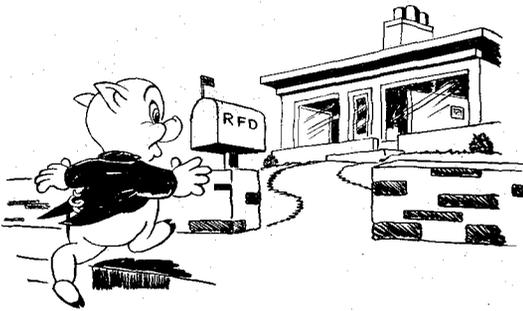


HOG HOUSES *and* Equipment

Departments of
Animal Husbandry
and
Agricultural Engineering



Federal Cooperative Extension Service
Oregon State College
Corvallis

Extension Bulletin 727

August 1952

Cooperative Extension work in Agriculture and Home Economics, F. E. Price, director,
Oregon State College and the United States Department of Agriculture cooperating.
Printed and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914.

Hog Houses and Equipment

*Departments of Agricultural Engineering
and Animal Husbandry*

GOOD SHELTER in hog production helps save pigs. Records show that 70 per cent or less of the pigs farrowed survive. Part of this high mortality is due to improper housing at farrowing time. Naturally, with the different climatic conditions in Oregon, the type of house needed will vary in different sections of the state. The planning of the farrowing house can save labor as well as little pigs. The plans selected for this bulletin show details of construction that can be modified to suit specific conditions on the farm.

Hog houses should be constructed so as to provide maximum sunlight and good ventilation. This is an aid in the control of disease. Sunlight is especially beneficial to the small pig; therefore, provide many windows, so spaced that as much sunlight as possible can enter the house. The ventilating device needs to be placed so that there will be no drafts. These suggestions apply especially where colony houses are used for farrowing purposes. Regardless of the type of house, the construction should provide warm and dry conditions.

In the colder climates of the state a stove to give heat during cold weather may be desirable. A temperature of from 50° to 60° F. is best for the comfort of the sows and pigs.

Central Farrowing Houses

The plans shown for central farrowing houses will suggest detail for floor plans which, as stated, can be modified to suit your own needs and desires.

Individual Houses

Some farmers with a small number of sows prefer individual houses built on skids. These need not be elaborate so long as they are warm and dry. The skids make moving to new locations easy.

There are many types of construction of individual houses. One commonly used and with which most everyone is familiar is the A-type house, which can be used for farrowing and as a shade during the summer. The sides of the type A house may be hinged so that they can be raised during the hot summer months, thereby making them more suitable for warm weather conditions. These houses as well as all hog houses should be floored to avoid dust. Dusty floors will cause pneumonia among the pigs.

The plan of the individual house pictured in Figure 3 has been used extensively in Oregon and has some advantages over the A type house. They are easier to clean. The high walls prevent the hogs from scratching their backs on the underside of the eaves, thereby loosening them from the rest of the building.

Insulation and Ventilation

Insulation is especially recommended for eastern Oregon. It serves two purposes: conserving heat and reducing condensation.

Moisture condensation in an uninsulated house cannot be satisfactorily controlled with ventilation and still maintain a warm house.

Fill insulation is recommended in preference to other types of insulation. Board type insulation is not recommended unless covered with a vapor seal on the inside. A minimum of 2 inches of insulation should be used on the side walls and 3 to 4 inches on the ceiling. Dry sawdust or planer shavings may be used.

A vapor barrier, such as a shiny, heavily asphalted paper or lightweight roll roofing should be placed on the inside of the building to prevent wetting of the insulation under high humidity conditions. The inside should be finished as airtight as practical. The outside should be weatherproof but need not be covered with paper. This will permit the insulation to dry to the outside should it get wet. Always use more insulation in the ceiling than in the side walls so that if condensation occurs it will be on the walls rather than on the ceiling above the pens.

Electric fans are considered the most satisfactory for ventilation. The ventilation rate is figured at about 1,080 cubic feet of air per hour per 300 pounds of hog. The flue area will be equal to discharge size of the fan. The discharge of the air should be taken as near the floor as practical. If solid pen partitions are used, then the discharge should be taken at the top level of the pens.

The inlets should be about 60 square inches spaced about 12 feet apart near the ceiling, located along the walls so that all the incoming air is directed toward the ceiling. This mixes the incoming cold air with the warm air before it settles to the floor.

Each inlet should be provided with an adjustable opening.

Electric Brooders

Electric brooders, where electricity is available, protect the pigs from the sow and provide warmth for the small pigs. Brooders need not be of expensive construction, but should be substantial and wired safely to prevent fire.

