

Types of Hogs Marketed and Consumer De- mand in Oregon



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SUMMARY

1. The desirable hog on the market under present conditions is one that weighs 160 to 200 pounds, has a hard finish, and is free from excessive lardiness.
2. During the time of visits desirable hogs composed 64 percent of the receipts at the Portland market and 42 percent at the Willamette Valley markets.
3. Lardy hogs constituted 16.3 percent of the total receipts at the Portland market and 36.9 percent at the Willamette Valley markets during the time of the visits.
4. Hogs weighing more than 200 pounds on the market sold for 50¢ to \$1.00 less than hogs weighing 160 to 200.
5. Hogs thin in flesh brought 60¢ to \$1.00 less per hundred than desirable hogs and constituted 5.2 percent of the receipts.
6. The price of feeder pigs varied up or down with the price of grain.
7. The percentage of unfinished hogs received increased when hog prices were low in comparison with grain prices.
8. When there was a light run of hogs on the market buyers paid little attention to weight or finish.
9. Hogs weighing more than 200 pounds put on a larger daily gain but require more grain to make one pound of gain than lighter-weight pigs.
10. The grower is justified in producing the 200- to 225-pound hog when 100 pounds of live hog bring as much as the cost of 690 pounds of grain.
11. According to tests made breeding or heredity has a greater influence on the type of market hogs than the amount of feed fed.
12. The big-type pigs required less feed per pound of gain than the chunky type.

Types of Hogs Marketed and Consumer Demand in Oregon

By

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THE market demand for a leaner type of hog is the result of two causes: (1) the falling off in export demand for lard together with diminished use of this product in the United States because of the increased popularity of vegetable cooking fats, and (2) the desire on the part of the consumer for leaner cuts. Oregon State College has been requested to make a study of this matter and in doing so it has had in mind not only the consumer demand but also the possibility of the grower making a profit in raising the hogs that best suit the trade.

The results of this study are divided into two parts: I. An investigation at the Portland, Salem and Albany livestock markets where a careful check was made of the different classes of hogs received for slaughter and the prices paid by classifications. II. Type-study experiments conducted at Oregon State College wherein the pork-producing abilities of chunky- and big-type hogs were tested (pages 10-13).

I. TYPES AND CLASSES OF HOGS MARKETED AND COMPARATIVE PRICES

The following classes of hogs were studied as they were received at the market:

1. The "desirable market type" that seemed to suit the buyers' preference.
2. Lardy hogs—those weighing less than 200 pounds and carrying too much lard to suit the buyers' preference.
3. Heavy hogs—all those weighing more than 200 pounds.
4. Thin or light hogs—such as did not carry suitable finish to be desirable killers.
5. Feeders or pigs—those weighing from 60 to 100 pounds.
6. Sows.
7. Stags.

It is not the desire here to attempt to lay down hard and fast rules relative to the type that the producer should raise. Conditions change, and there may be times when lard will occupy a more favorable position in the trade than at present. Any radical change in the type of hog supplied by the grower is therefore considered unwise.

At the present time the buyers feel that a hog weighing 160 to 200 pounds, carrying a good hard finish but free from excessive lardiness, is

best suited to the consumer demand. Such a hog can be supplied from most all of the present-day breeds. The extreme short chunky type, of course, carries too much lard at the required weights, while the extreme rangy type is likely not to carry the necessary finish if marketed within the desired weights. Hogs of the extreme rangy type are often classed as skippy when not properly finished.

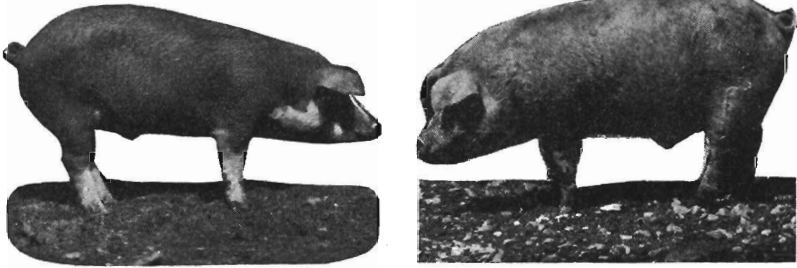


Figure 1. *Left:* Desirable type of market hog. *Right:* Lardy type hog.

