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MOFGA FACT SHEET #16

Raising Organic Pigs

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Pigs can be valuable additions to diversified farms by providing meat and helping to clear land. Louis Bromfield wrote in his book From My Experience (1955), "To be financially successful at raising hogs primarily requires the ability to think like a hog." This article covers the basics of keeping pigs and helps farmers to "think like a hog."

Pig Jargon

Sow: sexually mature female

Farrowing: sow giving birth

Gilt: young female

Boar: sexually mature male

Barrow: castrated young male

Stag: old castrated male

Piglets & Shoats: young pigs

Weaners: recently weaned or taken from sow

Feeders: from weaning to slaughter

Pig Biology

Normal temperature: 101.6°F - 103.6 °F

Age at puberty: 5-8 months

Heat period: 16-24 days; duration: 1-3 days

Gestation: 114 days

Average productive life: 8-9 years

Dental formula: 3-1-4-3 (three incisors, one canine, four premolars, three molars). They get their top and bottom final, third molar at 20 months of age.

Like humans, pigs are monogastric. This trait makes them the best animal model for studies of human digestion.

Breeds

Groups of pig breeds:

Lard Types: Poland Chinas, Cheshires, Essex, Mulefoots; have compact bodies, large hams, docile, and a heavier fat layer, although recent breeding has made them more similar to bacon and meat typing.

Tamworth x Large Black piglets on pasture at Bagaduce Farm in Brooklin.

Bacon and Meat Types: Landrace, Yorkshires, Tamworth; longer bodied and legs, trim profile, higher energy, less external fat.

Dual-purpose: Berkshires, Hampshires, Large Black (especially docile because of the large flopped ears), Saddlebacks.

There are demands for each breed by the market. Many hog growers practice cross breeding to get hybrid vigor in offspring. Information about the breeds and producers is available from the American Livestock Breed Conservancy, www.albc-usa.org.

Housing

Types of housing can vary as much as pig producers. It can be as inexpensive as an A-frame made out of scrap lumber or prefabricated, such as a Port-A-Hut. Whatever you construct, remember that some 200 lb. animals will be rubbing up against it. Larger producers that grow feeder pigs year round use hoop house structures with lots of deep bedding such as straw or lower quality hay. Whatever you decide to use, be sure they have enough room to lie down without crowding one another inside the house. If it is a structure that they live in during the winter there must be lots more room and deep bedding to allow for their natural rooting behavior. Lack of adequate bedding will lead to destructive behavior, injury to themselves and each other, and stress. Pigs are intelligent creatures and they must be housed in a way that satisfies their curious nature. If they aren't busy rooting and feeding they need root crops to dig up, ears of corn or other diversions (toys).

It is also necessary for pigs to have a place to wallow in warm weather. Because they are only able to perspire on the bottom of their feet, wallowing helps their bodies cool down. If you don't create a reasonable place for them to get wet, they will make their own and probably not where you would like it.

The minimum house and paddock space guidelines for pigs with a movable pen (more paddock space needed if stationary).

House space:

Piglet to weaners- 16 sq.ft.

Weaners to finished- 40 sq.ft.

Farrowing sow- 40 sq.ft.

Paddock space:

Sows: 10 Sows/acre with litter; or 15/acre without litter

Weaning to finishing: 1 litter/acre or 1000 sq ft/pig

Or, 1-2,000lbs of animal/acre

Despite common beliefs, pigs do not like their homes to be "piggy." Given the opportunity they will use one area for excrement, not near their food area or sleeping quarters. If you are keeping them in a confined area, it's important to keep it mucked out daily. For a deep bedding system, add fresh bedding daily. Otherwise, the animals will be stressed.

Handling

Quiet, purposeful, humane handling is important for livestock. Pigs in particular have a problem called Porcine Stress Syndrome (PSS) resulting in Pale Soft Exudative (PSE) pork. If poor management stresses pigs too often, especially close to slaughter time, then PSE is the result. It is important to find a butcher you trust before dropping off your pigs.