The electric brooder at Oregon State College, in a long time test, showed a saving of from 1 to $1\frac{1}{2}$ pigs per litter. The heat is supplied from a 100-watt light bulb in a deflector, as shown in the drawing. Electric brooders will, in a way, serve the same purpose as a guard rail in that small pigs will soon learn to crawl under the hover and be protected from the sow as well as keep warm.

Heat lamps that produce infrared rays are a new method for supplying brooding heat. The rays are efficient in warming and drying young animals as well as for keeping the bedding dry. Heat lamps are made in various sizes, and are available in hard or soft glass. Hard glass is resistant to breaking from water being spilled on the hot bulb.

A $\frac{1}{4}$ -inch-mesh hardware cloth should be placed around the lamp to prevent breakage or animal contact and to help hold the lamp in place. Be careful that heat lamps do not touch the dry bedding, as they will cause fire or blister pigs.

Guard Rails

Guard rails are an aid in saving small pigs. Each farrowing pen should be provided with them. These, like all hog lot equipment, must be built substantially, as sows will tear out flimsy construction. Guard rails are shown in Figure 6.

Concrete Feeding Platform

Pouring a concrete slab in the corner of the pasture will be of great help in maintaining a clean pasture, an essential in the hog program. The self-feeders, waterers, and other equipment may be placed on the slab and thus the hogs need not be in the mud. The houses may be pulled alongside for shelter.

Hog Troughs

A popular type of hog trough is made from a discarded hot water tank. Take such a tank to a shop and have it divided in the middle and add footings as illustrated so that it can be used for both grain and water in case there is no running water in the lot. Another type of trough, with which most hog men are familiar, is the flat bottomed trough with dividers to provide individual feeding space. The main thing in the construction of a feeding trough is to allow as little feed waste as possible. Hogs are inclined to root their feed out of the trough or to fight one another at feeding time. This can be prevented to a large degree by the use of the dividers spaced about 8 inches apart in the trough.

Self-Feeders

Self-feeders are a labor saving device. They can be built large enough to hold sufficient grain supply for several days. There are many types of construction.

The several plans that are shown in this bulletin will furnish ideas that will aid you in the construction of self-feeders. The construction should be such that they will not waste feed, allowing adjustment so that the feed will flow satisfactorily to supply the needs of the herd. Self-feeders usually are constructed on skids so that they can be moved to different locations as required.

In western Oregon it is desirable that the feed be protected with a roof—especially if it is outside—so that the grain can be kept dry. A roof also helps to protect the grain from rodents and birds.

Watering Devices

Hogs should have clean water before them at all times. There are many types of watering devices, such as the patented floats, that can be established in the farrowing pens or lots. The type illustrated, Figure 10, can be placed in the pasture and moved around to suit conditions on the farm.

Hay Feed Rack

Feeding good quality, leafy, legume hay to swine is a cost-saving practice. The hay should be placed in a rack so that the hogs can run to it at will the same as a self-feeder. It has been demonstrated that this saves grain and, where green, leafy hay is available, it also supplies the vitamins necessary to the health and vigor of the hogs.

Sun Porch

Fall and early spring farrowed litters are at a disadvantage, since they cannot readily be placed on the ground for exercise and sunshine. A sun porch will aid greatly in keeping the sow and the young pigs out of the mud. A slatted gate may be used, enabling the pigs to go out on the ground and return to the sow and their own bed.

Creeps

Little pigs find it difficult, of course, to eat with larger hogs. A creep will help them get away from the competition of the larger hogs and eat by themselves. There are many types of creeps, but the principle involved is illustrated in the accompanying drawings.

Shade

In the discussion of the A-type house the mention was made of the possibility of its use as a shade in the hot summer months. Oftentimes there is brush available in the hog lot which also serves that purpose. If in an open pasture, however, an inexpensive shade similar to the one illustrated is very practical and does the job for you.

Castrating and Vaccinating Tables

A device similar to the one illustrated is a help in castrating boar pigs. It is also useful for vaccinating hogs.

Farrowing Crates

During recent years there has been much discussion regarding farrowing crates. These crates are used for the sow at farrowing time in place of the usual farrowing pen. The plan pictured in this bulletin is similar to quite a number of other plans in use. There is some difference of opinion among hog men as to the benefit derived from the use of these crates. They are so constructed that they serve as a protection to the little pigs from the restlessness of the sow; also, they are helpful in handling the small pigs for any treatment necessary where the sow is inclined to be cross. The farrowing crate will not replace management at farrowing time.