During the period of the study 64 percent of the hogs received at Portland at the car-lot scales were classed as desirable by the investigators, indicating a tendency on the part of the grower to comply with the market demand.

Buyers tend to discriminate against the lardy type of hog.

For a considerable length of time the price of lard has been less than the cost of the dressed hog to the packer. Lard has been hard to move, and for that reason buyers were hesitant about buying hogs carrying too much lard. This condition, however, was sometimes overlooked. When there was a small run of hogs on the yards, packers, in order to supply their needs, took everything that was offered. Under those conditions there was very little difference made in regard to price paid for lardy or leaner type hogs. Under specific instances encountered during the period of this study, the difference in price was as much as 50¢ per 100 pounds in favor of the desirable type of hog.

During the time of these visits at Portland 16.3 percent lardy hogs were seen that weighed less than 200 pounds and were too fat to suit the market demand. They were not, in most cases, sorted and sold separately

TABLE I. NUMBER AND PERCENTAGE OF HOGS OF DIFFERENT GRADES STUDIED AT NORTH PORTLAND

Class	Number	Percentage
Desirable	21,343	64.27
Thin	1,719	5.18
Heavy	2,199	6.62
Lardy	5,406	16.28
Feeders	1,714	5.16
Sows	713	2.15
Stags	65	.19
Miscellaneous	51	.15
Total	33,210	100.00

when within this weight limit. Usually every lot contained hogs that fell in different classes. Where they were not over weight the common practice in the yards was to sell each lot at one price.

AVERAGE PRICE of PIGS at NORTH PORTLAND, OREGON, UNION STOCK YARDS. For Years 1923-1931 Inclusive.

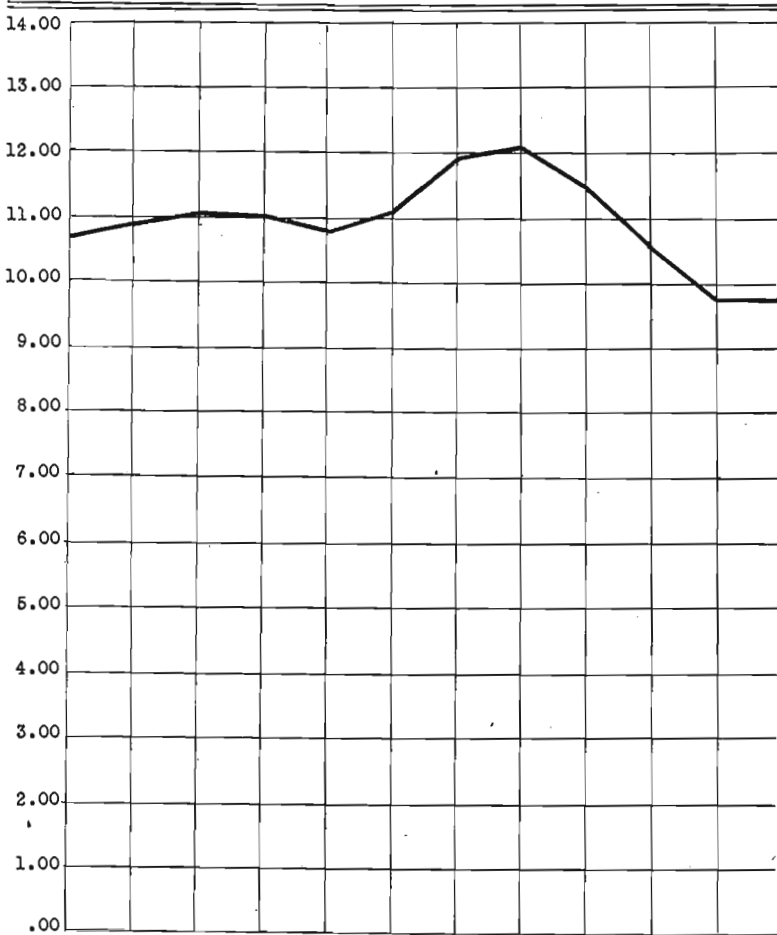


Figure 2. Average price of pigs at the North Portland Union Stock Yards.

Hogs weighing more than 200 pounds at the market received a heavy cut in price, often as high as \$1 a hundred.

