



Project Essential Fact Sheets: Growing a Show Swine to Market Weight

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Overview

Raising a swine is a great way for youth to learn about livestock and raise a market product through 4-H. In this document we have listed some strategies and resources that are important in making show weights and growing a high-quality agricultural product. Some important things to know about your swine project include appropriate feeds and feeding, planning to ensure your swine makes weight for the show, and how to spot common health problems. Be sure to work with your county Extension staff and 4-H Leaders to find additional resources and have the best chance for success!



#1 SWINE TIME BMD
COMPLETE SWINE GROWER
#2 FOR PIGS WEIGHING 125-190 LBS.
For increased rate of weight gain and improved feed efficiency.

#3 GUARANTEED ANALYSIS
 Crude Protein, Not less than..... 14.0 %
 L-Lysine, Not less than..... 0.80%
 Crude Fat, Not less than..... 4.5 %
 Crude Fiber, Not more than..... 5.0 %
 Calcium (Ca), Not less than..... 0.4 %
 Calcium (Ca), Not more than..... 0.9 %
 Phosphorus (P), Not less than..... 0.55%
 Salt (NaCl), Not less than..... 0.30%
 Salt (NaCl), Not more than..... 0.80%
 Selenium (Se), ppm, Not less than..... 0.3
 Zinc (Zn), ppm, Not less than..... 100

#4 INGREDIENTS
 Grain Products, Plant Protein Products, Animal Protein Products, Processed Grain By-Products, L-Lysine, Hydrolyzed Animal and Vegetable Fat, Calcium Carbonate, Monocalcium/Dicalcium Phosphate, Salt, Copper Sulfate, Basic Copper Chloride, Calcium Iodate, Ferrous Sulfate, Manganous Oxide, Sodium Selenite, Zinc Oxide, Vitamin A Acetate, Vitamin D₃ Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin, Niacin Supplement, Calcium Pantothenate, Vitamin B₁₂ Supplement, Choline Chloride

#5 FEEDING DIRECTIONS
 Feed continuously as the sole ration to pigs according to the body weight range and conditions where a 0.80% (approximate) total lysine level is appropriate. Swine Time is generally fed to pigs weighing between 125 lbs. and 190 lbs.

→WARNING←

#6 Do not feed to cattle or other ruminants.

#7
 Manufactured By
 4H Incorporated
 P.O. Box 999
 Wherever, USA
50 Lb (22.68 kg) Net Weight
77777

Figure 1. Example Feed Tag. Credit University of Wisconsin Cooperative Extension

Feeding Stages	Starter	Growing	Finishing
Weight (pounds)	25-100	100-200	200+
Protein Percent	21%	20%	18%
Lysine Percent minimum	1.15%	.95%	.75%

Figure 2. Feed Composition. Lysine and protein percentages change based on the musculature and weight of the swine.

Feeding Rations and Schedule

In animal production, a ration is the specific feed or feeds we provide to that animal for proper growth and development. Ration composition and schedule are important in keeping your swine healthy and gaining weight to meet show and market standards. Pig rations include 5 basic nutrients, water, crude protein, metabolizable energy, minerals, and vitamins. Minerals needed in a hog's diet include phosphorus, calcium, iron, salt, magnesium, zinc, copper, selenium, and iodine. The vitamins that should be added to rations are A, D, E, K, B12, biotin, and folic acid. Be sure to check feed tags (Figure 1) to determine ration composition and select a feed appropriate to the needs of your livestock.

Figure one is an example a feed tag with the key features numbered. This includes:

- #1 – Product name.
- #2 – Product purpose.
- #3 – Guaranteed nutrient analysis.
- #4 – Ingredients.
- #5 – Directions for use.
- #6 – Precautionary statement.
- #7 – Manufacturer name and address.

Starter and growing rations - early and growing rations provide high amounts of protein and lysine to encourage muscle development - when feeding hogs remember that muscle is protein!

- A good rule of thumb for estimating feed amount is to start at 4% of the pig's weight. This can be adjusted up or down depending on appetite and show schedule.
- Young hogs tend to be light or moderately muscled, so feeding a high protein feed is suggested. Feeding a ration over 20% protein is acceptable until the hog weighs 100 pounds. Be sure to incorporate lysine - this is an essential amino acid that is essential for muscle development. Hogs that do not receive the proper amount of lysine will develop and grow slower.
- After the hog weighs over 100 pounds, start adding 1 pound of high protein (20%) feed to the daily ration to encourage additional muscle growth.

Finishing ration composition - - swine over 200 pounds require a high energy diet to develop bones, tissue, and hair.

- If buying a commercial feed, be sure to select one that is labeled as a finishing feed.
- To help with body cover, feed a high energy feed that is higher in carbohydrates such as barley, wheat, corn, or sorghum. In general feed around 8-12 oz. a day and adjust as needed.
- When hogs become tight moving, or stiff in their motion, it is suggested to decrease crude protein and increase dietary energy (carbohydrates).
- If your hog has a low appetite, diversify the feed so you can find preferences and keep the diet interesting.

