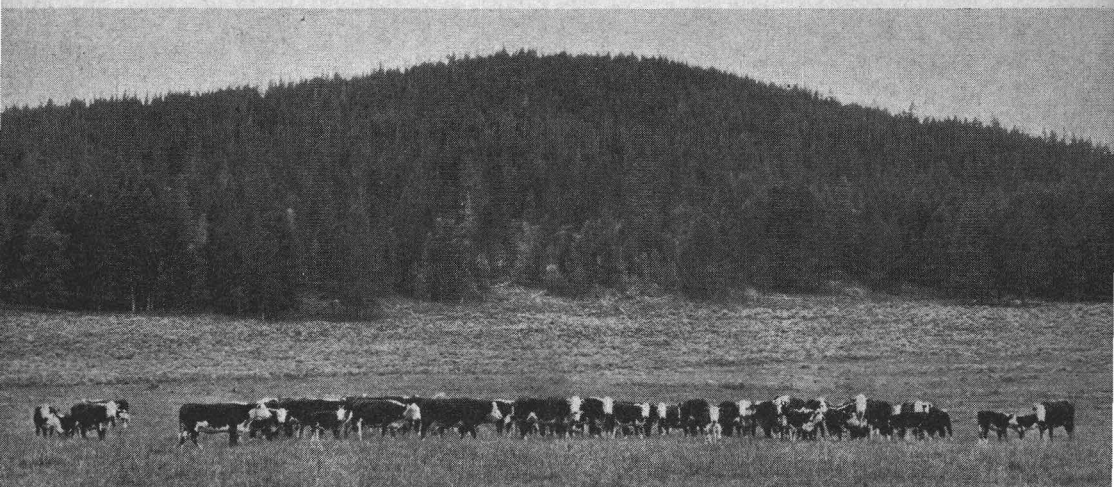


F O O D F O R V I C T O R Y



Converting
WHEAT TO MEAT
HOGS, BEEF CATTLE, SHEEP

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Present Costs and Proceeds of Feeding Wheat to Animals

Figures are based on market prices September 25, 1942.
As market prices change, figures should be adjusted.

FEEDING CATTLE (see page 5)

Values used: Calves 11 cents per pound; yearling feeders 10½ cents;
ground wheat \$35.00 per ton; and alfalfa hay \$15.00 per ton.

	<i>Calves</i> 400 <i>pounds</i>	<i>Yearlings</i> 700 <i>pounds</i>
Feeding period, days	150	100
Cost of animal	\$44.00	\$ 73.50
Cost of grain	17.50	14.00
Cost of hay (alfalfa)	15.00	18.00
Total cost	\$76.50	\$105.50
Gain in weight (pounds)	300	200
Total finished weight (pounds)	700	900
Farm value as of September 25, 1942	13½¢	13¼¢
Total value of animal	\$94.50	\$119.25
Return over cost	\$18.00	\$ 13.75

Under such conditions, the calf would return \$18.00 or the year-
ling steer \$13.75 to cover cost of labor, interest, taxes, and losses.

FEEDING LAMBS (see page 7)

Feeding period, days	100
Feeder lamb, 65 pounds @ 11 cents	\$7.15
100 pounds whole wheat @ \$32.50	1.63
200 pounds alfalfa hay @ \$15.00	1.50
Cost of lamb and feed	\$10.28
Weight of finished lamb 95 pounds, @ 12 cents	\$11.40

This would give a return of \$1.12 to cover other expenses in-
volved, such as labor, taxes, interest, and losses.

Cover picture: Livestock in thrifty condition provide highest poundage of meat.

Converting Wheat to Meat Hogs, Beef Cattle, Sheep

By

H. A. LINDGREN, Extension Animal Husbandman

Wheat is a surplus crop. It is also an important feed grain for fattening and maintaining all classes of livestock. Oregon produces annually 75,000 feeder cattle, most of which are sent to other states to be fattened. Forty per cent of the lambs produced in the state are sold as feeders. The Pacific Coast produces only half the pork products normally consumed in that area. At this time there is opportunity to aid the war effort by converting a surplus crop into meat, wool, fats, and other essential livestock products needed for wartime activities. Storage facilities for wheat are inadequate. Here again, feeding of wheat to livestock will contribute to the solution of an acute problem. Suggestions regarding the use of wheat in the livestock feeding ration are herewith offered.

WHEAT FOR SWINE

Value of wheat for fattening hogs. Ground wheat has been found equal in value to corn and barley for fattening hogs. The quality of the wheat-fed pork is equal to or better than pork fattened on other grains. The amount of wheat required to fatten a 30-pound feeder pig to a 200-pound weight is 715 pounds, or its equivalent. The amount of grain required can be reduced through the use of pasture crops such as alfalfa, clover, growing grain, or grass. Pasture will reduce the grain requirement in the production of 100 pounds of pork by $\frac{1}{4}$ to $\frac{1}{3}$ the amount otherwise needed.

