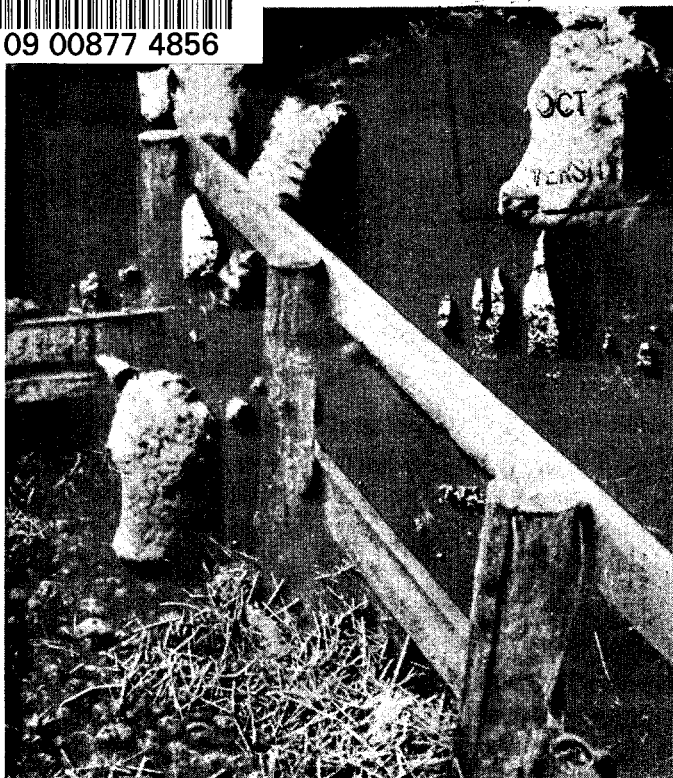


# FEEDING POTATOES TO LIVESTOCK



Notice Bar Arrangement That Keeps  
Steer Heads Down While Eating Spuds

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EXTENSION SERVICE

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1. Total U.S. potato production has increased since 1930. Average yields per acre have more than offset substantial reductions in harvested acreages.

2. Historically, per-capita consumption of tablestock potatoes shows a marked downward trend. Increasing population has helped to maintain total tablestock potato consumption at nearly constant level in late years.

3. Consumer demand for table potatoes is not very elastic. Demand responds slowly, and only a little, in response to substantial changes in either supply or price at the market place.

4. Farm potato prices have been highly vulnerable to small changes in total consumer demand. A 7 percent increase in supply (about 25 million bushels) over normal demand has, over the years, invariably resulted in a 20-25 percent decline in farm potato prices. Disproportionate reductions in farm potato prices during this same time resulted in little change in tablestock potato consumption.

5. 10-20 percent of the U.S. potato crop (field run) consists of small and cull potatoes (pickouts). Weather, production practice, care in harvesting and the methods of handling the crop following harvest make this a variable quantity from year to year. Normally the "tag end of the crop" figures out at about 50 million bushels.

6. It has been customary for producers and shippers to keep about half of the "smalls" and "pickouts" (about 25 million bushels) off the tablestock market. The other half has been shoved on to the food trade along with the

better run of tablestock potatoes the housewife finally uses. Such marketing policy and practice has contributed to:

- a. Sheer economic waste of containers, transportation, labor storage and merchandising effort--all used up in the process of shoving about and disposing of a product which no one wants.
- b. Depression of country prices by about 20 percent when total supply (including the "dogs") runs above normal table demand.
- c. Reduction in country prices to offset the hidden costs of handling the "tag end of the crop". (Any shipper who thinks otherwise may be kidding himself and his bankbook.)
- d. A low opinion of the whole potato industry is formed by the public. The housewife doesn't like to pay "quality prices" for "second-rate merchandise". Consumer demand can and does shift to other fresh vegetables.
- e. Final waste of a 25 million bushel product that might have been put to some economic use back home.

7. North Dakota's commercial potato producers can benefit twice from a marketing program built around (a) keeping low-grade potatoes off the tablestock market, and (b) feeding low-grade (and/or surplus) potatoes to livestock right in the area where produced. The first step pays off in market returns, over the years, at the country point. The second one makes sense too in the supplementing of feed grains and forage for the production of livestock products.

