timber  
Two of Harney County's Major Crops

# 1948 Planning Conference

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Mrs. Ned Howard, Drewsey

## WILD LIFE SURVEY COMMITTEE

John Scharff — Malheur National Wildlife Refuge.  
Ellis Mason — Oregon Game Commission

# General Introduction

Harney County is the largest county in the state of Oregon, embodying 6,484,480 acres of land, 18.1 percent of which is rated as farming land according to the 1945 census. Elevations of this land range from 3400 feet to 4600 feet and average about 4100 feet. The average annual precipitation based on a 34-year average of the Harney Branch Experiment Station records is 8.51 inches.

## HARNEY BRANCH EXPFRIMENT STATION PRECIPITATION RECORD

### 34-Year Average — 1914-1947

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1.09	1.03	.68	.78	.80	.74	.21	.21	.46	.73	1.02	1.03	8.51

Crops Year — Sept.-Aug. — 8.86.

Growing Season — April-July — 2.54.

The 33-year average of annual mean temperatures in the Harney Basin is 44 degrees. Although frosts may be expected at any time, they are most likely to occur up to the middle of June and after the middle of August. The average date of the last frost of spring is June 14 and the first frost of fall is August 26.

## HARNEY BRANCH EXPERIMENT STATION TEMPERATURE RECORD

### 34-Year Average — 1914-1947

#### AVERAGE MAXIMUM TEMPERATURE

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
33	38	49	59	68	76	87	86	75	63	47	36*	59*

#### AVERAGE MINIMUM TEMPERATURE

10	16	24	29	34	39	45	42	34	27	18	14*	28*
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#### AVERAGE MEAN TEMPERATURE

21	27	36	44	51	57	65	64	55	45	34	25*	44*
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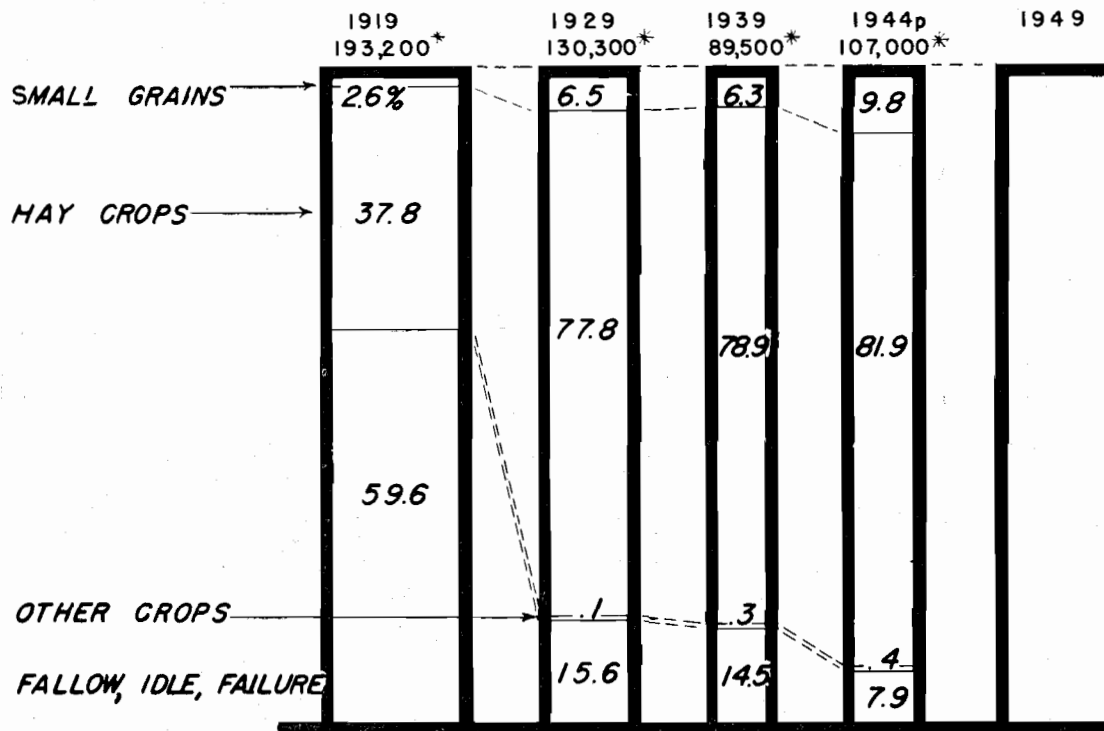
\* Only 33-year record.

Crops that usually mature even with this short growing season are spring grains of adapted varieties, flax, early potatoes, hay of all kinds, and seed crops. Figure 1 indicates the trends in cropland since 1919.