Breeding Crates

A breeding crate is very important where a large boar is used on gilts. These are generally in use on Oregon hog farms. They are easily constructed.

Loading Chutes

Loading chutes are helpful on all farms. Most of our hogs are moved in pick-ups or trucks and a convenient loading chute that can be moved from one location to another should be a part of the equipment, especially where there are many hogs to be moved. The step-type chute has become quite popular for all livestock loading. It is safer and there is less danger from injury than with the cleat-type approach formerly used.

Appendix

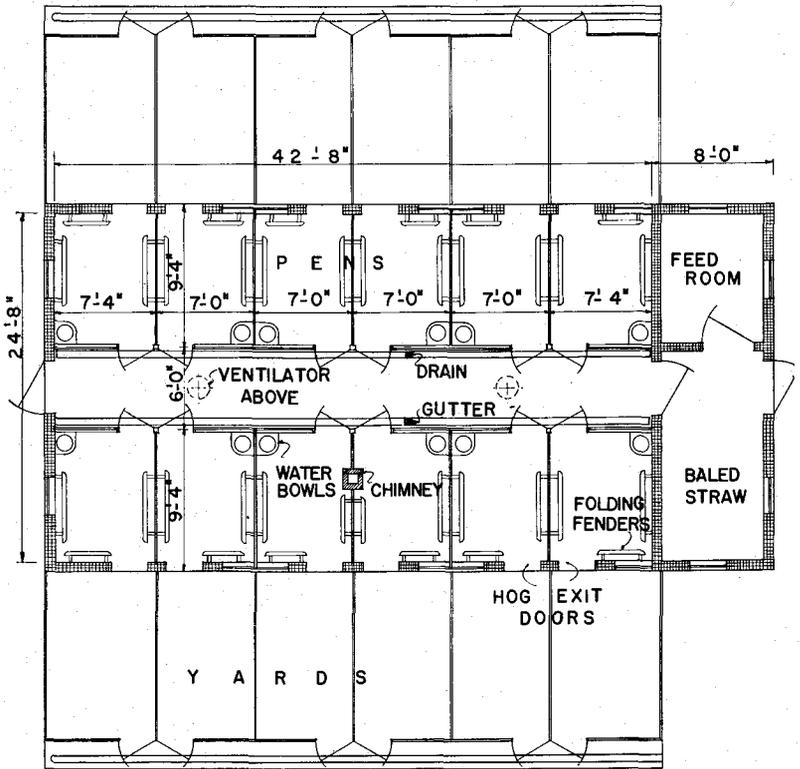
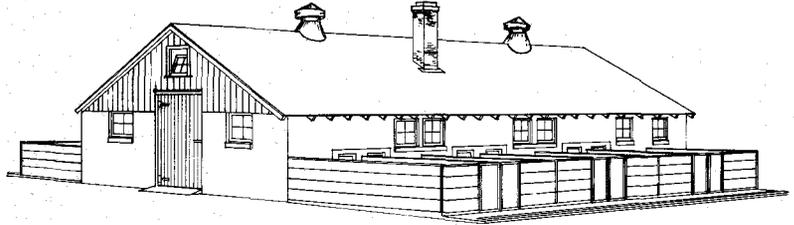


Figure 1. A central hog house showing layout of outside yards for exercise and sunshine, as well as feed-storage facilities at the end. Note location of water devices, guard rails, and gutter drains.

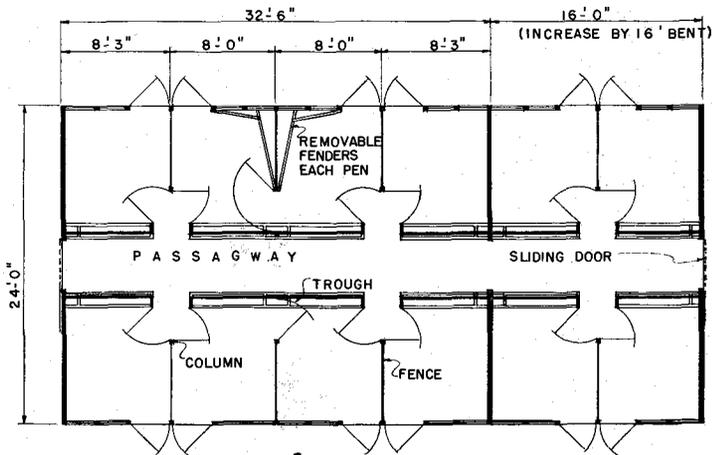
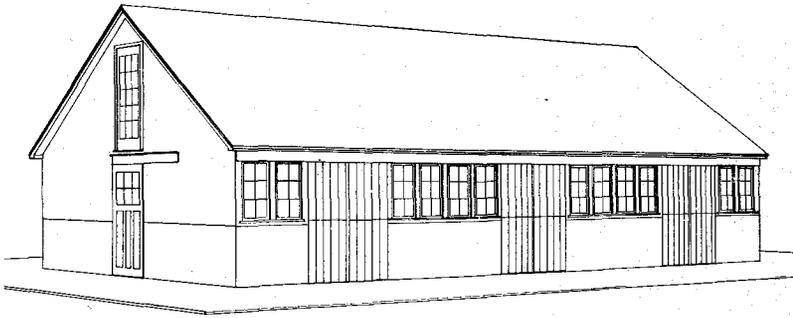