Pigs are easily trained to electric fences. For newly purchased piglets, run the electric fence inside a solid fence, such as snow fencing, to start. Pigs don't usually try to get through if they can't see the other side. This is helpful to remember when moving pigs or catching loose pigs. Holding a solid piece of plywood in front of the pig will cause it to move backward or to either side. Or place something over the pig's head and it will move backward.

Piglets to feeders require two wires at about nose and shoulder height. Adults can usually be contained with one wire. If you are going to rotate them through the pasture, move them frequently in the beginning so they are accustomed to moving to new spaces. Otherwise, they will be afraid of where the fence was and won't go to the next paddock.

The best way to load pigs onto a truck or trailer is to place the truck in the pig's pasture for a couple days and feed them inside. In doing so they will adjust to the trailer and you can close them in when you are ready to move them.

Pasture/Forage

A pig's ability to utilize pasture is related to its age and digestive capacity. Pigs are not ruminants. Their ability to utilize roughage is limited so care must be taken not to fill them with roughage, and to limit their intake of nutrient rich foods. Young pigs with higher requirements and a smaller capacity need more concentrated feeds. A full-grown sow that has completed farrowing and is suckling its young will have a much lower requirement. It is possible to raise feeder pigs on pasture and a good protein supplement e.g., milk, although it takes about 7 or 8 months (rather than 6 with grain supplementation) to get a finished market weight of 225 pounds. You can reduce grain consumption 30% to 60% with excellent quality pasture. This requires an intensively rotated pasture with many types of legumes.

Pigs will take time to get used to a forage diet. The variety of bacteria that digests forages must multiply in their gut. Piglets farrowed on pasture will adapt more quickly than animals that you purchase from a confinement operation. Often they have different genetic traits in addition to the fact that they didn't have pasture in their diet from birth.

A reasonable goal is 1.5 animal units (1,000 lbs. = 1 animal unit) per acre, per season to allow resting of fields. This will depend on the quality of the fields and experience of the farmer. It is ideal to use intensive rotational management. Animals are in a paddock for approximately 2-3 days and then the paddock rests and re-grows for about a month. The length of time a pasture needs to be rested depends on the season and rainfall.

Pigs are quick to decide about the quality of the pasture. They happily root up poor quality pasture or wet ground. Pigs will gladly eat roots if there is nothing else to eat or when it's easy. So if you put the pigs out on poor forages or soft ground, be prepared to move them quickly or they will till the ground.

You can use the pig's ability for turning in crops and aerating soil to your advantage. Some farmers include pigs in their crop rotation. These pigs are managed in more concentrated groups, closer to 12 animal units per acre. They are moved after they eat the crop and weeds and till the soil. After the pigs are moved, only light tillage is needed to prepare the ground for the next crop.

Pigs are very useful in multi-species grazing systems. They will consume areas of plant growth around other animals' manure in addition to breaking up or consuming the manure. This will almost eliminate the possibility of the other species getting parasites when they return to those pastures.

Pigs eat about 0.8 lbs/day of hay per 100 lbs of body weight during the winter.

Grain

Rations vary with different breeds and farmers. The amount and quality of the pasture also affects the ration required for optimal gains.

If you feed a 15% grower ration the first 90 days at 10#/day, then 5#/day until slaughter, it requires approximately 3.5 lbs of grain per pound of live weight gain.

It is possible to get a better gain:grain ratio by feeding a more precise ration. Each class of pig gets a ration that will meet its protein requirements:

Weaner: from 1 week to 8 or 10 weeks after birth, 21% Crude Protein (CP), 2.5 lbs/day.

Grower: 9-16 weeks, 18% CP, 5 lbs/day.

Finisher: from week 17 until slaughter at week 20 to 24, 14.5% CP, 8 lbs/day.

Sows with litters from birth until mating: 18 to 20% CP.

Gestating/dry sows and boar: 12-15% CP.

For those interested in mixing their own rations, the National Research Council's "Feeding Requirements of Swine" is useful, available online at www.nap.edu.