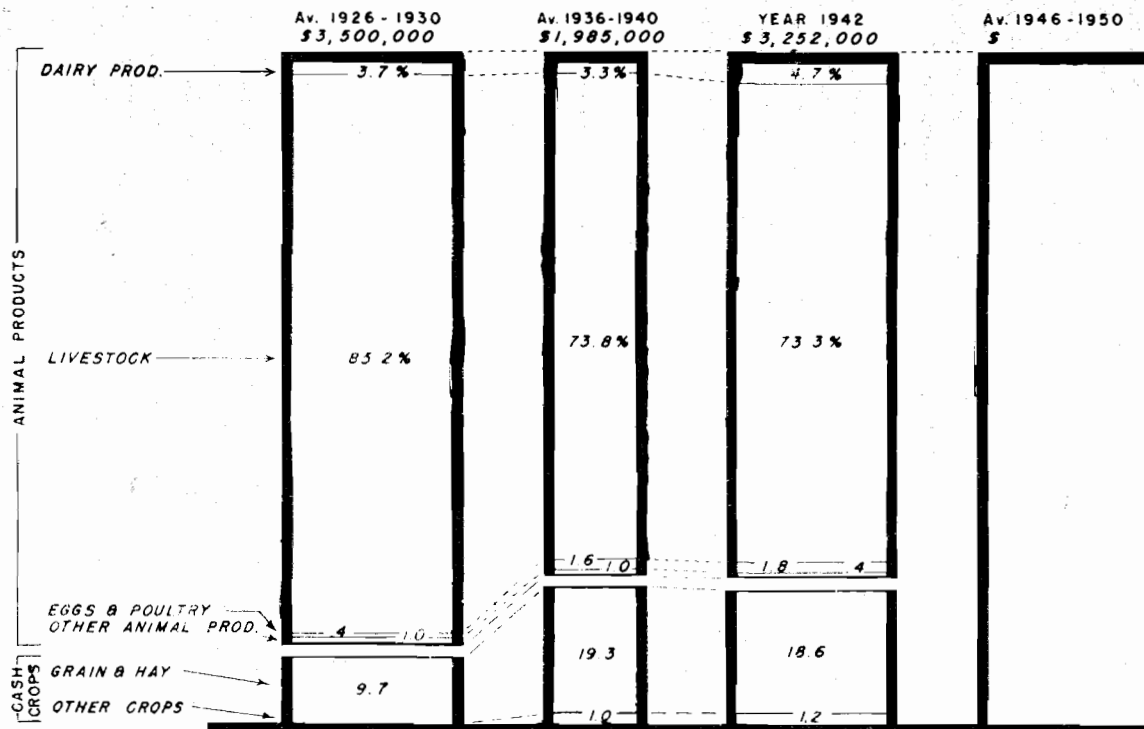
Soil types in Harney County ranging from a heavy adobe to a light sandy loam enjoy good fertility. However, alkali conditions may be found on most soils, being more predominant in the heavier types.

Agricultural income in 1942 totaled \$3,252,000. Sources for this income are shown in Figure 2.

Harney County Cropland Trends  
O. S. C. Extension Service



# Harney County Farm Marketings O. S. C. Extension Service



## Timber Industry Important in County Economy

Income other than that derived from agricultural products is made up mostly from the timber industry.

Harney County lies just south of the vast Malheur National Forest and just east of the eastern portion of the Ochoco National Forest. The timber is about 90 percent Ponderosa Pine and 10 percent Fir, Larch, White Fir and other species. While the majority of the timber in the Malheur National Forest lies in Grant County, during the late 1920's an agreement was made between Forest Service officials and the officials of Grant and Harney Counties that all the National Forest timber lying in the Burns working circle would be cut within a radius of five miles of Burns, Oregon.

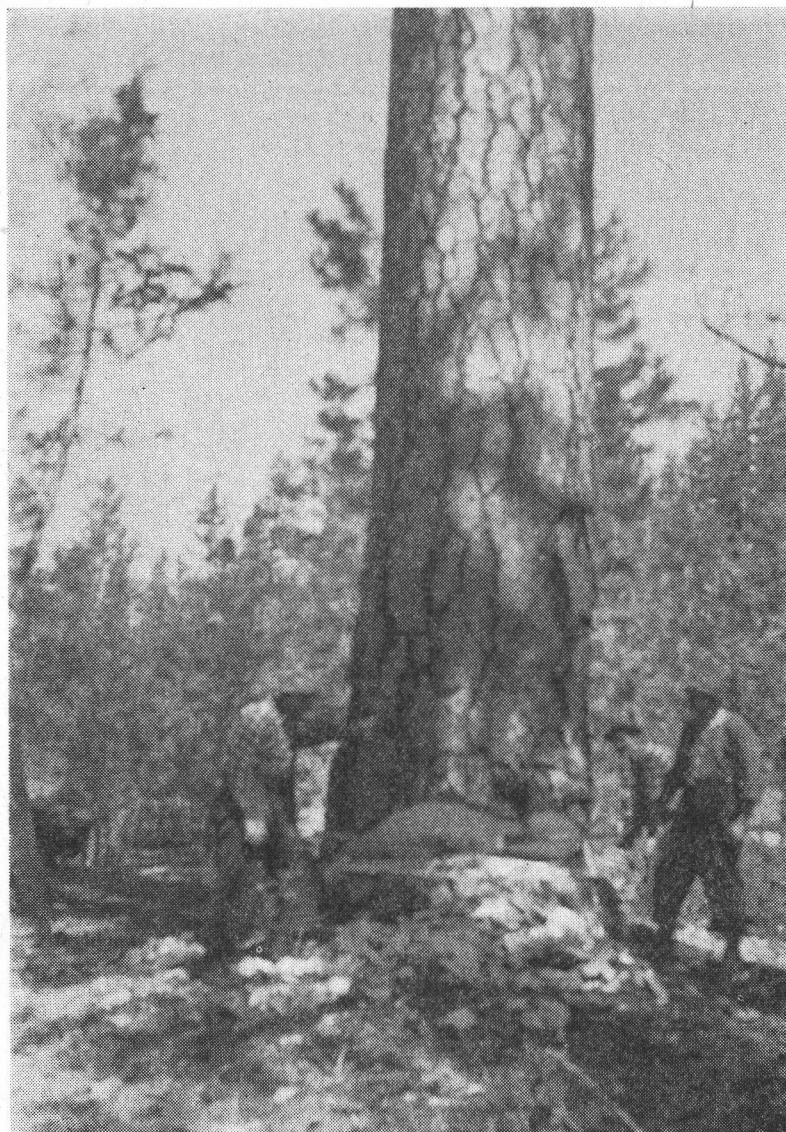
The National Forest timber is cut on a sustained yield basis by the Edward Hines Lumber Company, which operates a large mill at Hines, Oregon. The permissible Ponderosa Pine cut for the two forests is 100,000,000 feet, log scale, per year. Production maintained at this volume assures Harney County a perpetual operation of the lumber industry. The board measure production for the past ten years in Harney County is as follows:

### TEN YEARS PRODUCTION All Species Based on Board Measure

YEAR	PRODUCTION
1938	79,327,102
1939	98,076,340
1940	98,665,291
1941	95,731,866
1942	101,727,411
1943	108,692,260
1944	104,353,142
1945 — (90 day strike)	73,855,732
1946	116,439,086
1947	122,915,019
	<hr/>
	999,783,249

This large mill at Hines has been operating on a two-shift basis, six days per week. About 450 men and women are employed at Hines, Oregon; and about 200 men are employed at Seneca in the logging department. The payroll in 1947 was almost \$3,000,000. The Oregon and Northwestern Railroad Co., a common carrier operating between Hines, Oregon and Seneca, Oregon, connecting with the Union Pacific Railroad at Burns, Oregon, transports the manufactured logs from Seneca, Oregon, to Hines, Oregon.

In 1948 there were seven small mills cutting timber in the Harney County area. The average annual production of these was approximately 2,000,000 board feet.



Sustained yield harvesting of timber assures county of perpetual operation of lumber industry.

## Size of Farms Increasing.

Trend in size of farms is shown in the following table. It is of interest to note that since 1925 the number of farms has decreased and the average size of farms has increased. This is due mainly to the drouth period which began in 1915, forcing homestead families to move out of the country.

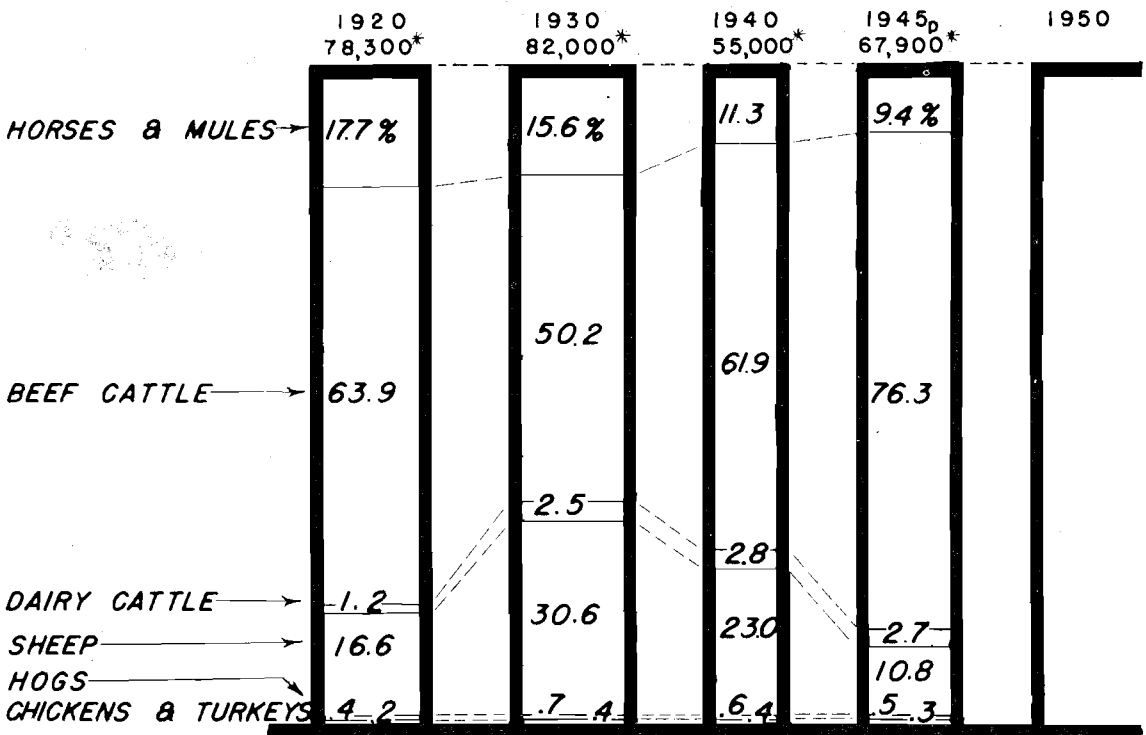
Census of	All land in farms		Number of Farms	Average Size of Farms
	Acres	Percent		
1890	469,813	7.4	482	974.7
1900	272,877	4.3	348	784.1
1910	562,204	8.8	443	1269.1
1920	524,678	8.3	589	890.8
1925	689,338	10.8	681	1012.2
1930	795,205	12.5	603	1218.7
1935	1,186,015	18.7	619	1916.0
1940	874,450	13.5	436	2005.6
1945	1,174,196	18.1	392	2995.4

