

EXPERTS DECLARE OREGON IDEAL DAIRY STATE—ANNUAL OUTPUT IS WORTH MANY MILLIONS.

By James Withycombe, Director Oregon Experiment Station.

A FIFTEEN MILLION DOLLAR product does not represent the possible dairy output of this state. Dairying is the largest single agricultural industry in Oregon and is likely to remain so indefinitely, unless perchance the present enthusiasm in the field of horticulture should push this industry to a premier position. Communities which practice dairying are always prosperous. The cow not only enriches the owner, she also fattens the land. Soil fertility and civilization go hand in hand. Thus the modern cow is an active promoter of an advanced civilization. It may appear irksome to some to care for the dairy herd 365 days a year, but this is an advantage rather than a discouragement. Agricultural communities which find constant employment are usually characterized by contentment and patriotism. It is a fact that dairy sections are not only prosperous, but the people are noted for their hospitality and social attainments. Thus the cow is not only the harbinger of prosperity, she is also the harbinger of peace. The modern cow has saved the home of many a farmer, for she is a genuine mortgage-lifter. When given proper care, she fails not to yield a handsome monthly stipend. She has furnished more farm homes, educated more children and brought greater happiness to rural communities than any other branch of agriculture.

Conditions are highly favorable for dairying in Oregon. Practically all of the western and much of the eastern and southern sections of the state are well suited to the industry. With proper systems of cropping, green, succulent, nutritious feed can be secured from the open field throughout the year over a large portion of Oregon. This of itself is a very important factor in the industry. In sections where climatic conditions preclude the growing of winter crops, roots and silage can be substituted.

In recent years the growing of kale has made rapid progress. This is not

ing of the fundamental principles of dairying. The cow-testing associations, of which there are several in the state, are doing a good educational work in this direction. Better selection and improved methods of feeding are bringing results. The 100 cow is steadily becoming more common. Pure-bred sires at the head of the herd are the rule rather than the exception, as in the past. No up-to-date dairyman will be found with a graded sire heading his herd.

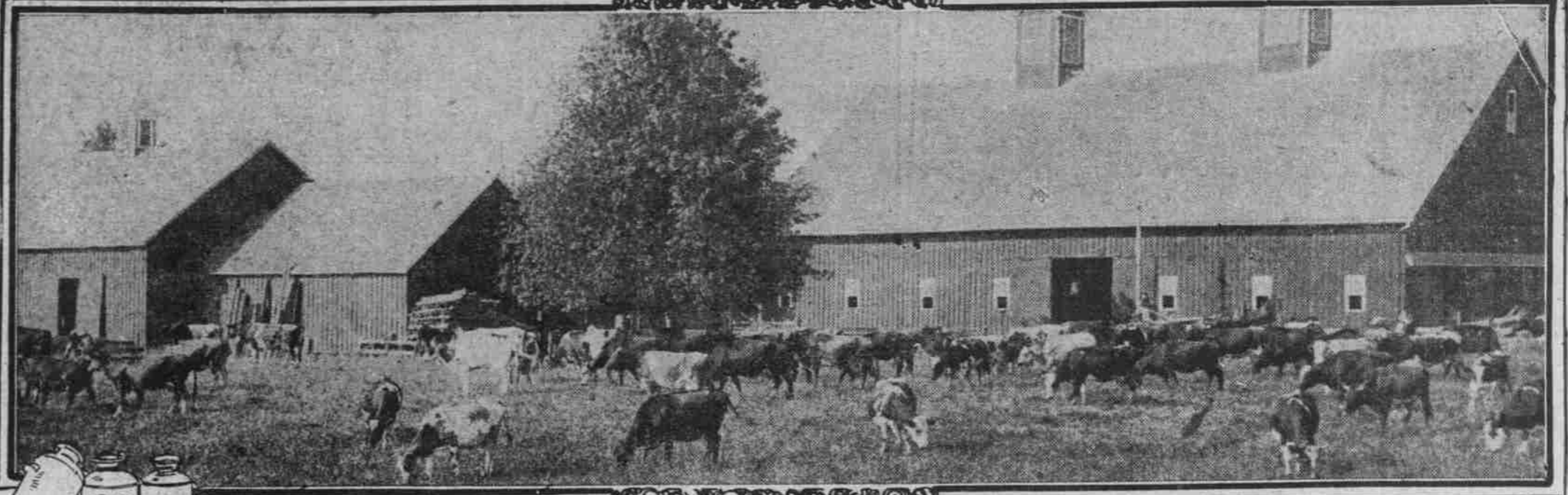
There are, however, two factors seriously operating against the rapid progress of dairying: First, the susceptibility of our dairymen to be induced by tempting prices to part with their good cows. Carloads of cows are constantly leaving for adjoining states. This is certainly a rehabilitation of the old adage of killing the goose which lays the golden egg.