Figure 2. This house has overhead feed storage space and less elaborate equipment than is shown in Figure 1. Central houses, Figures 1 and 2, are suitable for either eastern or western Oregon conditions.

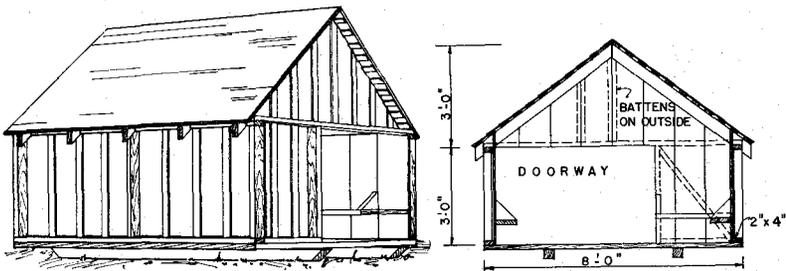


Figure 3. One type of individual hog house suitable for farrowing. Houses should be built on skids so they can be moved easily to new location. This is especially desirable from a disease-control standpoint. The gable roof provides for more head room for operator.

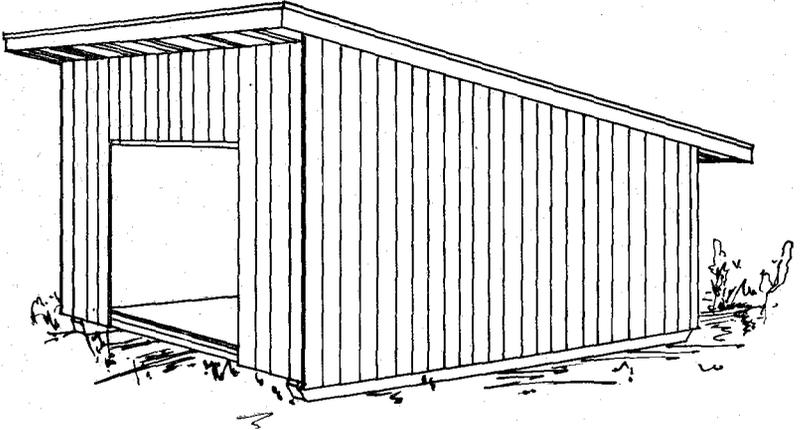


Figure 4. This shed-type roof on farrowing house is simple to construct, but is not as convenient to clean as the house in Figure 3.