Trends in livestock numbers may be observed in Figure 3. Livestock production continues to be the most important agriculture industry of the county. Other phases of agriculture are of necessity geared to the raising of livestock. Thousands of head of livestock grown in Harney County are fattened in the adjacent Snake River area and California. Forage produced on nearly six million acres of range land constitutes one of the most valuable assets of the area and accounts for the development and success of the livestock industry. Grazing permits on forest lands and Taylor grazing lands, which at the time this report was made were nearly all taken up by local stockmen, allow approximately 78,500 animal units to graze from April through September.

Winter feed supplies which, together with summer range conditions, largely determine the number of stock that may be successfully handled in the area are usually figured on a one to one and one-half ton of hay per animal unit basis. Stockmen consider this amount sufficient to adequately "winter" their stock. Average dates for the winter feeding period are from December 1 to April 1.

The foregoing information which was not necessarily discussed by the planning committees, was nevertheless used as background material in determining the needs and problems of the county.

Principal Animal Industries  
O. S. C. Extension Service



\* Indicated Animal Units Based on Estimated T. D. N. Requirements.

# Land Use Committee Report

Members of the Land Use Committee in studying the needs and making recommendations relative to land use have grouped the problems as follows:

1. Public Land Management.
2. Land Development.
3. Taxation.
4. Fire Control.

## Public Land Management

Land Patter of Harney County in Acres:

Total Acres of County .....		6,484,480
	Percent	Acreage
Public Domain .....	62.2	4,033,346
Forest Service .....	7.4	479,852
Game Reserves .....	3.4	220,472
Total Federal .....	73.0	4,733,670
State School Land .....	2.1	135,113
County Land .....	2.3	150,214
Total State and County .....	4.4	285,327
Privately owned range .....	21.4	1,387,669
Privately owner cropland ...	1.2	77,814
Privately owned .....	22.6	1,465,483

A survey of water developments on Taylor grazing lands showed that improved land use could be brought about by improvement in water developments on these lands. The committee recommends that the Bureau of Land Management not overlook this need in appropriating funds for the management of grazing lands.

A proposal for releasing approximately 23,000 acres of land in the Blitzen Valley for homesteading by veterans was believed by the committee to be a sound change in land management. The committee therefore recommends that this change be brought about and as much assistance as possible be given these veterans in developing the land.

## Land Development:

The practice of sub-dividing non-profitable land for resale at inflated prices was studied by the committee. Much of the dry land area of the county is not suited to crop production, the committee pointed out, and recommended that land of this type not be plowed for cropping.

The size of an economical agricultural unit was studied by a special sub-committee. Their recommendations are as follows:

### 1. Livestock Enterprise:

The committee recommends that, depending on summer range and winter feed conditions, 100 to 150 head of breeding cows and 750 to 1200 breeding ewes would constitute an economical livestock unit.

## 2. Cropping Enterprise:

### 1. Dry land farming —

In general, dry land farming is not encouraged by the committee. However, the operator who engages in this type of farming should have a unit of 1,000 acres for a dry land, summer-fallow type operation.

### 2. Controlled irrigation farming —

A unit of 120 to 160 acres was recommended for a farming enterprise where controlled irrigation was practical.

This committee also recommended that sub-marginal crop land of the type homesteaded at one time then deserted be plowed and seeded to Crested Wheatgrass. It was estimated that in many areas if sagebrush was cleared and adapted varieties of grass properly seeded, the carrying capacity of the land would be increased five times.

## Taxation:

The expenditures of the farmer's tax dollar on the basis of the 1948 tax budget are recorded as follows:

Total taxes paid by rancher ..... \$238,000.00

	Percent	
High School .....	27.0 %	\$66,000.00
Common School .....	33.0 %	68,000.00
Roads .....	8.8 %	21,000.00
Welfare .....	6.2 %	15,000.00
Admin. & Misc. ....	25.0 %	59,200.00

(Includes County Agent funds, County Nurse, Weed Control and Election.)

In lieu of taxes, approximately \$9,000.00 were received from the Game Refuge and \$4,000.00 from the Forest Service in 1947 for county funds. This money is earmarked for various items of the budget.

Sources of taxes for the county are traced as follows:

Ranch Improvements and Livestock .....	66.0 %
Town and Improvements .....	10.0 %
Business and Equipment .....	4.0 %
Utilities .....	15.0 %
Miscellaneous .....	5.0 %
Total County Budget .....	\$126,685.00

The committee recommended that the citizens of Harney County familiarize themselves with the tax situation of the county.

