AGRICULTURAL
GUIDE
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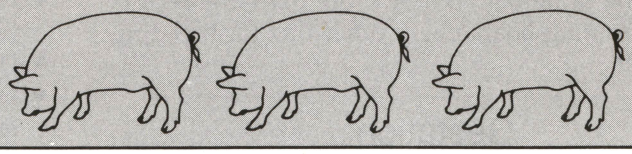
Raising hogs in Missouri



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This guide sheet deals with rather basic data on swine production and will be of most value to the new or beginning producer.

Profit potential

Profits from hog production have not been consistent in Missouri in recent years. They are not automatic and may vary a great deal from year to year. Examples of profit potential are in Table 1. For the most part, these records represent experienced producers.

Table 1. Return to labor and management per hog

	Farrow-finish	Feeder pig producer	Finishing feeder pigs
1979	1.89	.25	16.52
1980	3.01	2.23	5.77
1981	2.00	1.65	9.86
1982	44.14	15.94	10.37
1983	-2.71	-8.46	-4.79

Buildings and facilities

There is a large variation in buildings used by successful hog producers in Missouri. Cost does not always assure quality. In general, the more costly automated systems require less labor and allow the producer to handle more hogs. Many producers started in the business with a relatively small investment in buildings. Remodeled barns and individual portable buildings can reduce costs but may increase labor.

New swine buildings are expensive. Recent cost figures have been reported in the following general ranges.

Individual farrowing units	**$300-600 per sow**
Central farrowing units	**$1000-2000 per sow**
Central nursery	**$30-60 per pig**
Finishing buildings	**$50-120 per pig**

Water and feed equipment varies widely in cost and efficiency. Check with established producers in your area on quality and durability of these items.

Selection of breeding stock

Selecting good foundation gilts is important. Base selection on individual type or appearance, individual performance, and freedom from defects and disease. Excellent gilts can be bought at reasonable prices. Sources are

- **Purebred breeders.** At production or private sales, consider animals not qualifying for registration but otherwise with good records.
- **Breed association sales.**
- **Cross gilts from top commercial producers.**

The boar you select will determine half the genetic material in the pigs. He should be selected carefully based on type and quality, performance testing information, performance and carcass data on close relatives, and freedom from defects and disease.

Reproduction management tips

Age to breed. Gilts usually reach puberty between six and nine months of age. Recent research indicates that well-grown and developed gilts can be bred at the first or second heat period with little effect on litter size. Boars should be eight months old, weigh 250 or more pounds, and be in breeding condition.

Time to breed. The heat period for gilts is 40 to 45 hours long and may be close to 65 hours for sows. Mating sows twice, at least 12 hours apart, during the heat period will increase settling rate and numbers of pigs born per litter. The sow can be bred on the first and second day of heat. More eggs are shed during the last part of the heat period, so if only one mating is made, it should be on the second day of heat.

Sows normally come in heat three to five days after her pigs are weaned if the pigs are weaned at three weeks of age or older. Breeding at this heat period is recommended.

Breeding rates

Boars needed per sow will vary considerably due to

individual boar performance and methods of breeding.

Hand mating is where the boar is confined and the sows brought to him for breeding. This will increase the use of boars. Boars can be mated twice daily with eight to 12 services per week using this system. Requiring less time and labor, pasture mating is where the boar runs with the sows. One boar for each 10 sows should be adequate. Don't wean pigs from all 10 sows on the same day. Where more than one boar is used, alternating boars every other day for breeding works well.

Gestation

The interval between breeding and farrowing in swine is about 114 days. Embryonic death loss is a major problem. (About 30 percent of the fertilized eggs do not survive to produce live pigs.) Loss during gestation can be reduced with good management. Heat stress appears to be responsible for considerable loss, particularly in the period shortly after breeding and immediately before farrowing. Provide shade and sprinkling systems where needed.

Sows and gilts should be limit fed to avoid over-fat animals. As a rough guide, sows should gain 60 to 80 pounds during gestation and gilts 75 to 100 pounds. Four pounds daily of a 15 percent protein ration should be adequate for the first two-thirds of gestation and 6 to 7 pounds during the last one-third of gestation. (Good pasture will reduce feed requirements some.) Use Table 2 to determine farrowing dates according to when the sow was bred.

