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## EC235 Profitable Pork Production in Nebraska

O. O. Waggener

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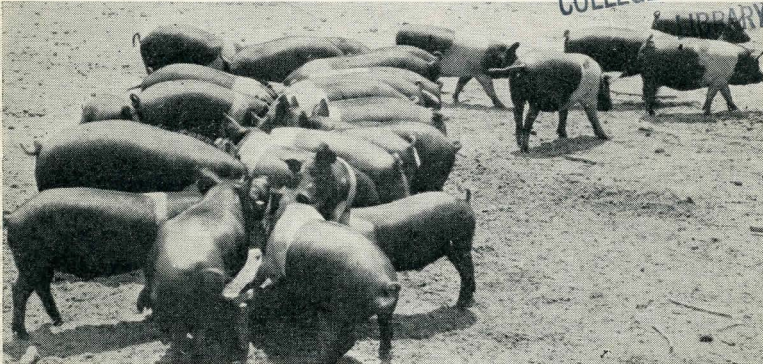
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# Profitable Pork Production in Nebraska

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The University of Nebraska Agricultural College Extension Service  
and The United States Department of Agriculture Cooperating  
W. H. Brokaw, Director, Lincoln

## **FOREWORD**

The purpose of this bulletin is to supplement and correlate information available in other Nebraska Extension circulars on hog production. It summarizes the pork production experiences of Nebraska hog producers as well as those of the Nebraska Experiment Station as they are reviewed in the exhibits of the Nebraska Profitable Pork Production Special.

**The Nebraska Profitable Pork Production Special is a cooperative enterprise between:**

**The Chicago, Burlington and Quincy Railroad  
The United States Department of Agriculture  
The Nebraska Improved Livestock Breeders Association  
The Omaha and Sioux City Livestock Exchanges  
The Nebraska State Department of Agriculture  
The College of Agriculture**

Credit for valuable aid throughout the entire preparation of this bulletin and the publication of this bulletin is especially due to Professor W. J. Loeffel, of the Animal Husbandry Department of the College of Agriculture. Without his consultation and help the preparation of this bulletin and train would have been impossible. Acknowledgment is also due to I. D. Wood, P. H. Stewart, Elton Lux, and many others for the information they have supplied and for their cooperation in making this train a success.



## PROFITABLE PORK PRODUCTION IN NEBRASKA

O. O. WAGGENER

### HOW THE NEBRASKA FARMER MAKES HIS DOLLAR

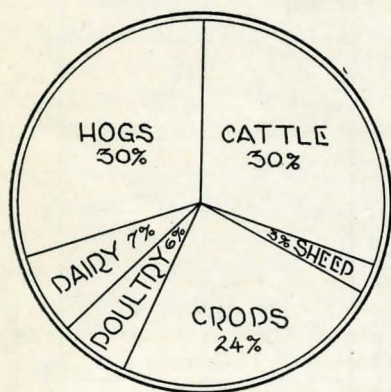


FIG. 1.—Hogs supply 30 cents of every Nebraska farm dollar. (Figures for 1927.)

The importance of the hog industry in Nebraska is not fully realized until a careful study of the state's various sources of income is made. According to the State Department of Agriculture, approximately thirty cents of every Nebraska farm dollar comes from swine. Annually Nebraska farmers are paid from one hundred million to one hundred thirty million dollars for their hogs. Pork is Nebraska's largest single crop, and this state ranks second only to Iowa in volume of pork produced. An industry of such magnitude and importance

deserves careful study. Perhaps it may be possible through short cuts and improved methods to still further increase the Nebraska farmer's income from this source.