## Fire Control:

Fire control facilities at the present time are provided by the Forest Service, Bureau of Land Management, Edward Hines Lumber Company, and the County Court. The committee recommends that in areas including both grazing lands and forest lands a cooperative arrangement for the most effective control of fires be worked out.

It is recommended also that areas which have been burned-over be seeded to adapted grasses to increase forage production on the range.

# Crops Committee Report

Crops production in Harney County normally represents approximately 20 percent of the agricultural income figured on a cash sales basis. A large part of the crop production, however, is confined to producing hay and grain in connection with livestock enterprises. Cropland census figures of 1945 indicate the following percentages:

Total number of acres in cropland .....	107,000
Crop .....	Percent
Small grains .....	9.8%
Hay crops .....	81.9%
Other crops .....	.4%
Fallow, idle and failure .....	7.9%

A trend was noted by the committee in the direction of increased crop production in the county. This is due to improved farming equipment, improvement in use of the existing water supply, and high grain price incentive.

## Oppose Cropping Dry Lands

In line with recommendations made by the Land Use Committee, the crops committee members have gone on record as being opposed to the cropping of dry lands and highly alkaline land. The committee further recommends that any lands of known limited water supply and low fertility should not be broken up for the purpose of producing cash crops. This is not to be construed to mean that increased crop production is not recommended. Where water and soil conditions are favorable, the committee recommends an increase of crops grown especially as this increase will better supply feeds and crop seeds for use by ranchers of Harney County. A survey of exports and imports of grains and processed feeds resulted in the following tabulations for 1947:

Processed feeds imported .....	560 Tons
Range cubes .....	400 T.
Cottonseed and Soybean cubes	160 T.
Grain exported .....	2800 Tons

With a view toward bringing into better balance the feed and grain production as compared to local consumption, the committee set up crop goals as follows:

	CENSUS (Acres)		GOALS (Acres)	
	1937	1947	1938	1948
<b>Total Grain</b>	<b>11,000</b>	<b>13,000</b>	<b>13,000</b>	<b>20,000</b>
Wheat	3,000	2,000	6,000	3,000
Oats	4,000	3,000	2,500	5,000
Barley	2,500	6,000	3,500	10,000
Rye	1,500	2,000	1,500	2,000
<b>Total Hay</b>	<b>110,000</b>	<b>100,690</b>	<b>106,000</b>	<b>120,000</b>
Grain for hay	6,000	5,300	5,000	5,000
Alfalfa	12,000	3,600	15,000	15,000
Sweet Clover	2,000	1,000	5,000	10,000
Other tame hay	70,000	70,700	66,000	80,000
Wild hay	20,000	20,000	15,000	10,000

## MISCELLANEOUS CROPS

	CENSUS (Acres)		GOALS (Acres)	
	1937	1947	1938	1948
Flax	0	100	0	2,000
Alfalfa seed	0	450	150	500
Clover seed	0	50	150	300
Grass seed	0	210	500	1,000

### Recommend Local Warehouse

To eliminate excessive imports of processed feeds and high freight rates, the committee recommends the development of a local warehouse to be equipped with seed cleaners, pelleting equipment, a grain elevator, and feed supplies. In studying this development, the committee has made a survey of possible locations for the warehouse. Plans for operating the plant with a minimum of labor have also been worked out.

A need for improvement in forage crops was cited as one of the most important considerations of the committee. The average yield of wild hay as recorded in the 1945 census was one ton per acre. In order to increase yields on hay land and improve forage crops in general, the committee recommends the rejuvenation of run-down meadow lands by reseeding to adapted grasses and legumes and by better utilization of the existing water supply. This development would result in better quality feeds and more aftermath pasturing. The committee points out that most of the seeding on meadows so far has been wasted through failure to control water. Meadow foxtail and Reed Canary grass are the only domestic grasses that will stand prolonged flooding.

Range improvement is an important need of the county. Seeding of dry land areas with recommended grasses should include two important steps: First, all existing vegetation should be removed and; second, all seed should be covered.

### Crop Varieties Recommended

Varieties for grains and forage crops are hereby submitted to serve as a guide in carrying out the foregoing recommendations.

#### GRAIN:

- Wheat — Federation
- Bart
- Barley — Hannehen (malting barley)
- Trebil
- Union Beardless (hay)
- Oats — Markton

#### GRASS AND LEGUME MIXTURES:

- Meadow Improvement —
- Well-drained, sandy type soils
- Yellow Sweet Clover
- Smooth Bromegrass
- Orchard Grass

Heavier, medium-drained soils

Alta Fescue

Timothy

Alsike Clover

Wet, poorly-drained soils

Reed Canary grass

Meadow Foxtail

Red Top

Range Improvement — (Dryland areas)

Crested Wheatgrass

#### LEGUMES:

Alfalfa — Ladak

Sweet Clover — Yellow Blossom

### Weed Control Requires More Work by Individuals

The crops committee is of the opinion that an active weed consciousness is essential for an effective weed control program. A \$4,000.00 appropriation is set up by the county court for weed control work. This activity has its limitations, however, and cannot be expected to cover the entire county. The committee recommends that more individual weed control work be accomplished by individual farmers. Use of 2, 4-D in grain fields is recommended for most broad-leaved annual weeds. Summer-fallowing fits into a dry farming operation for an effective weed control practice.