Weight had more effect on buyers' attitude than lardiness. The difference in price received for those that were too heavy compared with

the desirable weights ranged from 50¢ to \$1.25 a hundred less. The attitude toward the heavy hog was due partly to lardiness, although the large size of the ham, shoulder, and bacon were important factors. During the period

**AVERAGE NUMBER of PIGS RECEIVED at NORTH PORTLAND, OREGON,
UNION STOCK YARDS. For Years 1923-1931 Inclusive.**

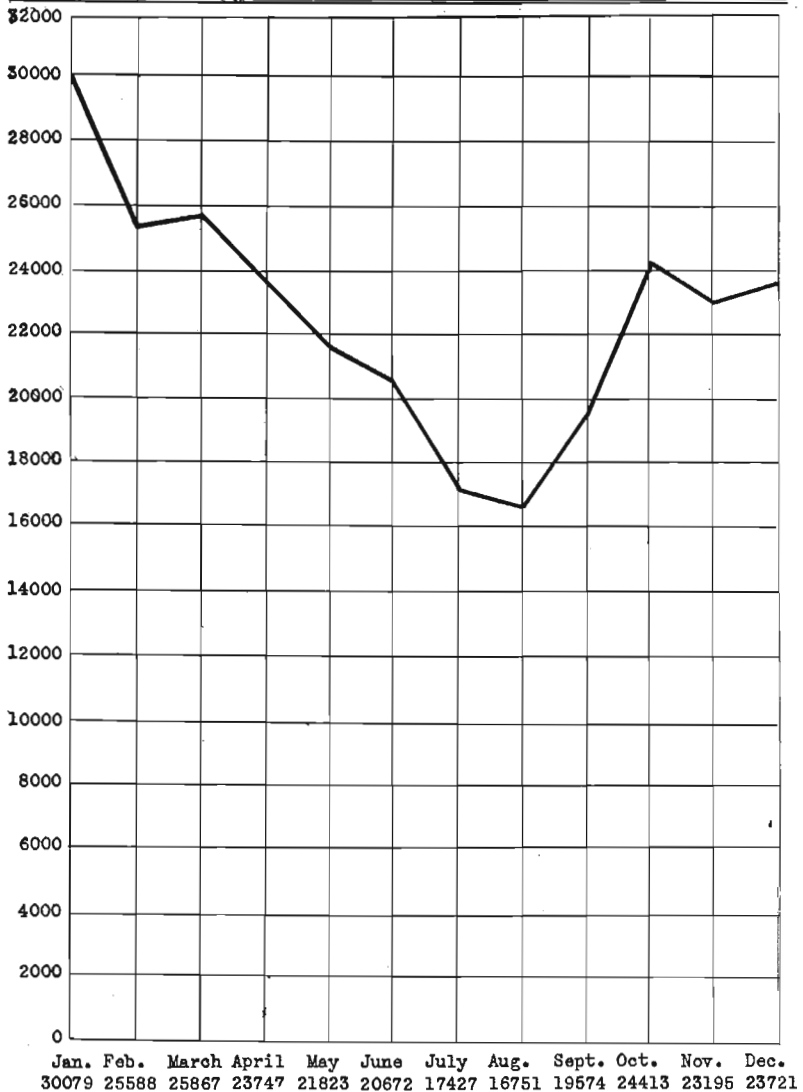


Figure 3. Average number of pigs received at the North Portland Union Stock Yards.

of this study 6.6 percent of the hogs received at North Portland, aside from stags and sows, fell in the heavy class and suffered the penalty of a cut in price. Oftentimes they were only a few pounds over weight. The line of distinction was closely adhered to by the buyer. Occasionally there was no difference in the price paid for hogs weighing from 200 to 225 pounds, as long as they were in good killing condition, but the buyers in their selection showed preference for the leaner type.

When grain is low in price in comparison with pork prices, or where a farmer has waste feeds that should be utilized, the grower may feel that it is desirable to raise the heavier hogs even though the price is lower. The advisability of this will be discussed later on in this bulletin.

Hogs light in weight should carry enough finish to keep them out of the "skippy" class.