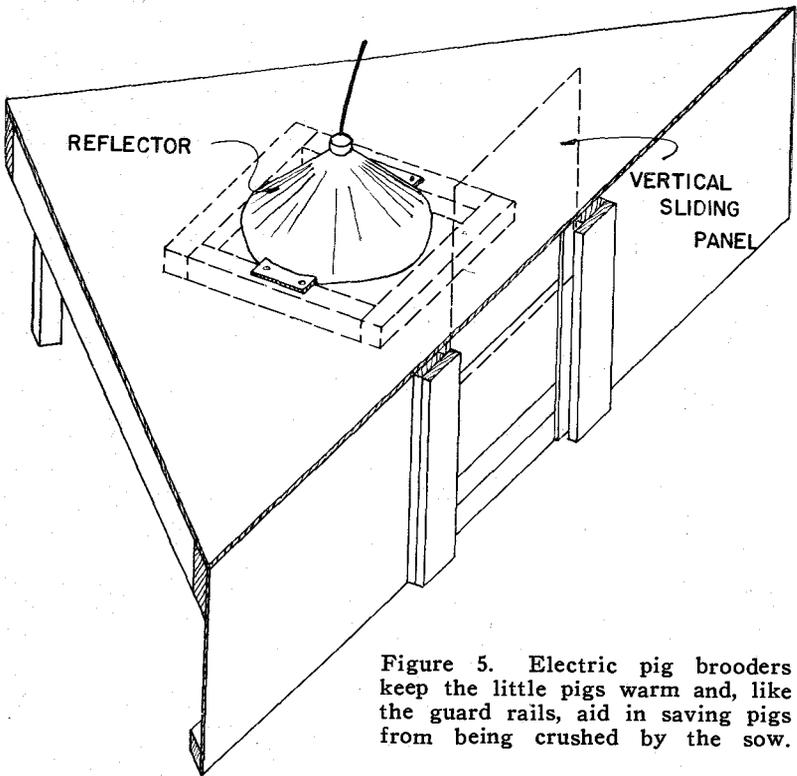


Figure 5. Electric pig brooders keep the little pigs warm and, like the guard rails, aid in saving pigs from being crushed by the sow.

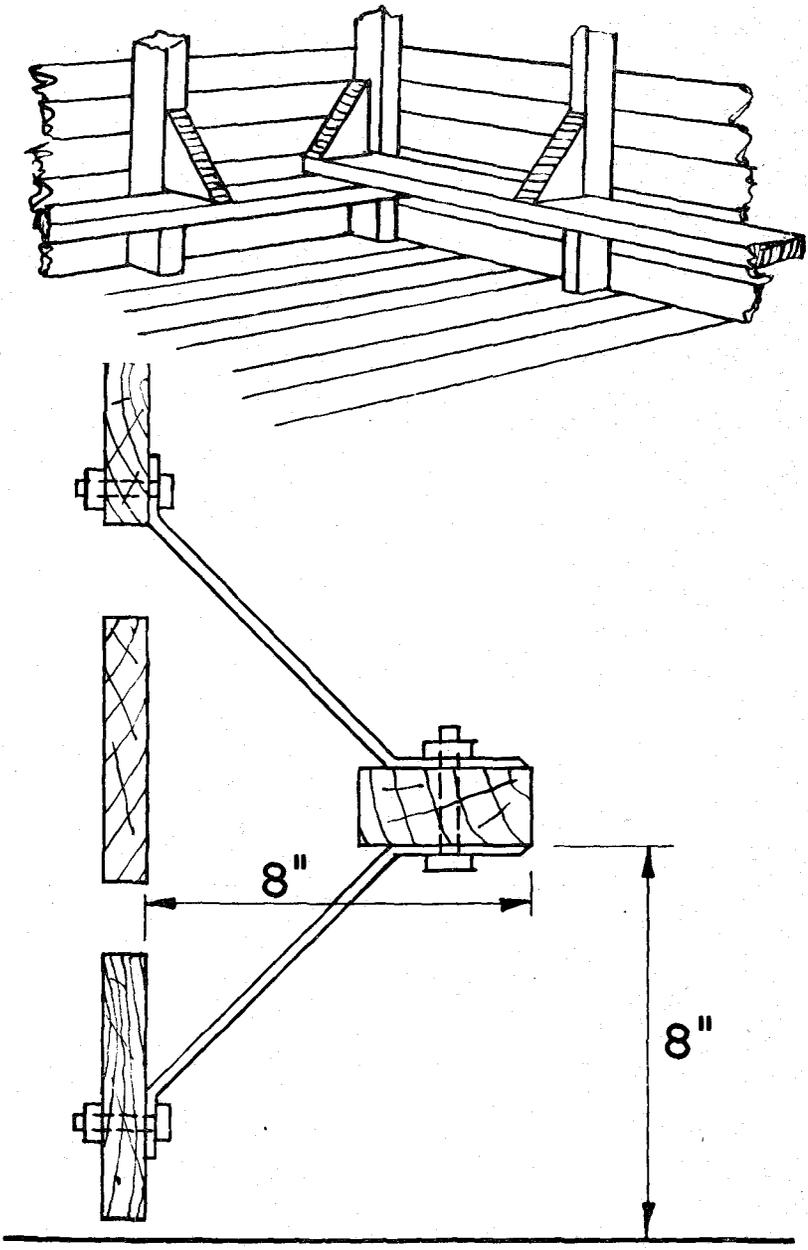


Figure 6. Method of constructing fenders or guard rails. Fender or guard rails should be fastened to wall securely. They serve as a protection to little pigs from the sow.