### Water Control Could Improve All Crops

Great improvement in all crops could be brought about through better water control and development of water sources. The committee recommends that all possible means be employed for the further development of the Silvies River flood control project in line with recommended soil and water conservation practices.

As a matter of record and for use by newcomers, average yields for certain crops are hereby recorded.

#### 1945 CENSUS

Crop	Ave. Yield (Bu.)
Spring Wheat	19.4
Oats	28.8
Barley	28.5
Rye	11.4
Crop	Yield (Tons)
Alfalfa hay	2.0
Clover or Timothy	1.3
Small grains cut for hay	1.0
Tame hay	1.2
Wild hay	1.0

As mentioned, these figures represent only average yields. On some of the better soil types and in favorable cropping years, yields of 40 to 50 bushels of wheat and 3 to 4 tons of alfalfa hay have not been uncommon.

# Livestock Committee Report

Livestock products account for 80 percent of the agricultural income of Harney County. This figure indicates the importance of the livestock industry in this area. Beef cattle numbers have shown a considerable increase from 47,792 in 1940 to 74,542 in 1945, according to official census figures of those years. The reduction in sheep numbers from 80,000 in 1940 to 45,000 in 1945 was considered by the committee to be due mainly to labor problems, increase of predatory animals, and change in range feed conditions. It can be seen then that cattle numbers have increased more than enough to offset the reduction in sheep numbers. Studies indicated that the average age of ewes in Oregon in 1947 was six years. The committee recommended that older breeding stock be replaced with young ewes each year and that ewe lambs be saved for this purpose.

It was pointed out by the committee that grazing permits largely determine the number of livestock in many areas of the county. In 1946, 398,157 animal unit months were recorded for district number 2 of the Idaho-Oregon region, which constitutes a large part of the Harney County grazing land.

## Feed Balance Is Good

The livestock committee believed that the feed balance for the county in general was good. A recommendation of a 50 percent carry-over of hay was made. This figure was recommended only as an average, however, and it was pointed out by the committee that in some areas such as Silver Creek and Burns, a carry-over of 100 percent was advisable.

The problem of hay storage was recognized as an important one. It was recommended that the Harney County Branch Experiment Station research program include a study of the quality of hay stored for different lengths of time.

According to available information studied by the committee, the feeding of mineral supplements was not economical in this area.

Comparative value of wild hay and alfalfa hay was considered. Alfalfa hay is equivalent to a combination of two pounds of 41 percent soybean or cottonseed cake and wild hay fed daily. It was recommended by the committee that 25 percent wild hay be fed with alfalfa hay to prevent bloat.

## Quality of Cattle Is Improving

It was agreed by committee members that the bull grading program should be encouraged and developed further in Harney County.

The following recommendations were made:

1. Bulls grading less than a "C" classification should not be sold in Harney County.
2. Legislation should be enacted making it illegal for any stock owner to turn out on community pastures bulls lower than "C" grade.

The committee indicated that great improvement in the quality of cattle in the last few years was evidenced by heavier weaners and bigger calf crops.

### **T. B. Test Shows No Reactors**

Beginning in January of 1948, a program for Tuberculosis testing of 6,000 head of cattle, representing 10 percent of the number of cattle on the tax rolls, was inaugurated and sponsored by the Harney County Stockgrowers' Association. This move was undertaken in response to a notice from the State Department of Agriculture to the effect that the tuberculosis-free accredited status of the county had expired January 2, 1948. By February 10, 1948, over 6,100 head had been tested without evidence of any positive reactors.

Along with the T. B. testing program, nearly 3500 heifer calves were vaccinated for Brucellosis or Bang's disease. Veterinary services of the State Department of Agriculture and the Federal Bureau of Animal Industry were obtained in this program.

It was recommended by the livestock committee that all cattlemen of the county vaccinate heifer calves between the ages of four and eight months for Bang's disease as a safeguard against severe losses.



Bull grading at the Harney County Range Bull Sale  
Sponsored Annually by Stockgrower's Association

# Farm, Home and Rural Life

## Committee Report

Members of the Farm, Home and Rural Life Committee in making recommendations for better rural living have grouped the problems as follows:

1. Housing
2. Youth Program
3. Community Life
4. Food and Clothing

### Housing — Rural Electrification Greatest Need

It was recognized by the committee that building curtailment, material shortages, and high demand for homes and land have made the housing situation very critical. According to the 1940 housing survey, one-third of the homes in the nation were in good, livable condition; one-third were in need of repair; and one-third were not adequate for living. This same survey showed that only 10.1 percent of rural farms have electric lighting. Another survey made by the committee relative to the development of rural electrification in Harney County since 1938 indicates that the California-Pacific Utilities Company brought services to rural people as follows:

Farms .....	46
Rural Dwellings .....	2
Rural Commercial .....	7
Rural Industrial .....	1
Total .....	56

During 1947 rural lines were extended a distance of 22½ miles, serving 33 farms, 1 rural dwelling and 3 rural commercial establishments. In view of this situation, the committee recommends that rural electrification be advanced more rapidly. In communities further removed from sources of electricity it is recommended that REA districts be set up to serve the rural populations of these areas. It was the opinion of the committee that electrification in rural homes would bring about more improvement in rural living than any other one development.