"Skippy" pigs are too thin. Their sides, which should furnish bacon, are thin and flabby. The side meat and thin cuts from skippy pigs are made into sausage rather than put on the market as bacon and fresh cuts. Thus the value to the killer is lowered. Of the hogs received at North Portland during the time of the visit 5.2 percent were classed as too thin to meet the market demand. The price paid for these light hogs is considerably below the price received for the desirable type, ranging from 60¢ to \$1.00 per hundredweight less.

The grower often has a good reason for the disposal of his hogs in this condition. It may be a shortage of feed or it may be high-priced feed and low-priced pork. These are factors beyond his control.

TABLE II. NUMBER AND PERCENTAGE OF DIFFERENT GRADES CHECKED AT ALBANY AND SALEM

Class	Number	Percentage
Desirable	300	41.90
Thin	10	1.40
Heavy	134	18.72
Lardy	264	36.87
Feeders	7	.98
Sows	1	.13
Stags		
Total	716	100.00

Willamette valley markets received a higher percentage of lardy hogs.

The percentage of heavy and lardy hogs seen at the Salem and Albany plants during the period of this study ran higher than at the car-lot scales of North Portland. On these markets 36.8 percent were classed as lardy and 18.7 percent as heavy. While there is little difference in the feed used in Eastern and Western Oregon, there is considerable difference in the type of hogs produced. In Western Oregon a larger percentage of the old chunky type is to be found. This condition partly explains the larger percentage of heavy or lardy hogs received in the Willamette Valley markets. There may be other factors but it is more than likely that the type is the outstanding one.

Tables I and II show the number of hogs checked at the Portland market and at the Willamette Valley markets. A study of these tables will prove of interest to the reader.

Sows and stags.

The receipts of sows at Portland ran 2.1 percent (Table I). These were mostly hogs that had served their usefulness on the farm and were disposed of in this way. This is not considered as an economic problem. A study of the table shows that most of the sows are marketed during June and July and that during these months the spread in price between desirable market-type hogs and sows was greater than during the months when fewer sows were marketed.

The stags composed a small percentage of market hogs, less than one percent, and there was generally a spread in price of between \$2.50 and \$3.00 per hundred. Stags are always docked 70 pounds.

When market prices on hogs were low in comparison with grain, there was a noticeable increase in percentage of unfinished hogs received.

When grain is high priced and hogs are cheap, there is little incentive for the grower to feed grain to his hogs, and consequently he sells the grain on the market and disposes of his hogs regardless of their condition. Whether or not this is justifiable must be decided by the individual grower. Oftentimes it would prove to be false economy, especially where it is a matter of saving what has already been put in the hogs in the way of feed and overhead expense. The grower who has pasture or milk but has to buy most of his grain, may find it profitable under his conditions to sell his pigs as feeders. The man who makes a business of feeding hogs is eager to buy feeders because he is in position to make a profit on the finishing end of the enterprise. Then again there are farmers who under these conditions could well afford both to grow and to finish their hogs as a business. Whether the grower will finish his pigs will depend to a great extent on the ratio between grain and hog prices.

The number of hogs on the market had a noticeable effect on the prices paid for the different grades.

The difference between the prices received for the desirable type of hogs and those that were less desirable was greater when there was a large supply from which to select. When the supply was short, the buyers were inclined to fill their orders with what was on hand and not pay so much attention to the difference in conditions.

Feeder-pig prices were influenced by the price of grain compared with fat-hog prices.

Cost-of-production studies in the past have shown that the grower must receive as much for 100 pounds of pork live weight as the cost of 616 pounds of grain, in order to break even or be able to stay in business (Oregon Station Circular 56). These figures apply to hogs weighing less than 200 pounds. Whenever the price on fat hogs was less than this figure, there was a decidedly lower value placed on feeder pigs.

It does not require 616 pounds of grain to make 100 pounds of pork. The actual grain required ranges between 450 and 500 pounds. Included in

the 616 figure are the overhead costs, in addition to grain, put on a grain basis.

During the time of the study when the grain-hog ratio was favorable for feeding, feeder pigs sold as high as 2½¢ to 3¢ above fat-hog prices on the market. This condition changed, however, when grain prices were high and pork prices low, feeder pigs then selling for 1¢ below the fat-hog prices on the market.

Hogs weighing more than 200 pounds make a larger daily gain but require more pounds of grain to make a pound of gain.