### GIVE THE PIG A CHANCE

In many cases, Nebraska farmers expect profits from their hog operations without first having made conditions such that their pigs will have had a chance to grow and fatten, without interruption, into normal, healthy hogs. In spite of the bountiful supply of well-bred hogs in Nebraska, many pigs are still being produced from low grade, off type, inefficient parentage. A farmer who produces pigs of this sort should not expect either rapid cheap gains or top prices. He hasn't given his pigs a chance to produce a profit for him. Similarly, pigs that are born in filthy, disease-infected lots to nurse worm-infested sows, or pigs that are not fed a properly balanced ration have

## A TIP FROM THE HIGHWAY ENGINEER \*

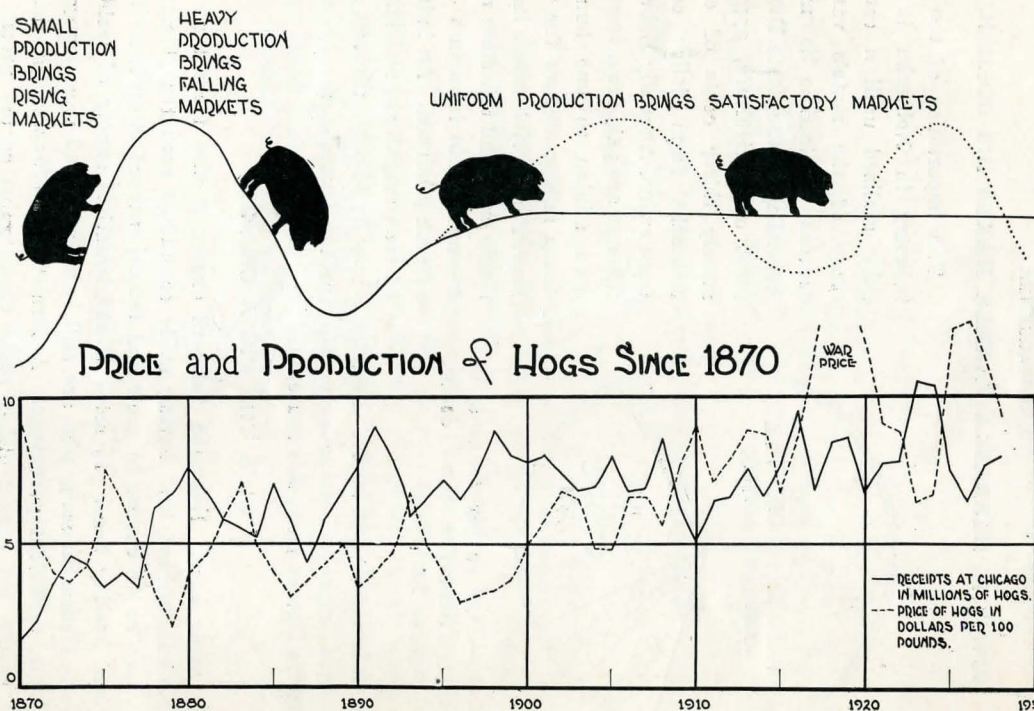


FIG. 2.—Cut off the high spots, fill in the low

\* For further information on hog prices write for Nebraska Bulletin No. 208.



not been given a chance and their owner has no reason to expect a profit from them.

A study of hog prices over a period of years shows that the values are constantly fluctuating. These fluctuations occur at more or less regular intervals known as cycles, and average approximately three to five years in duration. There are many factors which influence these prices. Perhaps the most important of the immediate influences on price is the number of hogs marketed. Almost without exception, hogs are high in price during periods when marketings are light and low in price when marketings are heavy. There is one and only one agency that can correct this evil of erratic producing and marketing and that agency is the producer himself.

Pork producers expand their breeding operations when corn prices are low and hog prices high. If this expansion were moderate all would be well, but instead it is often quite pronounced, resulting in many more hogs to eat the same amount of corn—result, high corn and more and cheaper hogs. Conversely, low hogs and high corn results in reduced breeding operations and fewer hogs to eat the same amount of corn—result, low corn and fewer and higher hogs. So pronounced are these fluctuations in production and price that it often happens that a larger number of hogs actually sells for less total money than a smaller number will bring a year later. A good example is found in 1923 and 1924. During the latter year, 45,000,000 hogs (inspected slaughter) brought farmers roughly \$1,100,000,000.00 whereas in 1923, 54,000,000 hogs brought only \$900,000,000.00. In smaller figures then, eight hogs in 1924 actually sold for more than nine in 1923.