Thirty-three percent of the rural dwellings of the county are equipped with running water, as shown by the 1945 census. Committee members recommended that as many homes as possible develop modern water and bath facilities in the homes as a main step in improving rural life.

A prediction was made by the committee to the effect that a large percentage of rural homes will be remodeled within the next two years. Following are important developments recommended by the committee to be included in the remodeling or new construction plan.

1. Proper insulation of houses and water systems.
2. Safe construction from the standpoint of fire hazards.
3. Ample storage space in houses.
4. Freezer lockers installed in the home for food conservation.

It was recommended by the committee that in planning new construction or remodeling work, careful study be put in prior to starting work. It was advised that home owners should take advantage of the Farm Building Plan service offered by the Oregon State College Extension Service.

### **Youth Program Needs H. D. A. and More Leaders**

Nearly 20 percent of the young people in Harney County between the ages of ten and twenty are enrolled in some type of youth activity. Youth activities now in existence are 4-H club work, Girl Scouts, Boy Scouts and Rainbow Girls. The committee believes that in order to reach a larger number of young people, the youth program should be broadened considerably. Since rural youth were considered the most difficult to contact, great emphasis was placed on developing the 4-H club program.

A two-fold recommendation was made regarding this problem.

1. Possibilities of obtaining the services of a Home Demonstration Agent for Harney County should be studied carefully. The committee's opinion is that an additional worker in this field would aid greatly in developing the 4-H club program as well as being of assistance to homemakers in handling problems connected with rural living. Therefore, this committee recommends that a committee be appointed at the general conference for the purpose of studying the feasibility of employing a Home Demonstration Agent for Harney County. It was the opinion of the committee that this would be an important step in the advancement of the rural youth program.

2. Training of more 4-H club local leaders through farm and community organizations should be encouraged constantly. It has been recognized that the local leader is the backbone of 4-H club work. Therefore, the committee recommends that Granges, Community Clubs, Schools and other rural organizations sponsor as many local leaders as possible. In this way the committee believes that a larger number of 4-H boys and girls will be able to take part in club work and the youth program in general will be made more effective.

### **Community Life — New Hospital a Major Need**

A first requirement for better health in Harney County is the construction of a new hospital. It is believed by the committee that a new hospital would encourage additional assistance of medical personnel to serve this area.

The American Medical Association and the U. S. Public Health Service recommend, in order to maintain minimum standards of medical care and hospital care for the civilian population, that one physician is needed per 1000 population,  $4\frac{1}{2}$  hospital beds are needed per 1000 population.

In view of these standards, the Farm, Home and Rural Life Committee recommends a minimum of five doctors and a 30 bed hospital to properly serve this area.

Of the 17 rural schools of the county, over half are without a hot school lunch program. It is recommended that as soon as these school districts are financially able, teacher's cottages, including kitchen facilities, be constructed to make possible a hot school lunch program in each school.

It is recommended that suitable playground equipment be provided for rural schools by the community or school district.

The committee placed great emphasis on the sanitary conditions of all schools, urging that high standards be maintained in all Harney County schools.

To develop in the community a better spiritual, social and recreational life for the rural family, it is recommended:

1. Rural communities cooperate more fully in maintaining community churches and Sunday schools in order to more adequately provide for the spiritual needs of the rural family.
2. Rural churches develop an expanded youth program which will include the use of church facilities as youth centers.

### **Food and Clothing — Encourage Home Food Production**

Good nutrition is essential for the physical welfare of the family. Families should be encouraged to continue the home production of the family food supply in line with the national "Food for Freedom" movement.

Studies of family food consumption reveal that the family diet is better in both quality and quantity when foods are produced at home. Therefore, the committee recommends:

1. That wherever possible every family be encouraged to raise a garden, with emphasis on producing green, leafy vegetables.
2. That educational assistance be given to farm families on the production of home gardens, and conservation of surplus produce by the most acceptable methods of canning, freezing and storage.
3. That wherever possible a home poultry flock and enough dairy cows be maintained to provide a sufficient supply of milk, butter and eggs for family use.

## **Harney County Wildlife**

Harney county is known throughout the west as one of the outstanding areas for hunting and fishing.

It produces a wide variety of game such as mule deer, antelope, elk, beaver, upland game birds, waterfowl, doves and other less important species.

Harney and Lake Counties comprise one of the leading deer producing sections of Oregon. It is extremely difficult to make a reliable estimate of the total population; however, many observers believe there are from 15 to 18 thousand deer in this area. It is believed that more deer are killed in Harney county than any other county in Oregon. Records show that the deer population has only slightly decreased over the past three years in spite of the heavy concentration of hunters. Observations the past two winters indicate the buck-doe ratio is 1 to 5.0 and fawn-doe ratio of 1-1.6. This buck-doe ratio is satisfactory and the high survival of the young fawn should help to maintain a good deer herd for years to come. The average weight of the mature buck killed in this district has been 176 pounds compared to the state average of 173 pounds.

About 5000 antelope have been shot by sportsmen from 1938 until 1945 during the open season in Oregon, and by far the larger percentage of these animals were killed in Harney and Lake counties. The season has been closed the past two years, since the antelope herds were considerably reduced in numbers by predators; however, the predator losses have been eliminated and the rapid increase in the herds will undoubtedly permit sportsmen to harvest some of the surplus bucks in the near future.