Some growers were inclined to criticise the buyers because of their discrimination against the heavy hogs. They felt that their hogs were just beginning to put on large daily gains at 180 pounds. It was their belief that it was more profitable to carry these hogs on through until they weighed from 210 to 225 pounds. A large number of tests on hog feeding show that while the daily gains may be larger at that weight, the amount of grain required to make a pound of gain is greater with the heavier hogs than with the lighter ones. Numerous experiments have shown the economy of feeding the lighter weight of hog as is shown by Table III.

TABLE III. RELATION OF WEIGHT OF PIGS TO FEED CONSUMED AND RATE OF GAIN (Henry and Morrison)

Weight of pig	Daily feed per head	Average daily gain	Feed per 100 lb. gain
<i>Lb.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Lb.</i>
38	2.2	0.8	293
78	3.4	0.8	400
123	4.8	1.1	437
174	5.9	1.2	482
226	6.6	1.3	498

When it is profitable to raise heavy hogs.

Table III shows the increased grain consumption required in raising heavy hogs. As said before, the general practice of raising 200-pound hogs has been found profitable whenever the price of 100 pounds of pork live weight was greater than the cost of 616 pounds of grain. By the same token growers will need as much for 100 pounds of pork live weight as the cost of 690 pounds of grain if they are to overcome the increased cost and less price received for the 200- to 250-pound hog. This figure has been determined to serve as an aid in showing when it is just as profitable to feed heavy hogs. Heavy hogs are those that average from 200 to 250 pounds in weight. Trade requirements are unfavorable to heavy hogs because of the large hams, sides, and shoulders. When the grain-hog price ratio is greater than this figure, the marketing of hogs within the weight limits named would therefore seem desirable from the growers' standpoint, provided the difference in price between 200- and 250-pound weights does not exceed 50¢ per hundred.

TABLE IV. DIFFERENCE IN SELLING PRICE OF VARIOUS CLASSES OF HOGS

Weight	Amount under price of top hogs
Thin or light weight	\$0.75
200-225 pounds25
225-250 pounds50
250-300 pounds	1.00
Sows	1.00-2.00
Stags	1.75-3.00

II. MANAGEMENT AND FEED VS. BREEDING OR HEREDITY

To compare the influence of management and feed with the influence of breeding or heredity on the type of market hogs, the Oregon Experiment Station began a series of tests in 1931.

In 1931, pigs from the college herd were used for the big-type lots to compare with chunky pigs purchased locally. In the 1932 experiment, Chester Whites were used. Both the big type and chunky type were purchased. They were high grades, sired by pure-bred boars and out of grade sows.

In the first experiment one lot of big-type and one of chunky pigs were fed the same ration in self-feeders. The other lots, one of big type and one of chunky type, were fed the same grain mixture but were given only three-fourths the amount of grain the pigs on self-feeders consumed, until they averaged 100 pounds, then they likewise were fed all they would consume from self-feeders.

The plan of the second experiment was different in that one lot of each type was fed only a three-quarters ration throughout the experiment. The other lots were fed in a self-feeder as in the first experiment. The grain mixture fed was:

	<i>Lb.</i>
Finely ground oats	29
Finely ground barley.....	59
Linseed oil meal	4
Tankage	3
Alfalfa meal	5

When each pig reached 175 pounds weight it was removed from the lot and taken to the Nebergall Packing Plant to be slaughtered. The carcasses were measured and the wholesale cuts were weighed. All the cutting was done by employees of the plant and the usual wholesale cuts were made.

Body measurements were taken in the second experiment on each pig at the start and finish. The measurements taken were of the length from between the ears to the base of tail, of the width and depth just back of the shoulders. The increases of body measurements are given in Table V and indicate the amount of growth.

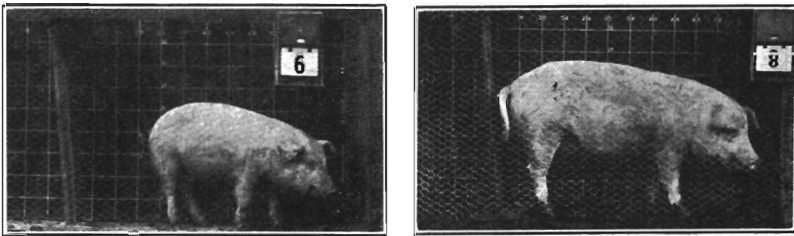


Figure 4. A REPRESENTATIVE CHUNKY-TYPE PIG.
 Left: Pig at beginning of experiment, weight 86 pounds. Right: Same pig at 175 pounds weight.