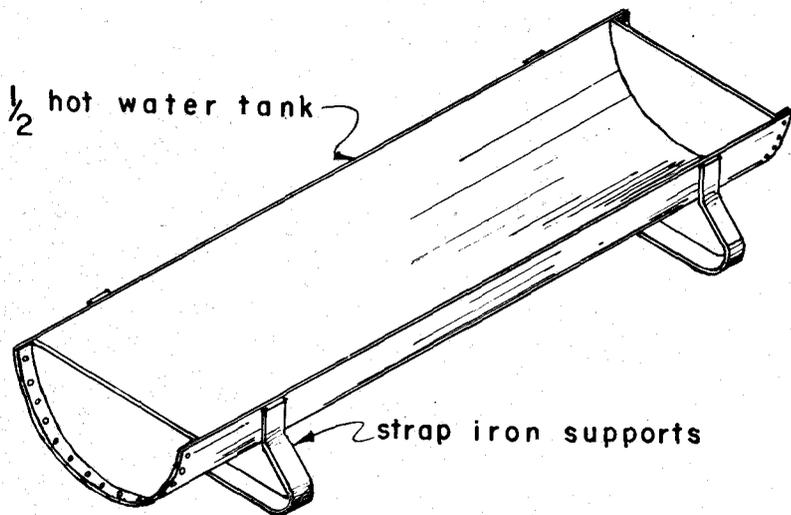


Figure 7. Discarded hot water tanks can be made into cheap and convenient water or feed troughs.

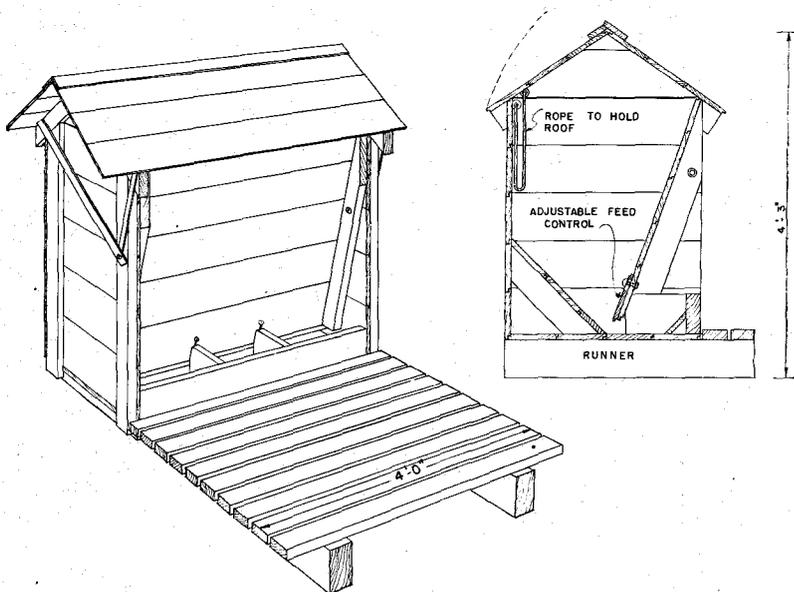


Figure 8. A self-feeder suitable for a small number of hogs. This type feeds from one side only, so can be placed against a fence or building.

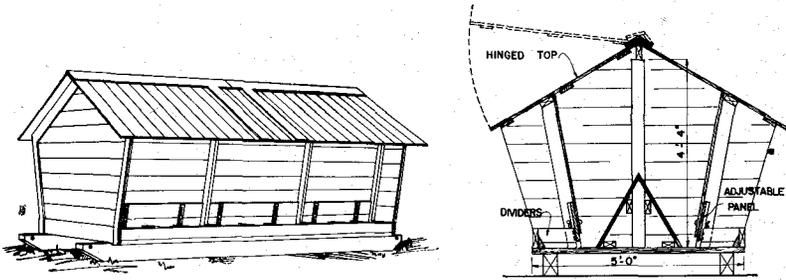


Figure 9. A substantially built feeder for a large number of hogs, with a hopper large enough to hold a grain supply for several days.

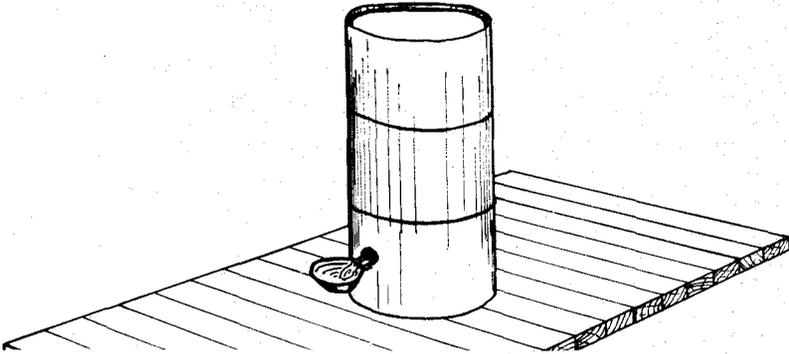


Figure 10. Keep water available for hogs at all times. If running water is not available, simple devices equipped with a commercial water cup are very satisfactory. The device can be mounted on a wood or cement platform as illustrated. The barrel should be anchored to avoid tipping.