Table 2. Gestation dates for sows.[1]

Date bred	Approximate farrowing date	Date bred	Approximate farrowing date
Jan. 1	April 23	July 1	Oct. 21
Feb. 1	May 24	Aug. 1	Nov. 21
Mar. 1	June 21	Sept. 1	Dec. 21
Apr. 1	July 22	Oct. 1	Jan. 21
May 1	Aug. 21	Nov. 1	Feb. 21
June 1	Sept. 21	Dec. 1	Mar. 23

[1]For farrowing dates for sows bred after the first day of the month, add the number of days after the first day of the month to the date in the right hand column.

Farrowing time

Farrowing is a critical period for pigs. About one-fourth of all pigs die before they are marketed and by far the largest percent die the first two weeks after birth.

Sows usually don't need assistance at farrowing, but being on hand to provide aid for the sow and pigs is a good practice, especially in periods of extreme weather. Attending to the needs of new-born pigs will greatly reduce death loss.

Important chores from farrowing to weaning are

- Washing sows before moving into farrowing quarters,
- Farrowing in clean, disinfected quarters or on clean ground,
- Keeping traffic through farrowing house to minimum,
- Helping the sow only if needed—normal farrowings take 2-3 hours,
- Having heat 90°-95° F in the pig area for new-born pigs,
- Dipping the navel cord in iodine,
- Evening up litters by transferring pigs among sows farrowing within 48 hours,
- Protecting pigs from anemia with iron shots or oral iron.

Feed and nutrition pointers

Feed will make up the largest percentage of all costs in raising hogs. It is important to purchase feed ingredients as cheap as possible and yet provide adequate nutrition for maximum performance. Major recommended levels of protein, calcium and phosphorus for various classes of hogs are given in Table 3.

Table 3. Protein, calcium, and phosphorus requirements.

	Weight or class (lbs)					
	11-22	22-44	44-77	77-130	130-220	Sows
Crude protein %	22	18	16	14	13	15
Calcium (%)	.8	.65	.65	.50	.50	.7
Phosphorus	.6	.50	.50	.40	.40	.5

Total feed needs should be estimated. Actual records indicate that a farrow-to-finish operation requires from 400 to 425 pounds of feed for each 100 pounds of pork produced. Growing pigs are more efficient and average gains and feed intake from weaning to market are shown in Table 4.

Table 4. Estimated daily feed requirements and gains of growing pigs.

Body weight (lbs)	ADG (lbs)	Daily feed intake (lbs)
25	.8	1.75
50	1.2	3.00
75	1.4	4.00
100	1.6	5.00
150	1.8	6.75
200	2.0	7.75
220	2.1	8.00

Three main alternatives in buying feeds to meet the pigs requirements are

- Buying and feeding a complete mixed commercial ration—more convenient, usually higher cost.
- Buying commercial supplements and mix with home grown grains. This works well where crops are produced.

- Formulating and mixing complete rations. This requires time and some training but can cheapen rations.

Many ration formulations can be made depending on cost and availability of feed ingredients. Some typical rations are shown in Table 5.

Table 5. Rations for swine (100-lb. mix).

Ration	40-75 lb.	75-125 lb.	125-230 lb.	Sow
Corn	77.1	83.1	86.1	77.3
SBOM	20.6	15.0	12.0	17.5
Alf Meal	---	---	---	2.5
Salt	.5	.5	.5	.5
Bone Meal	.9	.4	.4	1.0
Limestone	.9	1.0	1.0	1.2
Vitamins	+	+	+	+
Antibiotics	+	+		
Calculated Protein	16.0	14.0	13.0	15.0

Health management

Disease and parasites must be kept to a minimum to raise hogs successfully. Watch for signs of stress and symptoms of disease. Coughing, listlessness, loss of appetite, diarrhea, and rough hair coat may all indicate problems.

Become familiar with common disease problems such as erysipelas, rhinitis, TGE, leptospirosis, and swine dysentery. Establish a health program to include routine vaccination and worming schedules.

Additional references

UMC Guide No.	Title
2320	Nutrient Requirements of Swine
2321	Vitamin Requirements of Swine
2322	Mineral Needs for Swine Rations
2350	Grain-Protein Supplement Ratios in Swine Rations
2351	Evaluating Vitamin Premixes for Swine
2352	Swine Feeds & Their Composition
2356	Feeding the Sow and Gilt
2430	Common Internal Parasites of Swine
2500	Care of Pigs from Farrowing to Weaning
2502	Buying a Herd Boar
2503	Management and Care of the Herd Boar
2504	Swine Sanitation
2506	Income Possibilities from Finishing Feeder Pigs
2507	Disease Aspects of Swine Management
2508	Diseases of Breeding Swine & Baby Pigs
2509	Swine Management Check Sheet
2510	Selecting Replacement Gilts

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