Feeding Wheat To Livestock and Poultry

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H. A. Sandhouse, O. C. Ufford, and A. C. Allen

Wheat is second only to corn as a cereal in the United States, and under normal conditions the major part of the crop is raised for the manufacturing of human food. Consequently, very little wheat is generally fed to livestock and poultry. Most grains produced for livestock feeding, such as corn, barley, grain sorghums, and oats are generally provided at lower costs than is wheat.

Wheat has been used extensively as a livestock feed when it was very low in price. When properly fed, it is a satisfactory feed for all classes of livestock. Low-grade wheat not suitable for manufacturing or milling purposes may be almost equal in feeding value to grain of high-milling qualities.

Feeding wheat in place of other grains is not a new idea. Both experimental tests and practical farm experiences have demonstrated the feeding value of wheat for more than 40 years.

Many farmers who have had experience in feeding wheat merely take it as a matter of course. If the price of wheat is high, they feed corn, and if the price of corn is high in comparison to wheat, they substitute some wheat in the grain ration. These two grains appear to be practically interchangeable for most classes of livestock. It all depends on the relative prices as to which one is better to feed.

How to Get Wheat for Feeding

Farmers interested in purchasing Government-owned wheat for livestock and poultry feeding may obtain complete information from their local County AAA Committee or County Extension Agent as to the procedure in ordering the wheat, the price at which it can be delivered to local points for distribution, and the approximate length of time required for completing the transaction.

What It Costs

Wheat prices for livestock feeding when purchased through the Commodity Credit Corporation, were established at prices equal to 85 percent of corn parity, but these prices varied according to location, transportation, handling, and storage charges at the point of delivery. The prices now in effect with respect to Government wheat are equal to 100 percent of the corn parity price.
The Comparative Feeding Value of Wheat and Corn

Wheat is higher in protein than corn, and does not contain much more fiber than corn. Wheat has 2 percent fat in comparison to 4 percent in corn. Wheat is equal to corn in digestibility, and the same in total digestible nutrients as corn of the same dry-matter content. Wheat is lower in calcium than oats, but is higher than corn. Wheat contains more phosphorus than the other grains.

Wheat is deficient in vitamins A and D, the same as other cereal grains, and care should be used to select feeds high in these essential vitamins to balance any grain mixture or ration. The average protein content of wheat is 13.1 percent, which is considerably more than corn and slightly higher than oats. The protein content of wheat varies according to localities, and is affected by climatic conditions. The average protein content of wheat varies from less than 10 percent to more than 13 percent.

Wheat is a satisfactory feed for livestock and poultry when fed in suitable rations according to experimental and practical feeding tests. Wheat, when fed alone, may cause digestive disturbances. It gives best results when fed in combination with other grains.

For all classes of livestock, except sheep, wheat should be coarsely ground or rolled to make it more palatable, and to prevent the formation of dough balls or sticky masses in the mouth and digestive tract, which will occur when wheat is finely ground.

Wheat has a value, about equal pound for pound, with corn for feeding livestock and poultry when properly prepared and used. In the present emergency, wheat wisely used can help the farmer "step up" the production of meat, poultry, and dairy products, which are vital to the Food Production Program.

Wheat, as well as other cereal grains, is deficient in calcium. Therefore, when non-legume roughages are being fed, it is essential to provide the livestock free access to the following mineral mixture in a feed box in the corral:

- Finely ground limestone—2 pounds
- Special steamed bone meal—2 pounds
- Ground salt—1 pound

This mineral mixture also provides a good source of phosphorus, which is very apt to be deficient in the ration of most livestock.

Salt should be supplied in a separate container, and in addition to that, included in the above mineral mixture.

How to Feed Wheat to Hogs

1. Wheat has about the same feeding value, or is slightly superior, to corn for hogs.
2. Wheat is higher in protein than corn and when fed requires less protein supplement in the grain ration.

3. Wheat may be substituted for corn in most rations, but when fed alone, wheat may have a tendency to make hogs go “off feed.”