Market information which indicates future trends is always available. Nebraska producers can well afford to study this information carefully with a view to looking into the future and breeding in such a way as to bring about more uniform, average production. It is not the object of the Nebraska Profitable Pork Production Special to recommend an expansion in pork production, since an increase would probably result in lower prices. It is the object of this train, and of this circular as well, to bring more efficient production of a uniform number of hogs from fewer and better sows with the hope that by so doing, production and prices may be stabilized and greater net profits to the producer may result.

### DISEASE TAKES ONE PIG OUT OF EVERY FOUR

Recent records taken from 499 Nebraska hog farms and surveys conducted by the U. S. Department of Agriculture on numerous other corn belt hog farms indicates that preventable diseases actually take one pig out of every four. Couple this with the fact that these same diseases make so-called "hard feeders" of a large number of the pigs that do not actually die as a result of them, and it becomes evident that disease exacts a tremendous toll from Nebraska hog producers annually. Certain it is, that much fewer sows would be required to produce Nebraska's yearly pig crop if proper disease prevention measures were practiced. Records on farms where disease prevention is practiced, when compared to records where such disease prevention is not practiced, show conclusively that twelve sows properly fed and housed in disease-free quarters will raise as much pork in a year as sixteen similar sows properly fed but quartered in disease-infected houses and lots. Authorities predict, and the facts seem to substantiate, that if Nebraska farmers will cull out one-fourth of their

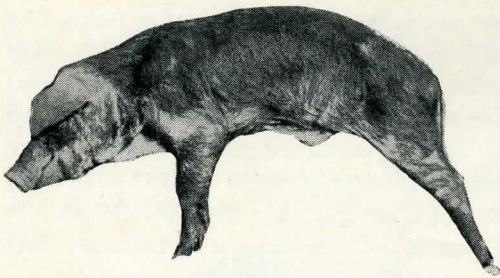


FIG. 3.—Pig typhoid reaps its harvest

fewer sows. "**Better hogs from fewer sows**" is not a bad motto for Nebraska hog producers.

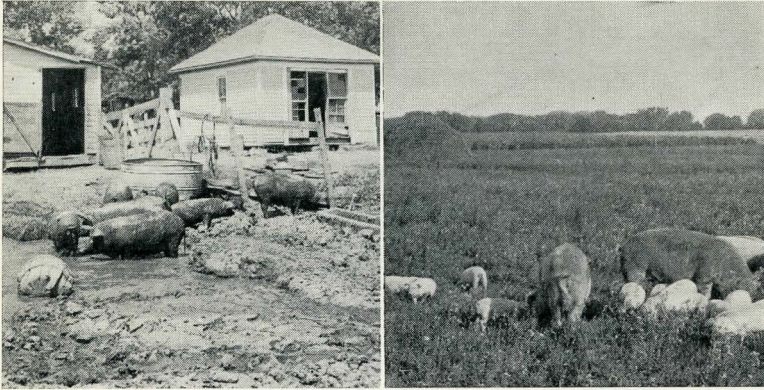
"tail end" sows and properly care for the other three - fourths, they will raise as much pork as is now produced and for much less money. All of which points to the fact that it pays through disease prevention to raise each carload of pigs from

### FILTH SPREADS DISEASE

Pig typhoid (often called necro), and "Bull nose," are known as filth-borne diseases. They spread from one pig to another through the filth of much-used hog lots. Pig typhoid is especially destructive. It affects the pig in much the same manner as typhoid fever affects man. It attacks principally the large intestinal tract causing the formation of ulcers and impairing the proper digestion. External symptoms are a profuse and foul smelling diarrhoea which sometimes



includes shreds of intestinal mucous membrane, continued appetite, often a pronounced restlessness, and a gradual wasting away. Extreme emaciation usually precedes death. Cures are never satisfactory. The method of controlling these diseases is through proper sanitation "Bull nose" is also prevented satisfactorily only by clean ground methods.



A filthy lot

A clean lot

FIG. 4.—Which lot is yours?