Fish Lake, Atop Steens Mountain

There are approximately 4,500 antelope in this area and they are widely distributed all over the county except for the area in the north where the land is heavily forested.

Elk have spread rapidly from the northeastern part of Oregon since 1933 when the first open season was held on these animals. During the 1945 and 1946 season either sex was legal for the hunter and in 1947 only bulls were killed. A total of 103 bulls and 61 cows were killed in Harney county during this period by approximately 400 hunters.

The beaver has proven to be an extremely valuable animal to the county from the standpoint of water conservation, erosion control, and as a fur animal. In 1939 a transplanting program was initiated and since that time 193 beaver have been livetrapped and transplanted to desirable streams in Harney county where some value could be realized from their work. During the past two winters 685 beaver have been deadtrapped in streams and lakes where damage complaints have been received from the landowner. These pelts were sold for over \$20,000 and the land owner, share trapper, and Game Commission each received one third of this money.

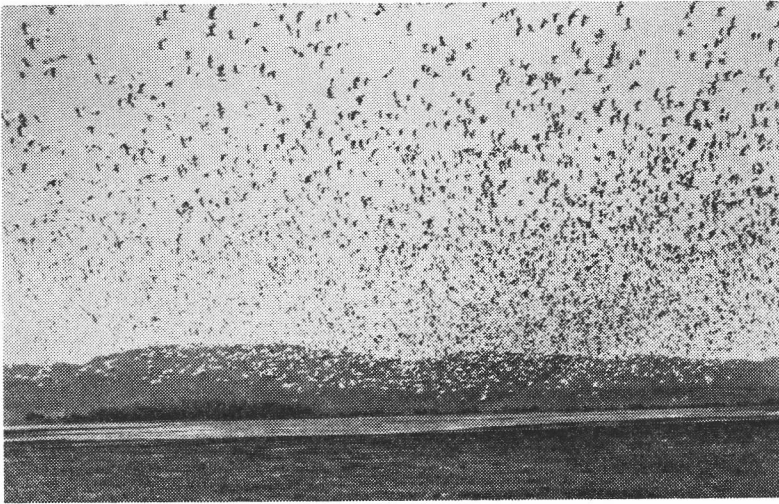
During the 1946-47 trapping season Harney county trappers received \$23,184.00 from other furbearers such as the muskrat and mink. This high yield of fur bearing animals is the highest of any county in the state.

Many other animals such as the ring-necked pheasant and dove provide ample hunting for all local sportsmen, the value of which is difficult to estimate. There are approximately 10 to 15 thousand outside sportsmen that regularly visit Harney county each year.

## Wildlife Refuge Known Throughout Nation

The Malheur National Wildlife Refuge, an important wildlife nursery of the nation, is situated in Harney County, the headquarters being 35 miles southeast of the county seat of Burns. The refuge comprises approximately 175,000 acres and contains Malheur, Mud and Harney Lakes, the major portion of the Blitzen River Valley, and the old Wm. Hanley Double O Ranch. The water that feeds this area comes from the Donner and Blitzen River and its tributaries from the south, the Silvies River from the north, and Silver Creek from the northwest. Malheur and Mud Lakes at certain elevations drain into Harney Lake which is the dehydration area of all three water sheds.

The importance of this area for waterfowl was recognized years ago and on August 18, 1908, President Theodore Roosevelt issued an



Abundance of Game and Wildlife as Shown Here Mark Harney County as Important Refuge of the Nation

executive order establishing Lake Malheur reservation which included Malheur, Harney and Mud Lakes containing an area of almost 90,000 acres. From 1935 to 1941 additional lands were acquired which included the Blitzen Valley area and the Double O unit.

To indicate the importance of this particular area for birds, there have been 228 different species recorded using the area, and from birds banded on the area returns have been received from Pt. Barrow, Alaska to the north, Columbia, South America to the south, and Pittsburgh, Pennsylvania to the east. Much information has been acquired from the bird banding operation regarding the routes of migration and the importance of the area to other states from

the hunters' standpoint. Although the Malheur National Wildlife Refuge is of primary importance because of its bird population, mammals make up a considerable number which include mule deer, antelope, and many of the fur bearers. There have been a total of 53 species of mammals recorded using the area.

In 1948 from 1400 to 1500 tourists visited the area, and in addition over 1400 hunters were checked in at the checking station on the public shooting ground. This feature is relatively new, and it is anticipated that the hunters will increase with the years as the area becomes more publicized.

It has been found that restricted grazing and haying may be permitted to the advantage of wildlife management, and last year the receipts from this form of economic use plus the fur taken totaled over \$60,000, 25% of which goes to Harney County for distribution into the road and school systems.

On the basis of the tax roll number of cattle in Harney County, the Malheur National Wildlife Refuge provides almost 15% of the total cattle grazing figured on a year around basis in Harney County. In addition some sheep grazing and wintering is permitted on the Double O unit.

From the standpoint of the tourist, the best time to observe the abundant bird life and game animals at the Malheur National Wildlife Refuge are late in the spring or early summer, and in the fall during fall migration.