# POTATOES ARE VALUABLE LIVESTOCK FEED

1. Cattle, sheep and hogs like potatoes.
2. Potatoes can be substituted for at least one-half the grain for fattening animals and breeding stock, and for all the silage and one half the hay.
3. Potatoes are low in protein and minerals. Always feed high quality legume hay or a protein supplement with potatoes. Potatoes are low in calcium and phosphorous. Always feed minerals when large quantities of potatoes are fed. When pregnant females get large quantities of potatoes, be sure to feed protein and mineral supplements, and green hay, to insure strong vigorous young.

## LIVESTOCK TO FEED

### CATTLE

Raw potatoes are best suited for cows, and yearlings or older cattle.

Start cattle with 2 to 3 pounds per day and gradually increase amounts until on full feed. Scours or bloat may result from increasing amounts too fast.

Feed potatoes whole in low bunks. Attach a rail about 3 feet above the feed bunks to compel animals to keep their heads down while eating, to avoid choking.

Feed often and in amounts which can be cleaned up readily. Avoid freezing. Three or four feedings a day may be practical.

The Minnesota Experiment Station in trials at Crookston with fattening cattle found: (1) Potatoes without grain will not finish cattle, but are a good substitute for about one-half the grain. (2) A cheap class of roughage such as oat straw appears to be entirely suitable with potatoes for fattening cattle. (3) Yearling steers will take up to 60 pounds of fresh potatoes a day without going off feed (Older cattle and cows should eat more.)

The North Dakota Experiment Station fed 25 to 40 pounds of potatoes a day to dairy cows as a substitute for corn silage. The cows produced as much milk, and the quality and flavor of milk and butter were as good, as when cows were fed corn silage. Feed potatoes after milking to prevent milk taking up potato smell.

### **SHEEP**

Feeder lambs can use up to 2 pounds daily and pregnant ewes 2-1/2 pounds daily. After lambing, ewes can get up to 4 pounds daily. Sheep choke easily on potatoes and potatoes may need to be chopped to avoid trouble. Do not feed frozen potatoes.

Good quality legume hay and grain with mineral with potatoes will give best results.

### **SWINE**

Cooked potatoes are an excellent feed for swine. Potatoes should not replace over one-half the grain fed to swine. If 2 pounds of cooked potatoes are fed with each pound of grain, then 350 pounds of potatoes will replace 100 pounds of grain. It is essential to feed ample protein supplement and mineral when feeding potatoes.

## **FRESH POTATOES ARE BULKY**

Potatoes are 79 percent water. You must handle about 5 times as many potatoes as grain and 3 times more potatoes than alfalfa hay for the same feed value.

Potatoes should not be allowed to freeze for best results. This means they should be fed at least 3 times a day and stored where they will not freeze.

## **FEED VALUE OF FRESH POTATOES**

The comparative feed value of fresh potatoes may be computed as follows:

100 pounds of shelled corn equal 450 pounds of fresh potatoes.

100 pounds of alfalfa hay equal 300 pounds of fresh potatoes.

100 pounds of corn silage equal 100 pounds of fresh potatoes.

100 pounds of mixed grain equal 350 pounds of cooked potatoes when fed 2 to 1 with the grain, to swine.

28 pounds of alfalfa and 12 pounds of barley equal 100 pounds of fresh potatoes for lamb feeding.

According to reports of experiments in Idaho, potatoes contain approximately twice as many digestible nutrients as wet beet pulp or beet tops.

When grain is worth \$2.00 per 100 pounds, raw potatoes have a feeding value of 40 to 45 cents per 100 pounds.

When grain is worth \$1.00 per 100 pounds, raw potatoes have a feeding value of 20 to 22 cents per 100 pounds.

When alfalfa hay is worth \$20.00 per ton potatoes are worth 33 cents per 100 pounds.

The feeding value of potatoes will be higher when the ration is balanced with protein supplement, mineral and green feed.

## **FEEDING "FIELD SPREAD" POTATOES**

Potatoes may be spread on the ground in open pastures and fed in the spring after they become dry or "mummified" due to alternate thawing and freezing. Feeders report gains of over 2 pounds a day on cattle fed these dried potatoes with pasture. Swine have also been pasture fed potatoes with good results that have been spread thin and allowed to field dehydrate.

The exact value of this method of feeding potatoes is not fully known since controlled experiments have not been conducted. Because of the saving in cost of handling this has been a popular method of using cheap cull and surplus potatoes.