### FILTH BREEDS DISEASE

Worms, so prevalent in many lots of Nebraska hogs, are almost unknown in clean-ground pigs. This is especially true where the sows have been cleaned prior to farrowing and placed on disease-free ground, in scalded movable houses.

Hog cholera can be controlled only by vaccination with anti-hog cholera serum and virus.

Other diseases such as pneumonia, (flu), colds, etc., are less likely to attack healthy hogs that are properly housed than hogs run down by other diseases, or hogs that are improperly housed and compelled to live in damp, cold, insanitary surroundings.

Mange, like most other parasites and diseases, is more easily avoided than cured. Pigs born of mange-free sows in clean pens and raised on clean ground do not suffer from these parasites.

If you are anxious to avoid losses and needless expense, and really want to raise a crop of healthy, thrifty pigs, try this simple system:

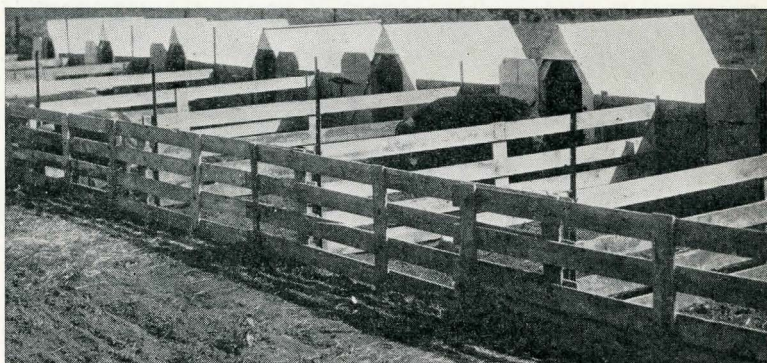
It cannot be too strongly emphasized that these are the only methods that have proven satisfactory and effective in preventing and controlling these common but costly swine diseases.



## FOR BEST RESULTS:



1. Clean the sows prior to farrowing. (FIG. 5)



2. Put them in clean farrowing pens. (FIG. 6)



3. Raise the pigs on clean pastures. (FIG. 7)

It is all well enough to suggest that hogs be raised on disease-free ground and moved from pasture to pasture yearly, but some questions that invariably arise in the hog man's mind are: How will I house these sows and pigs away out from the old buildings on pasture? How can I feed without extra labor? How can the pigs be watered without digging a well in every pasture?

The answer to the housing question is to be found in the "A" type Nebraska Blizzard Beater. The Blizzard Beater is a one-sow house. It is inexpensive, serviceable, well ventilated, warm in winter, cool in summer, and easily moved. (See Figure 8.) For further particulars, write for Nebraska Extension Circular 230, revised.