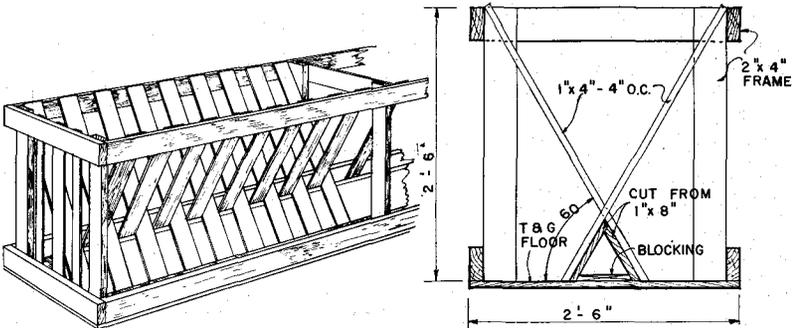


Figure 11. Alfalfa hay or other green, leafy forage provides vitamins and is a means of better balance in the ration. Hay should be available in racks in the hog lots—especially when hogs are on dry feed. It is not so necessary when hogs are on pasture.

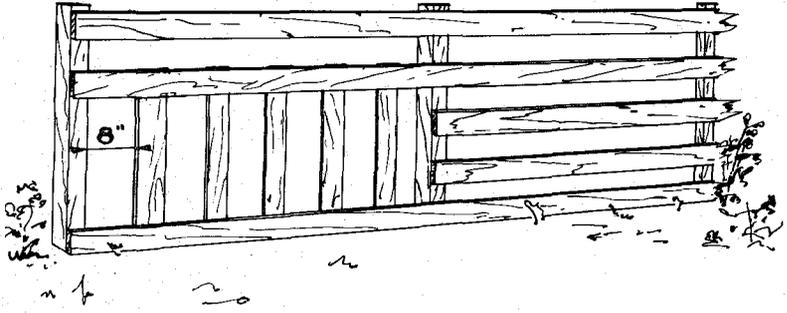


Figure 12. A creep makes it possible for small pigs to feed themselves without interference from older animals.

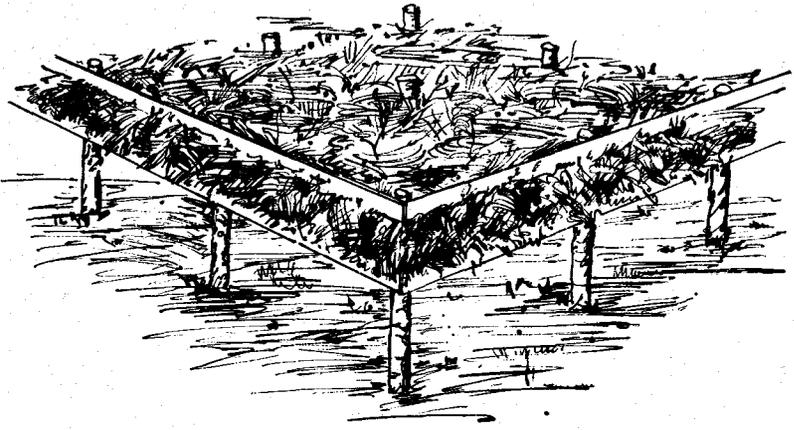


Figure 13. Shade for hogs on pasture pays dividends. It can be provided at little cost.

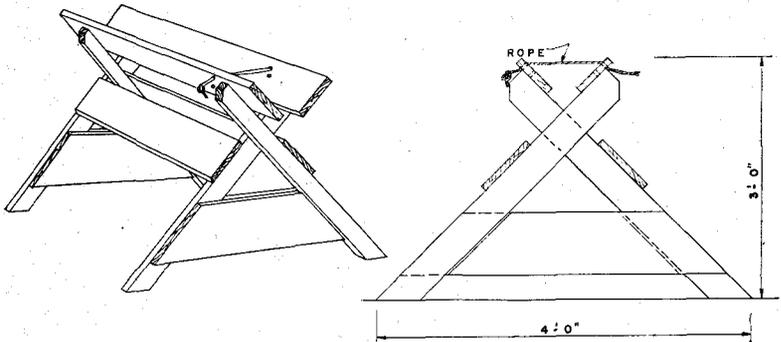


Figure 14. When castrating or vaccinating pigs, a convenient device to hold the animal saves labor and is less harmful than rough handling of the animal on the ground.