Second—The tendency among dairymen to veal their heifer calves. This is little short of a calamity to the dairy interests of the state. Fully to appreciate what this loss means is to consider the net yield of a cow during her life. The profitable life of a cow is about ten years. A good cow, under proper care, will yield a net profit of \$50 annually. Thus in ten years she will yield \$500. This logically represents the value of every good heifer calf to a dairy community. Dairymen by all means should save their best heifer calves.

Problems in feeding are being rapidly solved by our dairymen. Summer pasture, except in the Coast counties, is not depended upon. Up-to-date dairymen have learned that it pays to follow the partial or complete soiling system for summer feed. At the Experiment Station five acres of alfalfa supported 20 cows all summer. This was cut four times and fed green in the barn. Soiling is not only economy of land, but it gives better results than pasture. Cows that are allowed to roam over a large pasture will not yield as much milk as those that are well fed and take less exercise.

The aim of many of our dairymen is to make one acre supply the rough feed for a 100 cow. This term is used to designate a cow whose milk and butter fat will represent a value of \$100 annually. There are a number of herds of such cows in Oregon. These herds are due to intelligent breeding, selection and good care. Dairymen are rapidly learning that the special-purpose cow is the one to be depended upon. They have also learned that generous feeding gives the best returns. The cow is a machine and must be well fed for maximum profits. She is the very best machine the farmer can have for transforming the crude crops of the farm into a highly concentrated and valuable product. The cow enables the farmer to get his produce to market at the minimum freight rate. He can ship his hay and grain in the form of butter fat. For the small farmer with moderate capital the cow will prove to be his best friend. She will not only give him employment, but she will pay him well for his labor.

Winter dairying is found to be more



A TYPICAL OREGON DAIRY



THOROUGHBRED HOLSTEIN STOCK



REGISTERED JERSEY CALVES



HEREFORD STEERS READY FOR SHIPMENT



RIBBON WINNING DUTCH BELTED CATTLE IN CLATSOP COUNTY



YAMHILL COUNTY HERD OF DURHAMS

a new plant in this section, but its growth for a number of years has been restricted to a few farms. Within the last three or four years, however, its growth has assumed a much wider scope. It is pre-eminently the best winter succulent feed for the dairy cow. There are but few winters in Western Oregon when kale cannot be successfully harvested in the open field. In the coast counties kale can be depended upon as a sure winter crop.

In kale and vetch the dairyman has two superior feeds. They are both rich in protein, highly palatable and easily grown. With 40 pounds of kale and 20 pounds of nicely cured vetch hay, a cow giving an ordinary flow of milk will do well. In fact, with such a ration very little mill feed is required. There is one important lesson that many of our dairymen should learn, and that is to grow if possible all the feed required on the farm. This will mean growing the legumes for hay and providing kale, roots and silage for succulent feed and barley, if practicable, for grain feed.

In all dairying sections land is rapidly advancing in value. This is due to increased productivity. The cow paves the way for better things on the farm. Oregon's need is more and better cows. Many of our farmers have learned, however, that it costs just as much to maintain a poor cow as it does a good cow, hence the weeding-out process is in active progress in many dairying sections. This has been brought about by a better understand-

solved by our dairymen. Summer pasture, except in the Coast counties, is not depended upon. Up-to-date dairymen have learned that it pays to follow the partial or complete soiling system for summer feed. At the Experiment Station five acres of alfalfa supported 20 cows all summer. This was cut four times and fed green in the barn. Soiling is not only economy of land, but it gives better results than pasture. Cows that are allowed to roam over a large pasture will not yield as much milk as those that are well fed and take less exercise.

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Winter dairying is found to be more profitable than Summer dairying. Many of our best dairymen estimate that a cow freshening in the Fall will yield 25 per cent greater value of dairy products than a cow that freshens in the Spring. They have also discovered that cows stabled in comfortable stalls will yield

better returns than those confined in the uncomfortable rigid stanchion. At the Experiment Station a test of stalls was made. A portion of the dairy herd was purposely confined in the common rigid stanchions and a portion in a comfortable individual stall. It was found

that the cows confined in the comfortable stalls yielded 10 per cent better returns than those confined in the stanchion. At this ratio if all the cows in Oregon were confined in rigid stanchions it would represent an annual loss of \$1,500,000. The percentage of cows confined in rigid stanchions in Oregon is rapidly growing less. Cleanliness and comfort are important factors in dairying.