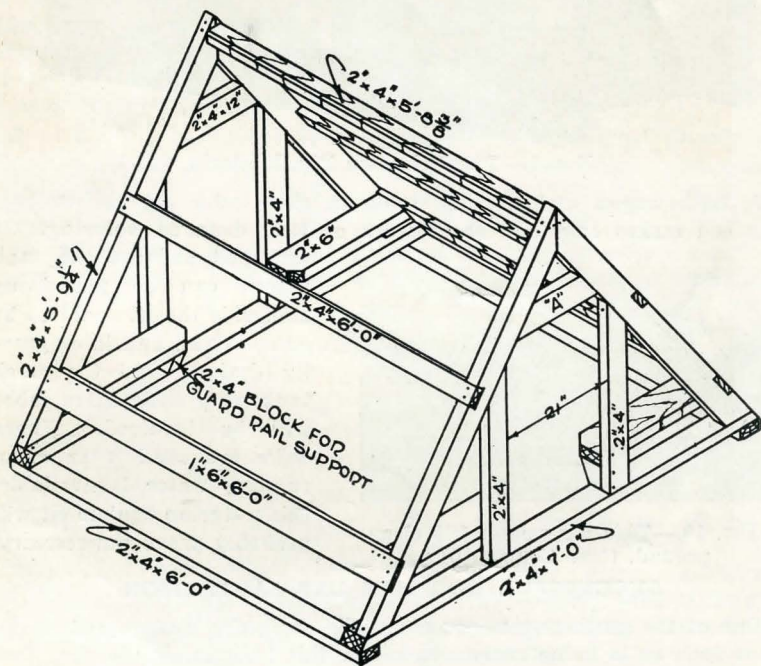


FIG. 8.—The framework for the Nebraska Blizzard Beater

The problem of feeding is readily solved by one of the Nebraska Pig Cafeteria Self Feeders. (See Figure 12.) The feeder should be large enough to accommodate the pigs for several days in order to avoid the necessity of going too often to the hog pasture with feeds. The roof and swing side doors of this feeder protect the feed from the weather. The gas pipe across hatching prevents wastage but is readily removable for cleaning. The feeder is built on skids to facilitate moving, and can be built in several sizes. Its sturdy framework resists moving strains.



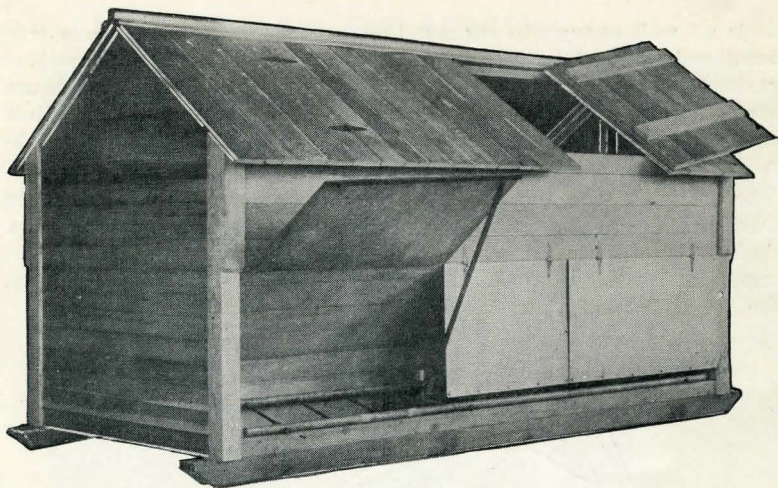


FIG. 9.—The Nebraska Pig Cafeteria

A tank wagon and a stock tank on skids with pig self-waterer attached makes easy and short work of long distance watering. If

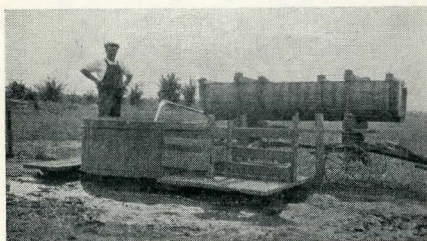


FIG. 10.—This rig waters 190 clean ground, Cass County pigs

arranged so that the tank wagon can be pulled up alongside the windmill to be pumped full and later gravity drained into the stock tank, very little extra labor will be involved. Where wells are shallow or clean running water is available, this watering equipment will probably prove unnecessary.

### SUCCESSFUL HOG MEN USE SANITATION

One of the gratifying things about the sanitation system and equipment such as is being recommended in this bulletin, is the fact that large numbers of the more successful hog men in Nebraska are and have been following the system for several years. Demonstrations are numerous in which Nebraska hog men practicing clean ground methods have succeeded in producing as much as 1500 to 1800 pounds of pork from each sow on their farms in a period of six months after farrow. One good Nebraska hog man has produced over 1400 pounds of pork per litter in six months from every sow on his farm for a period of three years. Another has succeeded in raising an average of eight pigs from each of 74 litters, and has maintained this high average for four consecutive years. In all the recent records that have been filed with the Agricultural College, there is not one instance of a man, who

has not followed clean ground methods, making a continuously good showing over a period of years. On the other hand, numerous instances of uninterruptedly successful hog production over a long period of years are to be found among the ranks of hog men following proper disease prevention methods.

Feeding conditions may vary, prices may rise and fall, hog types may come and go, but the one hog producing practice which pays under any and all conditions is that of hog lot sanitation.