Other feeding considerations - there are many variables affecting a swine's appetite and ability to gain. It may be necessary to change feeds, push for growth, or hold a heavy hog to not exceed show maximums. A few things to consider include:



Age in Weeks	Animal Weight (Pounds)	Average Daily Gain (Pounds)	Daily Feed Consumption (Pounds)	Daily Water Consumption (Gallons)
4	15.4	0.46	0.77	0.24
6	26.4	0.88	1.65	0.50
8	46.2	1.37	2.20	0.66
10	66	1.44	2.64	0.79
12	88	1.56	3.09	0.95
14	112.2	1.76	3.75	1.11
16	143	2.13	4.19	1.27
18	176	2.24	4.85	1.45
20	209	2.45	5.29	1.59
22	242	2.41	5.73	1.74
Estimated Total Input	N/A	N/A	461*	148*

Figure 3. Water and Feed Rations Over Time. Feed intake, water intake, and ADG will change as your hog grows. These averages can give you an idea of growth and intake over time. Info sourced from www.Agrfarming.in. *Total inputs are based off of industry averages. Your project inputs will depend on the age at purchase, genetics, and other factors associated with your individual projects. Consider these numbers as a guide for getting started but expect variation in your individual experience.

- When changing between 2 feeds, blend feeds over a couple of days before directly changing to new feed. This will be less of an issue if changing between feeds that are the same brand and have similar nutrition profiles. For example, start by mixing 25% new feed/75% old feed for a couple of days, then move to 50/50%, then 75% new/25% old. Finally, switch to 100% of the new feed.
- If you need to push growth rates, consider adding a high fat liquid such as milk replacer or vegetable oil to the swine's diet. This provides extra calories without extra diet bulk to a hog that may be eating as much as they physically can of solid feed.
- If you need to hold a swine at a specific weight, feed 2-3 pounds of your show feed and add bulk to the feed and make your hog feel fuller after the meal. Fiber heavy/less energy dense ingredients such as rolled oats, beet pulp, whole oats, or soybean hulls are useful fillers when holding. Fibrous ingredients alone do not provide enough necessary protein, you must feed these in combination with the normal ration.
- Show feed suppliers offer various growing and holding supplement products. Discuss these with your leader and veterinarian and follow labeling instructions.

Weight Gain Calculations

There are many factors that influence how to properly feed a pig for show, including the hog's genetics, environment, health, sex, and age. As a rule of thumb, a swine will

generally convert 3.5 pounds of feed to around 1 pound of gain. This will vary from animal to animal. There are several equations that are useful to determine your animal's average daily gain and the feed requirements to make weight for your show date.

- Ideal beginning weight = (desired weight) – (pound of gain needed before fair)
- Pounds of gain needed before fair = (days until fair) x (Average Daily Gain)
- Average Daily Gain = weight gain since last weighing / number of days since last weighing

Common health issues to watch

There are some typical health issues that 4-Hers will encounter when growing a swine project. It is important to develop a relationship with a veterinarian and work with your 4-H Leader to administer vaccines and medicines to keep your hog healthy. Remember that many medicines have minimum withdrawal periods that need to be met before slaughter. Make sure you take your required Youth for the Quality Care of Animals training early in your 4-H project - it is a great overview of these topics (<https://yqcaprogram.org/>). A few common health issues you might see include:

- Internal parasites
- Sunburn
- Influenza
- Brucellosis
- Wounds

With nearly all health issues, biosecurity plays a major part in keeping animals healthy and preventing the spread of health issues. Plan out an appropriate biosecurity plan with 4-H leaders, and work with a vet to make sure that your hog is receiving proper preventative and interventional care.

Pro Tips From Arizona Swine Project Leaders

Kristi Bennett – Coconino County – Page Livestock Club

- Sweet things that will stick to the end of a stick help a lot with training, I've found Nilla Wafers to be especially effective!
- Pigs are like people; they all have different palates – try different feeds and treats to see what they like.
- Free feeding pigs can tend to nibble – feeding twice a day can help a hog feel hungry and lead to more effective feeding.
- It is crucial to weigh soon and often – you can hold a heavy pig, but if you weigh too late it's really hard to catch up.
- Livestock milk replacer is a nutritious way to help a pig gain, but it can be expensive. If you need to encourage weight gain, it can be worth the cost. Mix rolled corn in milk replacer and soak. If you're mixing a big batch, refrigerate so it doesn't sour. Add two cups to the daily feed ration.
- The key to success in raising show pigs is a set of scales. Digitals are not that expensive to buy, and you can build your own platform/cage to put on them. If you do not have scales, it will be nothing but a guessing game all season. We religiously weigh once a week especially toward the end.
- Pigs of all colors will sunburn just as bad as a human! When building a pig pen, make sure they cannot lay out in the sun!!! This is crucial - once they blister, crack, bleed, develop nasty scabs, and then they start scaling super bad! The key is to keep them totally out of the sun during the worst part of the day.
- Certain pig breeds that are genetically born to gain better than other breeds. Durocs, pure Yorkshires, & Berkshires are three common good gainers.