Dairying is steadily encroaching upon the grain and stock farms. There are many sections maintaining successful dairies now where a few years since the industry was considered wholly impracticable. The cow is a wonderfully cosmopolitan animal. She will thrive on the rich valleys below the sea level and prove profitable in sections of considerable elevation. Dairying, however, finds its best environment where green feed can be secured the year round. Fully one-third of the area of Oregon will meet this requirement. Many profitable dairy herds are maintained wholly upon grass and hay. This practice is common in the Coast counties and in the more elevated sections of Eastern and Southern Oregon. Reports have reached this station where cows have yielded over \$10 per month from alfalfa hay. One of the most successful dairy herds in the state, from the standpoint of profit, was fed kale and vetch without mill feed, and the gross yield per cow was over \$100 per year.

FARMERS AND RAILROADS CO-OPERATE TO AID STATE

By R. B. Miller, General Freight Agent O. R. N. and Southern Pacific.

NO matter how wise a man may be, there are some things he can see and some things he can hear that will be to his material advantage.

Time was when the people of the earth were few, and their wants and vocations necessarily limited, but the constantly increasing population, and the resulting growth in the affairs of men have created new conditions, and stimulated their advancement in many ways.

countries, marvelous as it has been, should continue at the same or even higher ratio, and emphasizes the fact that our needs are not only becoming greater, but that the competition in supplying them, already keen, will become more so, and that our present and future development must be along the most practical and scientific lines.

We live in an age that may be called the age of necessities. The necessities of the products of agriculture stand pre-eminently, because they represent the very foundation of our existence. There is no other vocation, industry or pursuit with which the welfare of the country is so closely associated, nor upon which our commercial and industrial activities so largely depend. Therefore, as a business, the conduct of agriculture becomes of paramount importance, and its influence, directly and indirectly, upon transportation a matter of special concern to the carriers. Under such circumstances, the cultivation of the land and the tillage methods employed are questions entitled to the most serious consideration.

Oregon and Washington are essentially agricultural states, and coincident with the fertility, development and productiveness of their farms must be determined the wealth and prosperity of their inhabitants. There is gold in the mountains and timber on the hills, but these are exhaustible, while the soil will continue to produce for all time, if properly nursed. It can, however, become run down or worn out, and denuded of those properties which are essential to its life-giving qualities, and if we are to profit from the experience of other states and countries, the question of future production, because the actual financial worth of the land is not only involved, since its value is measured by the value of what it will produce, but the time will come when the population has become so dense that every acre will be required to yield its maximum as a matter of absolute necessity. Consequently the care of the soil, the necessity for putting back into it those elements which become absorbed, and yet are required for proper plant sustenance, as well as the adaptability to different crops, productiveness, and

general cultivation, are matters to which much study and thought must be devoted.

The first school for the teaching of agriculture was founded in Switzerland in 1806, and since then many institutions of a similar character have been established in France, Prussia, Germany and Russia, and, in fact, throughout all parts of Europe are

found such schools supported by the state. In those countries the productiveness of the land has been materially increased rather than diminished, notwithstanding the fact that it has been cropped for hundreds of years.

Name	Pounds
Shaniko	2,000,000
Heppner	2,500,000
Fendleton	2,500,000
Arlington and Condon	1,500,000
Ontario and Vale	2,000,000
Echo	750,000
Huntington	500,000
Baker City	1,500,000
Eglin	1,500,000
The Dalles	250,000
Lakeview	1,000,000
Willamette Valley and Southern Oregon	1,500,000
Total	18,500,000
Value	\$2,500,000

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That the science of agriculture is also recognized in the United States is evidenced by the action of the Federal Government in establishing a Department of Agriculture, and by the action of the several states individually in establishing experiment stations and colleges for the express purpose of promoting general farming pursuits.

These trains consist of a number of cars, each containing exhibits devoted to some particular kind of agriculture, as, for instance, agronomy, horticulture, entomology, dairying, livestock, etc., and especially equipped for the purpose of practical demonstration. Accompanying these trains in their respective states were members of the faculties of the Oregon and Washington Agricultural Colleges, experts in their particular line, who delivered lectures on all subjects of interest and conducted the demonstrations. The interest manifested on these occasions by all concerned was very grat-