### GOOD HOG PASTURE CUTS FEED COSTS FIFTEEN PER CENT

A summary of eleven tests conducted at different corn belt experiment stations in which the cost of producing hogs fed in the dry lot was compared to that of producing hogs fed similar rations on pasture, demonstrate clearly that pasture fed hogs gain faster and more economically than those fed in dry lots. Charging the pasture fed pigs one-half a cent per head daily for pasture and using going feed prices the experiments summarize as follows:

* Lot No.	Days Fed	Daily Gain	Corn per cwt. gain	Taukage per cwt. gain	Costs per cwt. gain
I. (Pasture)	133	1.310	370	24	\$6.87
II. (Dry lot)	133	1.113	410	40	7.75

Not only did each acre used for pasture in these experiments carry 19 pigs, thus saving 1149 pounds of corn and 468 pounds of tankage,

but in addition each acre cut 2326 pounds of hay. At going Nebraska farm prices this equals a per acre income of about fifty dollars. Experience indicates that where alfalfa pasture is to be used, the seed should be of Nebraska or Northern origin.† Where Southern or unhardy seed is used, winter killing has often resulted.

Many temporary pastures such as Sudan grass, rye, rape, clover, etc., give excellent satisfaction under Nebraska conditions. Normally they may be depended on during the periods indicated in Figure 11.

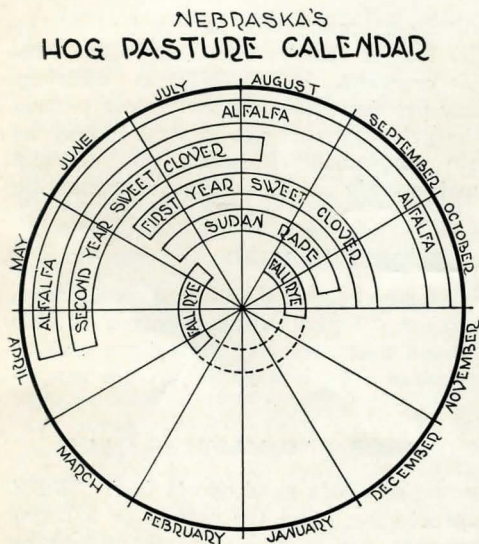


FIG. 11.—Shows how long each pasture will last under Nebraska conditions

\* "Feeds and Feeding," by Henry and Morrison, p. 666.  
 † Further detail as to source of seed and varieties can be secured from Extension Circular No. 130, "Hardy Alfalfa for Nebraska."



**BALANCE CORN WITH PROTEIN FEED**

Perhaps no single fact of hog production has been more clearly recognized by investigators and hog producers alike than has the necessity of balancing corn with a protein feed. For this purpose, tankage is often used. Other good protein feeds are skim milk, linseed meal and cottonseed meal. The latter should not be used except when mixed with other protein feeds in a fifty-fifty or more diluted basis. Briefly stated, tankage in moderate amounts, will replace from five to eight times its own weight in corn. In one typical test, pigs fed corn alone required 642 pounds of corn at a cost of \$9.63 to produce a hundred pounds gain. During the same period similar pigs under similar conditions, except that tankage was supplied free choice, made a hundred pounds gain on only 350 pounds of corn and 36 pounds of tankage at a cost of \$6.84 per hundred weight. The tankage-fed pigs also gained more rapidly and were more desired at the market. The advantages of the use of such a protein feed is evident.

Other good protein supplements may be prepared as follows:

No. 1	No. 2	No. 3
Cottonseed meal 1 part	Tankage ..... 1 part	Tankage ..... 1 part
Tankage ..... 1 part	Cottonseed meal 1 part	Cotton or linseed
	Linseed meal..... 1 part	meal..... 1 part
		Gr'd alfalfa 1 part

These mixtures should constitute approximately 10 per cent of the ration. If pasture is available, less of the protein feeds will be required. Skim milk, buttermilk or whey, if available in sufficient amounts, will supply all ordinary protein requirements. Other protein supplements may be used if the price permits. In general it may be said that the use of protein supplements increases the rate and efficiency of gains and often makes early and advantageous marketing possible.