Balanced ration important. With all grains protein supplements are essential in order to obtain the best results in feeding hogs. For fattening, 8 to 10 pounds of protein supplement are required, such as tankage or fish meal, or 20 pounds of other high protein concentrates for each 100 pounds of grain fed. Such combinations will give the proper balance between carbohydrates and proteins. Hogs run on alfalfa pasture during fattening require 5 to 7 pounds of tankage or fish meal or 9 to 12 pounds of other high protein meals per 100 pounds of grain to balance the ration.

If skim milk is available at the rate of from $\frac{1}{2}$ gallon to 1 gallon

per pig per day, that will balance the ration without the addition of the protein supplements mentioned above.

Minerals. Hogs produce gains rapidly and do not obtain enough minerals from the grain to take care of their needs. For best results, a mineral mixture is needed. Such mixture can be made up of 100 pounds of sterilized steam bone flour, 100 pounds of ground limestone, and 100 pounds of salt. The mineral can be placed in a trough or self feeder in the lot where the hogs can satisfy their own appetites for it, or it can be mixed with the feed at the rate of 2 pounds of the mixture to 100 pounds of the grain. Growers are cautioned against putting the mineral mixture out free choice if the hogs are salt hungry, as they may consume too much of the mixture at first in satisfying their appetites for salt, causing losses. To avoid this danger, a little salt, a teaspoonful per head daily in the feed, will satisfy the craving for salt in a week or 10 days so that the pigs can be allowed free access to the mixture in the lot.

Disease. For the greatest success in hog production, minimize losses through the control of diseases. Ailments, such as necrotic enteritis, cholera, round worms, etc., can be largely avoided. Sanitary precautions, such as changing pastures, thorough cleaning of hog houses or sleeping quarters, or ploughing up long-used pastures, help keep down disease.

Wheat valuable for breeding and growing pigs. Pigs that are being grown for breeding stock can be produced most economically on pasture together with 2 to 3 pounds of wheat plus 10 per cent tankage or skim milk per 100 pounds of live weight daily. This, together with the mineral suggested, will furnish a satisfactory growing ration. Mature sows and boars can be maintained on pasture or leafy alfalfa hay together with 1 pound of wheat per hundred weight per day. To the grain mixture, add 12 to 14 per cent protein supplement for sows that are carrying litters, to supply necessary protein for the development of the litter.

Save labor. Much labor can be saved during these times of scarcity through the use of fenced pastures, self-feeders, and convenient watering devices. Self-feeders are easily constructed of wood or discarded iron barrels such as have served their usefulness as containers for other products. Specifications and plans for construction are available through your county agent.

Cost of production. Long experience shows that whenever 100 pounds of pork, live weight, on the farm sells for the same as

the cost of 625 pounds of grain, the hog raiser will get pay for his feed, interest, taxes, labor, and other expenses. At the present time, with ground wheat at 1.75 cents per pound or \$35.00 per ton, hogs would need to sell for 11 cents a pound on the farm in order to pay for all the costs. On the present day market (September 25, 1942), hogs are worth 14 cents on the farm, or a margin of 3 cents per pound over costs. Under these price conditions, hogs can be fattened profitably on wheat, and the operator will contribute to the effort of strengthening the chain that leads to victory.

WHEAT FOR CATTLE

Wheat is an excellent feed grain for fattening cattle. A 400-pound weaner calf fed 1,000 pounds of ground wheat and 2,000 pounds of hay can be put in satisfactory market condition in 150 days.

A 700-pound yearling steer fed 800 pounds of ground wheat and 2,400 pounds of hay can be fattened in 100 days.

The present cost of feed supplies and feeder animals (September 25, 1942), and the results that could be expected if the selling price of finished cattle remains at the level of the above date are shown in the example on page 2. As values change, the figures can be adjusted.



A self feeder for chopped hay including feed bunk for grain. Plans available through your county agent.

Factors for success in cattle fattening. The results cited in the example can best be accomplished by attention to certain details such as:

1. Regular time of feeding each day.
2. Feeds of good quality.
3. Free access to pure water.
4. Lots bedded with clean straw for a comfortable bed.
5. Free access to salt.
6. Attention to bloat.*
7. Management methods to keep the animals quiet and contented.

Wintering cattle on wheat. Beef cattle, like other classes of livestock, should be kept in thrifty condition at all times. Cows and heifers need feeds that will promote growth and development of their calves before and after they are dropped. Legume hays of good quality are usually sufficient for cows carrying calves. For the 1942-43 season the hay supply may need to be supplemented with other feeds, especially where hays other than legumes are fed. For this purpose, 1 pound of high-protein concentrates, or 3 pounds of wheat daily is recommended. A well-nourished cow is usually a better milker, and thereby produces a heavier calf at weaning time. Suckling calves should gain 1.25 to 1.75 pounds or more per day if the dams are giving a good supply of milk.

Wheat on pasture. Cattle will gain more rapidly on pasture and grain than in the feed lot. A small allowance of from 3 to 4 pounds of ground wheat per animal daily will produce as much daily gain as cattle on 8 pounds of grain and hay in the feed lot. Grain-fed pasture cattle will grade higher than cattle fed on grass alone. To save labor, grain on pasture can be self-fed. Under this condition, the daily grain consumption will be somewhat higher, but larger gains will compensate for this.