Laura Kelley – Coconino County – Parks in the Pines 4-H Club

- High quality feed-Spend the extra money on high quality feed. Your pig will gain more because it has less fillers. You will notice their poop will be smaller because they are not getting all the fillers that go right thru them. Cost wise it equals out the same, because you must feed more of the less expensive feed to get the same results. The bonus, when cleaning pens, less poop!
- Clean fresh water! An igloo water jug with nipple where the spigot is works very well. This keeps the



water clean and cool, but a pipe waterer works well also, just make sure it's clean and full daily.

- A Hanging feeder is the best to use. Make sure you clean it DAILY. Wash it with water and scrub it clean. Pigs do not like to eat out of a dirty feeder.
- Do not free feed. Take the feed away after 20-30 minutes, even if they have not finished it. Doing this from the start will teach the pigs that they need to eat it all that is given to them, or it gets taken away. This strategy also allows you to manage how much a hog is eating.
- Higher protein feed will increase weight. If pig is gaining too fast and looking lean, change the percentage of protein level in the feed and add more fat. Example – if you're feeding an 18% protein with 7% fat and you want to soften the look of the pig, change to a 14.5% protein level with 6% fat level. If the pig is gaining too fast and you want to "hold" the pig from gaining, there are products available to feed without losing muscle or shape. Do not cut back on the feed to hold your pig, it will lose shape and it's not healthy.
- Beet pulp will add fill and center body mass.
- Clean pen! Make sure your pig pen is clean, this means cleaning DAILY to keep flies to a minimum. Insecticides such as Permethrin are useful to use when flies get bad.
- Deworming regularly is essential for weight gain and a healthy pig.

- Change ration compositions slowly. Change the rations over several days to a week by mixing in the new feed and gradually increasing the amount of the new feed.

drop to a 14-16% protein to add desired cover (fat). Remember we're growing this pig for someone to eat so we want to have good muscle and about 1/2-3/4" back fat.

Michele Najare – Greenlee County – Duncan Community Club

- When you buy your pig, get 1-2 bags of feed that the breeder was using. For the first 3-7 days feed that ration then if you decide to feed a different brand. Mix 3 parts old brand to 1 part new brand for 3-7 days, then half and half, then 1 part to 3 parts until you run out of the original type. This will reduce the potential for or severity of scours (diarrhea). Do the same if you switch feed at any other time.
- NO animal byproducts, that includes eggs, cheese, milk, or dog food. Exception high quality yogurt with probiotics if they have scours or stop eating.
- Weight your feed. Measure it in pounds and increase the amount of food as the pig grows, or cut back if you need to "hold" your pig (make it not gain weight as fast).
- Try to feed early in the morning and when it cools off in the evening.
- It should take them no more than 15-20 minutes to finish their meal. If they gobble everything up quickly, give them 1/4 pound more. If they leave a lot, cut back a little bit.
- Add water to your feed so that it is the consistency of mush but not soup. Try different amounts until you find the consistency they like. This helps them process the food more efficiently and gets more water into their system to stay hydrated.
- ALWAYS provide freshwater--their food is dehydrated, and they must have water to process it and continue to stay cool.
- Keep your pigs as cool as possible (make sure they can't lay in the sun). This will help them want to eat.
- When it is hot, they may stop eating as much. This is a good time to add cold water to their food. Frozen melon rinds or greens are also a nice treat, but don't give them too many.
- If you have more than 1 pig, have them in separate pens. If that's not possible, have a feeder and a water spigot for each pig. This way they don't fight over their feed and water and each pig gets its personalized amount of feed / supplements for its growth program. This is a good time to be in the pen and brush their skin while you keep them separate to feed.
- As pigs grow, they usually need feed that is 18% protein for sound muscle growth and in the last 4-6 weeks before fair/market show they may need to

Useful references

Find your county/Tribal Nation Extension program and staff - <https://extension.arizona.edu/locations>

Show Swine Feeding Fact Sheet - <https://extension.arizona.edu/pubs/az1055.pdf>

University of Arizona 4-H Swine Project resource page: <https://extension.arizona.edu/4h/project/swine-market>

UA Large Stock Fact Sheet - <https://extension.arizona.edu/pubs/4-h-project-essentials-livestock-fact-sheets-large-stock-vol1>

Youth for the Quality Care of Animals Training - <https://yqcaprogram.org/>

United States Department of Agriculture swine disease information - <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/swine-disease-information>

Biosecurity for swine producers - <https://texashelp.tamu.edu/wp-content/uploads/2016/02/Biosecurity-for-Swine-Producers.pdf>

Feed Tag Worksheet - https://fyi.extension.wisc.edu/ncrvd/files/2015/04/Interpreting_Feed_Labels_Worksheet.pdf



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This information has been reviewed by University faculty.
extension.arizona.edu/pubs/az2071-2023.pdf

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