**BARLEY, A GOOD HOG FEED**

Barley if ground coarsely and supplemented with a protein feed, makes a very acceptable hog feed. Barley when prepared in this manner is usually considered worth approximately ninety per cent as much by weight as corn. It requires a bit less of the protein supplement than does corn.

**SELF-FEEDING REDUCES LABOR AND HASTENS GAINS**

A common feeding recommendation and a good one is this: "Build a large self-feeder (one foot of feeding room for each 4 or 5 hogs) and divide it into two compartments, one of which has about four or five times as much feeding room as the other. In the large compartment put the corn or ground barley. In the small compartment put the protein supplement. Allow the hogs to have access to the feeder at all times and supply plenty of clean fresh water." The pig will

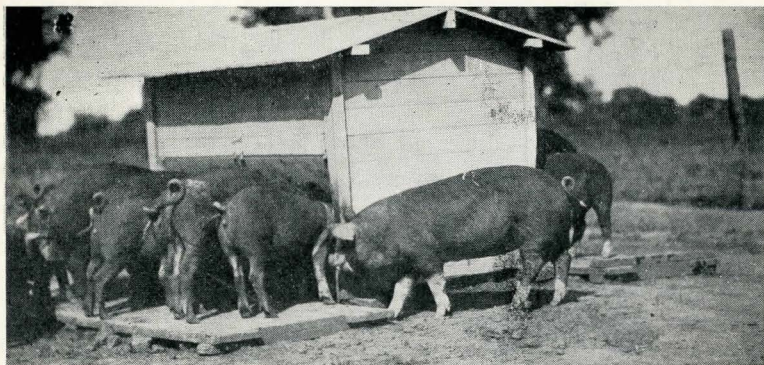


FIG. 12.—Nebraska Pig Cafeteria in action

balance his own ration if given a chance. A small amount of the protein feed may be saved by hand-feeding it in limited amounts. Care should be taken, however, to see that these amounts are not too limited. On pasture the protein supplement should constitute at least 6 per cent of the ration. In dry lot more should be provided.

#### PASTURE, TANKAGE, AND SKIM MILK CONTAIN MINERALS

Feed them, and other minerals except salt will be unnecessary. It has been the experience of most Nebraska hog men and of the Experiment Station as well, that where animal protein (tankage, skim milk, etc.) make up as much as one-half of the protein supplement, additional minerals except salt are unnecessary. A good plan is to put a small self-feeder at the end of the regular grain self-feeder, fill it with barrel salt and give the pigs access to it from birth. Pigs unaccustomed or hungry for salt should not be given free access to it.

The United States Department of Agriculture after considerable experimentation says that a simple mixture composed of:

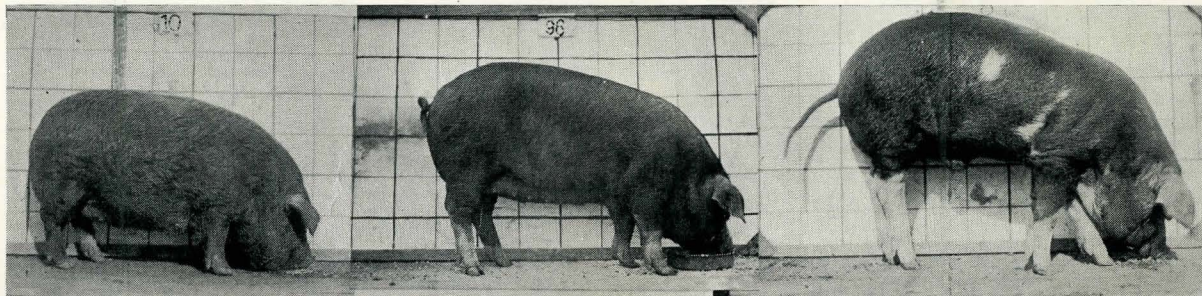
Finely ground limestone.....	40 parts
Bone meal.....	40 parts
Salt .....	20 parts

has as much to recommend it as any other. Although experience does not substantiate it, many Nebraska farmers believe that their hogs, even though on pasture and receiving tankage, need minerals. In such a case the above mixture or one similar to it, to which has been added two bushels of cob or wood ashes, will be found to be inexpensive and fully as good as any other. Coal slack has little or no value as a mineral feed. The pigs like to chew it but it is for the most part indigestible.