4. Whole wheat can be fed satisfactorily in self-feeders, but should be coarsely ground when hand fed.

5. Grinding wheat increases the feeding value about 6 percent.

6. Soaking wheat will not take the place of grinding. In most cases, when fed to hogs, has shown up to a greater advantage than when fed to any other class of livestock. For hogs, wheat seems to produce a firmer fat. Slightly less protein supplement is needed to balance the ration with wheat than with corn.

7. Alfalfa hay or meal should be added to the grain mixture in addition to the protein supplement. Vitamins, such as A and D, are necessary for maximum growth and production. They are found in green, leafy, alfalfa hay, alfalfa meal, or pasture. Up to 5 percent alfalfa may be added to the fattening ration with good results.

Feeding Wheat to Beef Cattle

1. Wheat for beef cattle is equal to, or slightly greater, in feeding value than corn.

2. Wheat should be coarsely ground, rolled, or cracked for best results when included in any grain ration. Finely ground wheat is not palatable, and forms a sticky mass in the mouth and paunch, tending to throw cattle off feed. It sometimes causes bloat.

3. Ground wheat was 18 percent better than ground barley for fattening cattle, according to results from several experimental feeding tests. Whole wheat may be considered to be worth about as much per ton as a good grade of shelled corn for beef cattle, but the wheat must be ground before feeding. Since wheat contains more protein than corn, slightly less protein supplement is needed to balance the grain ration.

4. Wheat should be used in a grain mixture with ground corn, ground or rolled barley, or oats for best results. Wheat may constitute up to one-half of the grain ration when mixed with other coarse-ground feeds.

Feeding Wheat to Sheep

1. Wheat is about equal to barley and has from 80 to 85 percent of the feeding value of corn when fed to lambs in a grain ration composed of 50 percent wheat and 50 percent of either corn or barley.

2. Whole wheat may be fed satisfactorily in a grain-ration mixture for fattening lambs.
3. Wheat is considered as a good grain for sheep feeding, but the relative prices of wheat to other grains is the determining factor as to its use.

4. Wheat can be used successfully in grain rations for breeding ewes, fattening lambs, and for creep feeding.

5. Wheat, when fed in combination with legume roughages (alfalfa or clover hay), does not require a protein supplement to the grain ration fed.

6. Wheat gives best results when fed in combination with shelled corn, whole barley, or grain sorghum, as lambs prefer a mixture of grains to whole wheat. Also, the lambs are less liable to go “off feed” during the fattenning period.

**Feeding Wheat to Horses and Mules**

1. Wheat should be ground coarsely, rolled or crushed, and mixed with bulky concentrates, such as oats, or wheat bran, or with chopped hay to prevent digestive troubles. Care should be used not to feed moldy or damaged wheat.

2. Results from recent feeding tests at the Oregon Experiment Station show that steamed, rolled wheat can be fed successfully to weanling colts, yearling colts, brood mares, and work horses, when fed with a hay mixture of oats, wheat, and vetch.

3. Wheat has a higher feeding value and is a more concentrated feed than oats. It generally takes 20 percent less wheat to replace oats in the grain ration for horses. Steamed, rolled wheat is more palatable to horses than the ground or crushed wheat and will cause less digestive disturbances.

4. Wheat can be fed satisfactorily either to horses that are idle or performing heavy work.

**Feeding Wheat to Dairy Cattle**

Coarse-ground or steamed, rolled wheat is about equal to ground corn for dairy cows and heifers when used as one-fourth to one-third of the total grain mixture. It should be mixed and fed with bulky concentrates, such as oats, corn and cob meal, dried beet pulp, and barley to make it more palatable and prevent digestive troubles or going “off feed.” If a grain mixture of wheat is fed heavily, the wheat should not make up more than one-fourth of the grain mixture. If the grain mixture is fed in limited amounts, the wheat may make up to one-third of the ration.

Wheat may be fed satisfactorily over an extended period of time, if it is mixed with other grains in a properly balanced ration.
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Wheat is higher than corn in protein and requires less protein supplement to balance the ration. Wheat closely resembles corn in composition and feeding value, except that it is a little lower in fat, and like corn, is deficient in calcium.