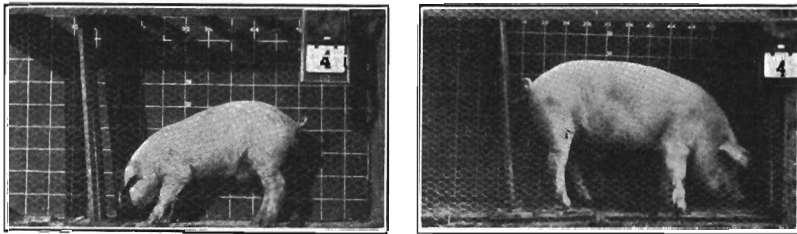


Figure 5. A REPRESENTATIVE BIG-TYPE PIG.
 Left: Pig at beginning of experiment, weight 79 pounds. Right: Same pig at 175 pounds.

TABLE V. SUMMARY TABLE SHOWING AVERAGE INCREASE IN BODY MEASUREMENTS BETWEEN BEGINNING AND END OF EXPERIMENTS

	Chunky type Lots I and II	Big type Lots III, IV	Chunky type self-fed Lot I	Chunky type ¾ ration Lot II	Big type self-fed Lot III	Big type ¾ ration Lot IV
	Inches	Inches	Inches	Inches	Inches	Inches
Length per pig	6.95	10.37	6.65	7.29	10.09	10.65
Length per 100 pounds gain.....	8.50	9.82	8.52	8.48	9.70	9.94
Width per pig	2.28	2.73	2.22	2.36	2.59	2.86
Width per 100 pounds gain.....	2.80	2.58	2.85	2.74	2.49	2.67
Depth per pig.....	2.74	3.50	2.70	2.79	3.62	3.38
Depth per 100 pounds gain.....	3.35	3.32	3.46	3.25	3.48	3.16

The data from these experiments tend to show that the breeding or heredity has more to do with the type of a market pig than the amount of feed given or management used. The chunky pigs were of the same type when finished whether they were given a full ration or a three-fourths ration, and the same was true of the big type in that their type did not change when fed different amounts. This is shown in the table of increase in body measurements. The big-type pigs grew more in length for each hundred pounds of gain than the chunky type, while the chunky type increased more in width, indicating the laying on of fat along the back. The increase in depth was about the same for both types.

The chunky-type pigs yielded from 2 to 3 percent more back and leaf fat than the big type, which is the reason they classify as lardy hogs.

The big-type carcasses yielded as much as 2 percent more pounds of loin, $\frac{1}{4}$ to $2\frac{1}{2}$ percent more trimmed shoulders, and from $\frac{1}{4}$ to 2 percent more trimmed hams than the chunky type.

Chunky-type carcasses yielded from 1 to $1\frac{1}{2}$ percent more fresh bacon but often the bacon was rather thick and heavy with fat.

The chunky type has a slight advantage in having a higher dressing percentage in three cases but in the second experiment one lot of big-type pigs dressed out as much as the chunky pigs. In experiments conducted elsewhere the reverse was true.

The big-type pigs in the first experiment were off feed while they had the "flu." The chunky pigs, in a different part of the barn, were not affected. This is probably the reason why the big type required more feed per 100 pounds gain in that experiment. In the second experiment the big type required less feed per 100 pounds gain. This is similar to the results found at other stations, as in practically all cases the big type required less feed per 100 pounds gain. This is of especial interest to the producer.

It is interesting to note that it is possible to find the chunky and big types in any of the common breeds of hogs.