### WHICH TYPE IS BEST?

And when they are ready for market what type is most to be desired?



“ Shorty ”

“ Ham and ”

“ High Pockets ”

FIG. 13.—Three types of hogs — the middle one feeds best

Experiments at Illinois indicate that the medium type hog makes the most economical gains in the feed lot. The average consumer objects to excessive fat but alternate streaks of fat and lean insure quality. Extreme type pigs are frequently unfinished at desirable weights.

To select the type of breeding hog that will produce market pigs of the most acceptable type is the task of the hog breeder. The feeder wants pigs that will gain most economically in the feed lot — pigs that will sell to best advantage when fat. Just what type of breeding hogs will best serve this purpose under all varying conditions is a matter for the combined experience of feeders and breeders to decide. The experiments at the Illinois Station coupled with the experience of the Institute of American Meat Packers are helping to point the way. Let those who see the goal work toward it.

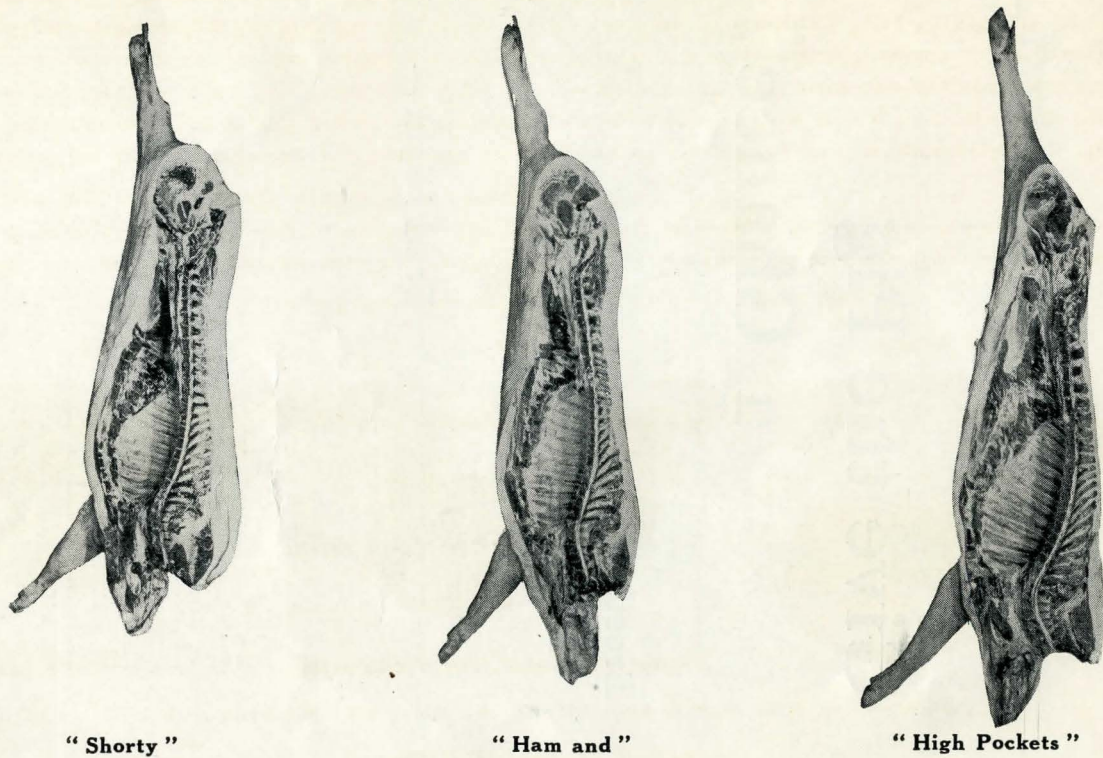


FIG. 14.—Three types of carcasses — which would you prefer?



# **Give the Pig a Chance**

**Breed Right—**

**Prevent Disease—**

**Feed Right—**