Soft Pork

If you are going to make your pork into a smoked product, note that soft fat liquefies at room temperature. A great deal of fat will be lost in processing and storage. A diet heavy in corn and soy, or low in saturated fat, will increase soft fat. One way to reduce soft fat is to feed more barley as the grain. Feed peas with other seeds, such as flax or sunflower, for protein. This is especially important during the last few weeks before slaughter. The less pasture the animals are eating, the more carefully their diet must be balanced.

Alternative Feeds

You can feed pigs grain but there are many options for supplementing or substituting different sources of nutrition. Dairy products are great for supplementing pasture and cheese makers are often looking for a place to get rid of their whey. Market gardeners have cull vegetables they might normally compost. The list is as extensive as you can imagine. Pigs are often used for clearing land. If you put them in a wooded lot they will eat the underbrush first and then move to girdling trees. How much you feed them will depend on the production levels you want and the age of the pigs. Older pigs will do a better job of scavenging. You can also grow crops for hogging down. Some folks will grow a field of corn, grain, beans, or turnips and let the pigs harvest them.

Water

Make sure that there is plenty of fresh water (warm in the winter) available for pigs at all times. Water is necessary for proper digestion and pigs eating dry feed rations particularly require plenty of water.

12 –30 lbs of pig: 1qt./day

100-240 lbs: 6 qts./day

lactating sow: 20 qts./day

Remember these amounts don't take playing into account! A constant supply of water using nipples on a barrel is the ideal set-up.

Minerals

Minerals and salt must be available to all pigs unless they are fed a commercial pig ration. Even then, keep kelp, at least, in a mineral feeder.

Health Care

There are many diseases that can affect swine, but as with raising any organic livestock, prevention is the key. Sound management practices copy the natural environment: fresh air, sunshine, freedom for natural behavior, shelter as needed, healthy feed, PASTURE, variety in the diet, clean water, good sanitation and manure management. The major concern for most small-scale hog growers is intestinal parasites. These can be managed with proper pasture rotation. Never put piglets on ground that infected animals have been on for at least a year. If you need to worm them a good helping of fresh garlic and wormwood powder will eliminate many parasites. It pays to do a fecal sample on new animals after treating and on unthrifty animals. Worm animals before moving them to new pasture and isolate for 3 days, either in a trailer, quarantine stall or sacrifice area. Treat and test on the new or full moon; parasites have been shown to be more active then.

Piglets need to have dirt or sod to root in early in life or it is necessary to give them iron shots. If you decide to clip their needle teeth, do it before they are a week old (day 1 or 2 is even better), the same for castration. This greatly reduces the stress to you, the piglets, and the sow. Piglets benefit greatly from Probiotics. In addition, keeping sows of different ages together increases the sows' immunity levels. This immunity will be passed to the piglets in the colostrum. The MOFGA Fact Sheet, "Raising Organic Livestock in Maine: MOFGA Accepted Health Practices, Products & Ingredients", is available from MOFGA with additional treatment specifics.

Resources

MOFGA Fact Sheet, "Raising Organic Livestock in Maine: MOFGA Accepted Health Practices, Products & Ingredients", www.mofga.org.

The National Sustainable Agriculture Information Service, (ATTRA) www.attra.ncat.org. Some fact sheets titles are "Considerations in Organic Hog production", "Pork: Marketing Alternatives", "Hooped Shelters for Hogs" and more.

Sustainable Agriculture Research & Education (SARE) has a good bulletin: "Profitable Pork, Strategies for Hog Producers" www.sare.org/bulletin/hogs.

Sugar Mountain Farm has a great blog sugarmtnfarm.com/blog/.

Karma Glos, Kingbird Farm has an organic hog article with enterprise budget www.kingbirdfarm.com.

Joel Salatin, Polyface Farm raises "Pigerator" pork finished on acorns www.polyfacefarms.com.

The Stockman Grass Farmer has a Pastured Pigs Digest, www.stockmangrassfarmer.net.

Morrison's Feeds and Feeding by Frank B. Morrison

Raising the Homestead Hog by Jerome D. Belanger

Local organic pig farmers. Contact MOFGA 207-568-4142, mofga@mofga.org, for a listing.

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