TABLE VI. SUMMARY OF EXPERIMENTS

	Lot	Number of pigs per lot	Average initial weight	Average final weight	Average total gain	Average daily gain	Total feed consumed	Average daily feed	Feed per 100 lb. gain
			Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
<i>Experiment 1931</i>									
Big Type....	I	10	33	172	139	0.73	6921	3.6	498
Big Type....	II	10	33	176	143	.75	6719	3.5	471
Chunky Type	III	8	28	177	149	.93	5214	4.0	437
Chunky Type	IV	8	27	177	149	.83	5336	3.7	449
<i>Experiment 1932</i>									
Big Type....	I	9	75	178	103	1.6	3839	6.3	410
Big Type....	II	9	77	172	95	1.3	3980	5.5	413
Chunky Type	III	10	97	176	79	1.8	3544	7.9	454
Chunky Type	IV	10	95	176	81	1.5	3322	6.1	414

Experiment 1931

Lot I: Self-fed throughout test.
 Lot II: $\frac{2}{3}$ ration until 100 lb. weight, then self-fed.
 Lot III: Fed same as Lot. I.
 Lot IV: Fed same as Lot II.

Experiment 1932

Lot I: Self-fed throughout test.
 Lot II: Fed $\frac{2}{3}$ ration throughout test.
 Lot III: Fed same as Lot I.
 Lot IV: Fed same as Lot II.

TABLE VII. SUMMARY OF CUTTING DATA

	Lot	Number of pigs per lot	Average dressed weight	Average dressing percent	Average length of carcass*	Depth of back fat at shoulder	Depth of fat at last rib	Depth of fat at aitch bone	Percentage of fresh bacon	Percentage of leaf fat	Percentage of back fat	Percentage of leaf and back fat	Percentage loin	Percentage trimmed shoulder	Percentage trimmed ham
			Lb.	%	In.	In.	In.	In.	%	%	%	%	%	%	%
<i>Experiment 1931</i>															
Big Type.....	I	10	135	75	29.5	1.5	0.8	1.0	13.7	2.7	7.7	10.4	14.3	17.2	18.2
Big Type.....	II	10	133	74	29.0	1.5	.8	1.0	13.7	2.6	7.4	10.0	14.6	17.9	18.9
Chunky Type..	III	8	136	78	27.0	1.8	1.1	1.5	14.4	3.6	10.8	14.4	12.3	15.4	16.9
Chunky Type..	IV	8	136	77	27.5	1.7	1.0	1.5	15.4	3.4	10.2	13.6	12.9	15.3	17.0
<i>Experiment 1932</i>															
Big Type.....	I	9	128	72	30.0	1.5	.7	1.1	12.2	3.1	9.1	12.2	14.5	17.5	18.1
Big Type.....	II	9	127	74	29.0	1.4	.7	1.1	12.3	2.9	9.0	11.9	14.5	16.9	18.9
Chunky Type..	III	10	128	73	28.0	1.8	1.0	1.3	13.5	3.6	10.8	14.4	14.4	16.4	17.9
Chunky Type..	IV	10	131	74	28.0	1.6	.9	1.2	13.7	3.7	9.6	13.2	14.4	16.6	17.8

Experiment 1931

- Lot I: Self-fed throughout test.
- Lot II: $\frac{3}{4}$ ration until 100 lb. weight, then self-fed.
- Lot III: Fed same as Lot I.
- Lot IV: Fed same as Lot II.

Experiment 1932

- Lot I: Self-fed throughout test.
- Lot II: Fed $\frac{3}{4}$ ration throughout test.
- Lot III: Fed same as Lot I.
- Lot IV: Fed same as Lot II.

*Length of carcass was measured from front of first rib to aitch bone.

HOG TERMS USED AT THE STOCK YARDS

- CRIP:** An animal that has been hurt or crippled.
- DOCKAGES:** A specified weight deducted from stags and pregnant sows. On "piggy" sows the dock is 40 pounds; on stags 70 pounds. An official docker is employed by the stock yards company. He determines the dock at time of weighing.
- SEEDY SOWS:** Old and rough sows that have had several litters of pigs. They are undesirable because of heavy udders and teats.
- SKIPPY PIGS:** Pigs that are thin, light weight.
- STAGS:** Male hogs that have been castrated after maturity.
- SUBJECT:** Hogs are bought at the owner's risk subject to inspection when the animals are killed. If the carcasses are condemned as being diseased, the owner is paid only the amount the carcass is worth as fertilizer. "Subject" applied to feeders means subject to temperature; if the pigs are running a temperature the sale on those pigs is off, unless the temperature lowers to normal, in which case settlement is made.

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