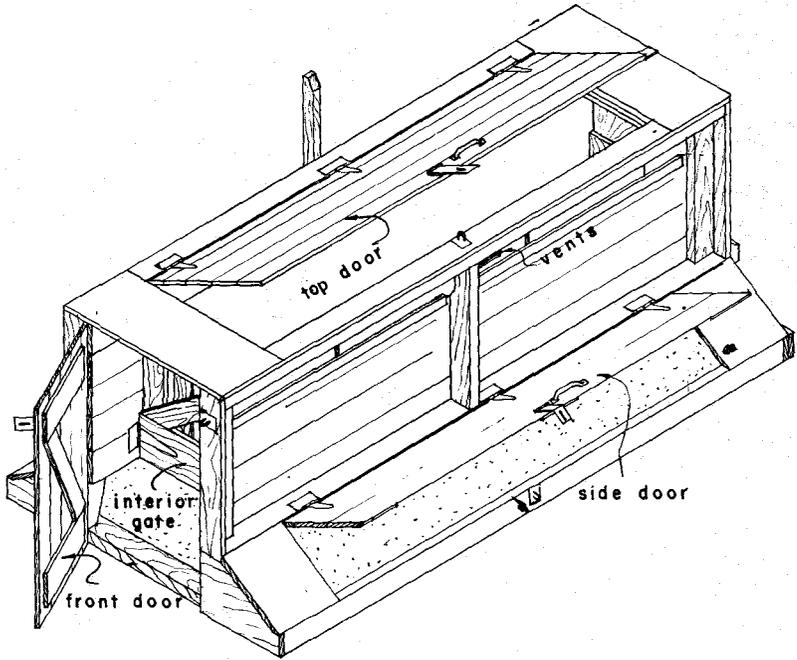


Figure 15. Farrowing crates reduce pig loss—especially with nervous sows. There are many modifications to the farrowing crate plans but the type illustrated shows the general points

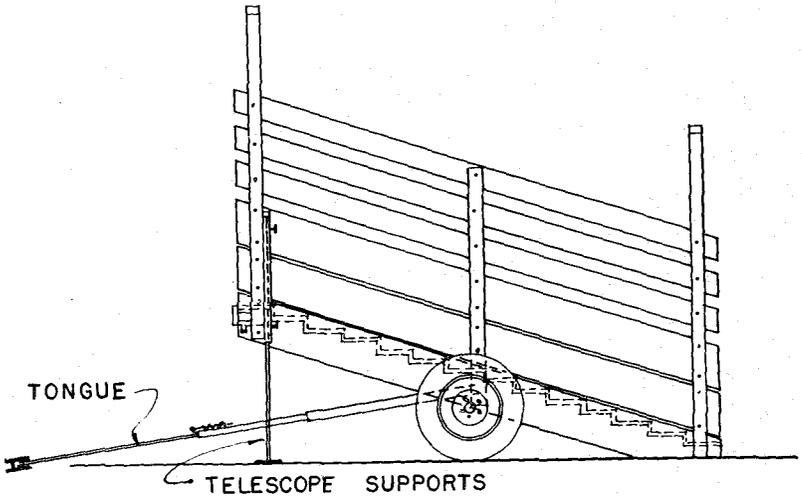


Figure 16. This portable loading chute, mounted on wheels, is convenient for loading hogs and other types of livestock on the farm. The chute should be 30 inches wide. Step ramp prevents slipping.

Detailed Plans Available

Figure 1. Farrowing House	Plan 5641	3 sheets
Figure 2. Hog House	Plan 2.63	3 sheets
Figure 3. Brooder House	Plan 2.65	1 sheet
Figure 8. Self Feeder	Plan 6.17	1 sheet
Figure 9. Self Feeder	Plan 6.16	1 sheet
Figure 15. Farrowing Crate	Plan 5750	1 sheet

Not illustrated

Hog Porch	Plan 2.66	1 sheet
Shipping Crate	Plan 6.40	1 sheet
Breeding Crate	Plan 6.32	1 sheet

Plans are available from the Oregon Farm Building Plan Service, Department of Agricultural Engineering, Oregon State College, Corvallis. The cost is 25 cents per sheet, plus 35 cents per order to cover cost of printing and mailing.

Also available are plans included in free Extension and Experiment Station publications. These include Experiment Station Circular 135, *A Lamp-type Electric Pig Brooder*, and Extension Circular 400, *A Portable Hog House*. These are available through your County Extension Agent or direct from Oregon State College.