Hay supply short. For the 1942-43 season, if a normal winter is experienced, there will not be enough hay to carry the animals through in the best condition. It would be wise, therefore, to put in a supply of wheat or oil cake to be ready for an emergency. As stated before, alfalfa or other legume hays are excellent for wintering. If the hay supply is short, remember 1 pound of wheat will supply as much feed value as 3 pounds of hay. Also, 1 pound of oil

* Some animals fed grain and alfalfa in the feed lot are subject to bloat, usually $\frac{1}{2}$ hour to 1 hour after feeding time. A helpful treatment for bloated animals is 1 teacupful of live-stock mineral oil such as can be obtained from the oil companies. Much loss can be prevented if the attendant checks the animals after feeding and gives treatment to bloat cases.

cake contains as much protein as 3 or 4 pounds of grain. Where other than legume hay is used, such as grain or grass hay, it will pay to supplement it with 1 pound of cake or 3 pounds of wheat.

WHEAT FOR SHEEP AND LAMBS

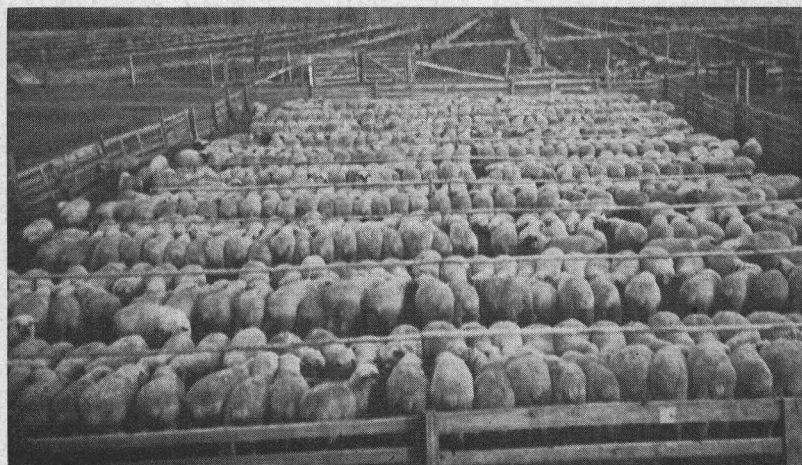
Fattening lambs. Oregon lamb feeders have shown that the average healthy range feeder lamb can be put in top market condition with 100 pounds of whole wheat together with 200 pounds of alfalfa hay of good quality. Start with a small amount of wheat daily, $\frac{1}{4}$ pound per head. Increase as rapidly as the lamb will clean it up. At the end of the feeding period, each lamb will be consuming $1\frac{1}{2}$ pounds or more daily.

An average feeder lamb will weigh 60 to 70 pounds and should be ready for market in 100 days, weighing 90 to 100 pounds after consuming the amount of feed indicated.

The present prices of feed for lambs (September 25, 1942), would place the cost of a finished lamb about as indicated in the example at bottom of page 2.

Factors that influence success in fattening lambs are as follows:

1. Regular time of feeding.
2. Good quality feeds.
3. Salt.
4. Pure water.
5. Management methods to keep the lambs quiet, comfortable, and contented.



Lambs make good gains on whole wheat.

Shearing. Lambs fed under sheds and sheared at the time of putting them on feed will produce a shearling pelt, which is needed for making coats for soldiers and sailors serving in cold climates. The United States is asking for 15,000,000 of these at the present time. The pelt for this purpose must carry from $\frac{1}{4}$ to 1 inch of wool growth.

Lambs that are shorn are more comfortable and have keener appetites.

Wintering ewes. Ewes that are in thin condition in the fall need supplemental feed in order to produce a heavy fleece, a large strong lamb, and more milk for the lamb.

One-half pound or more of wheat daily per ewe, in addition to the hay during the winter, will assist in accomplishing the best results.

For young, good-mouthed ewes, whole wheat can be used. For older sheep, the wheat should be ground. Lambs that have heavy milking mothers make the most economical gains.

Creep feeding. Lambs running on pastures with their mothers can be creep fed to advantage. For this, use a mixture of 1 pound of oil meal to 9 pounds of wheat. Locate the creep near the bed ground, water, or salt supply. A creep is an enclosure with openings large enough to admit the lamb but too small to admit mature sheep. The grain is kept in a clean trough inside the enclosure. By this device lambs that do not fatten while with the ewe can be made top lambs if run on good pasture and supplied 1 pound of whole wheat daily after they are weaned.

Parasites. Sheep often become infested with worms. When this occurs, they do not thrive. Where such a condition develops, consult your county agent and obtain advice. Sheep that are well nourished will be able to throw off the effects of worms better than those that are in a run-down condition.

Meat, wool, and sheep-lined coats. Your sheep enterprise is a factory that turns out materials of utmost importance to the war activities all along the line. The operation requires careful management in order to furnish this material, but with such management on a sound basis, the business will be profitable as well as a means of contributing articles needed to win the war—meat, wool, and sheep-lined coats.

Cooperative Extension Work in Agriculture and Home Economics

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