Recent feeding trials at the Oregon Experiment Station show that wheat can replace up to 50 percent of the barley, oats, and wheat bran in a concentrate mixture for dairy cows fed from 8 to 10 pounds daily, with alfalfa hay and silage as roughage, without affecting the palatability of the grain mixture, or its nutritive value, and without any unfavorable effect on the milk flow.

*Do not* feed finely ground wheat which is dusty, unpalatable, and forms a pasty mass in the cow's mouth and paunch.

The following are several wheat grain-mixtures selected according to the roughage being fed:

1. If good alfalfa hay or pasture is being used as roughage, the following grain mixture is recommended:
   - Ground yellow corn or ground grain sorghum—100 pounds
   - Rolled or coarsely ground oats—100 pounds
   - Rolled or coarsely ground barley—100 pounds
   - Rolled or coarsely ground wheat—100 pounds

2. If silage is being fed with legume hays as the roughage, use:
   - Ground yellow corn or ground grain sorghum—200 pounds
   - Rolled or coarsely ground oats—200 pounds
   - Rolled or coarsely ground barley—200 pounds
   - Rolled or coarsely ground wheat—200 pounds
   - Oilmeal (soybean, linseed, or cottonseed)—100 pounds

3. If grass or other non-legume hays, corn, or sorghum fodders, with or without silage are being fed, use:
   - Ground yellow corn or ground grain sorghum—100 pounds
   - Rolled or coarsely ground oats—100 pounds
   - Rolled or coarsely ground barley—100 pounds
   - Rolled or coarsely ground wheat—100 pounds
   - Oilmeal (soybean, linseed, or cottonseed)—150 pounds

In all of these above mixtures, corn, grain sorghums, oats, barley, and wheat can be interchanged for each other, depending upon the feeds available. In no case should any one of these grains make up more than one-third of the total grain mixture.

It should always be remembered that wheat is higher in protein than the other cereal grains, and therefore saves a small amount on the use of protein concentrates such as soybean, linseed, or cottonseed oilmeals.
Feeding Wheat to Poultry

Wheat is an excellent feed for chickens and turkeys. Price and availability usually are factors that determine the extent of its use in poultry rations. Wheat may be used up to two-thirds of the grain and up to one-half of the mash mixtures. For the mash, it should be coarsely ground, otherwise it will be too sticky. When ground wheat is used to replace all the bran and shorts in the mash formula, ground oats or barley should be generously used to furnish bulk. Shrunken wheat is higher in protein than plump wheat, and thus can be used to advantage for feeding poultry when it is available.

Whole or ground wheat is lower in protein and certain vitamins than wheat bran and shorts. This should be taken into consideration when using wheat in place of these by-products.

Too much wheat will have a laxative effect on poultry which will retard growth and egg production. Thus best results are achieved when one or more grains are added to the wheat to make the grain and mash mixtures.

For a laying-mash mixture, using a large amount of wheat, use:
- Ground wheat—40 pounds
- Ground oats or barley—15 pounds
- Ground yellow corn, kaffir or milo—15 pounds
- *Alfalfa meal—5 pounds
- Meat and bone scraps—10 pounds
- Soybean oilmeal—10 pounds
- Pulverized oyster shell or limestone—2 pounds
- Bone meal—2 pounds
- Salt—1 pound

For scratch-grain mixtures, using large amounts of wheat, use:

Mixture No. 1:
- Wheat—60 pounds
- Corn—40 pounds

Mixture No. 3:
- Wheat—60 pounds
- Kaffir or milo—20 pounds
- Barley—10 pounds
- Oats—10 pounds

Mixture No. 2:
- Wheat—60 pounds
- Kaffir or milo—40 pounds

Mixture No. 4:
- Wheat—60 pounds
- Corn—20 pounds
- Barley—10 pounds
- Oats—10 pounds

*When laying and breeding flocks are confined in the laying house during the winter months, fish oil with a guaranteed vitamin A and D content should be added to the mash mixture. (See Colorado Extension Bulletin 367-A, "Selection of Feedstuffs for Poultry.")