

to the shed or field, as the case may be. The gate need not cost any more than the rest of the partition, except the hinges, and will be a great convenience.

D. F. Wilson, Brandon, and others, have used and strongly recommend that the opening leading from the pen to the yard be supplied with two doors, one fitting moderately tight and hung on the side, while the other is hung from the top and allowed to swing both ways, so that the pigs can go in and out during cold weather, always shutting the door after them. This can be hooked up if necessary. That the pen should be divided into sleeping and feeding apartments is strongly advised, as in that case the bedding can be kept dry and from littering the whole pen.

Except when cement troughs are used they should be made of three planks spiked together, about ten inches wide at the bottom and twelve at the top. Strips of hoop iron should be nailed on the edges, or anywhere else that the pigs are likely to chew. The partition between the feeding passage and each pen should be about four feet high, and hung at the top so that it can be swung in at the bottom past the trough to facilitate the cleaning of the trough and pouring in feed. Recommended by H. E. Baker and others. This swinging partition should have stall-like divisions, with head plank attached, just high enough to allow pigs to get their heads in, and yet keep their feet from the trough, so that when pigs are feeding no crowding or fighting need result. (This is not shown in the illustration.) The divisions were recommended by J. H. Pedlar, Wheeler. Three-quarter-inch iron rod bent into a triangle shape and bolted at the top and bottom, appears to be the best recommended divider. According to recent experiments feeding dry meal and water separately produces satisfactory results, and where this is desired to be practised two troughs will be necessary. The water trough in that case need not be long, and can run along the side of the pen at right angles to the feeding trough. A swinging partition will answer for a door, through which the pigs can be brought into the passage and changed from one pen to another; or perhaps a handier way, but more expensive, would be to have the feeding trough and swinging partition say two and a-half feet shorter than the width of each pen, thereby leaving room for an ordinary door to be placed in that position.

The pens for breeding sows, boars and fattening pigs should be somewhat differently arranged. The sow pens need not be so large as the feeding pens. They should also be situated away from the possibilities of draught from the doors. The gutters should be very shallow, for the safety of the youngsters. If a continuous gutter is used through the entire length of the pen, John Holborn claims that the floor of breeding pens can be gradually lowered to the gutter instead of raising the gutter up to the floor. When the young pigs are old enough to help themselves at the trough a part of the pen should be divided off, and an entrance made for them to go in and out at will. W. R. Brown, Dufferin Co., has weaning pen situated next the brood pen, and when not already in use it will answer for the feeding pen before weaning. It is also convenient in this place, if it is desired, to wean the pigs by two's and three's as some prefer, as they can be caught and lifted over quickly while the sow is feeding. A low trough will be in order in this pen.

The fattening pen can be made to accommodate ten or twelve pigs very well, which should be about the outside limit.

The boar pen or pens will do much narrower than either the sow or fattening quarters, but should be connected with a grass paddock, which can be easily arranged if the pen be placed at one end of the piggery. It would be advisable to make his partitions higher and stronger than the others for safety. Recommended by W. B. Brown, Dufferin Co.

The feed-room has several locations among the numerous essays. Some would have it extend just half way across the pen, while others strongly advise that the whole width be used. The width of feed room will depend on the uses to be made of it. If simply for mixing feed one side should be enough, but as a good many feeders think they must have a furnace more room will be necessary. Again, and it looks reasonable, that the slaughtering and cutting up may just as well be done right here, which room may be utilized as a work shop during winter months. We have received some good ideas in connection with the killing and dressing room from J. Pedlar, Wheeler. For scalding use a trough seven by two feet, in which the pigs can easily be rolled by means of two chains or ropes in the hands of two men, which also answers for turning them out on the platform to be scraped. Overhead at right angles to the trough runs a track as used for the hay fork. When the carcass is ready for hanging up, attach a rope to the gambrel, run it up through the left floor close by the track over a roller firmly attached, then along to another roller, also attached to the floor, then down to a windlass attached to the wall of the dressing room. Now, have a roller hook to catch on to the gambrel with a pulley on the track. The rope can now be removed and the pig run back for dressing. It will be most convenient to have a roller hook for each pig, then no lifting by hand need be done.

There are several reasons why a piggery should

have an upper story. Where the feed-room is large enough to hold a considerable quantity of grain, the loft can be used to hold straw for bedding, but an up-stairs granary is convenient when arranged to convey feed down by spouts with slides.

As water is an important element in the piggery, we should endeavor to have it as convenient as possible, and where not supplied by a spring or windmill, why not have the cistern up in the loft? So long as there is any fall from the roof's edge into it, it is just as well in the loft as underground, which will do away with all the pumping. Water can be conveyed to every trough if desired, and with a tap attached we have complete waterworks. This arrangement may be very useful in case of fire. Where no upper story is used a spout can be connected with the pumps outside and the inside of building, so that no carrying of water need be done.

Proper ventilation is important. When a loft is used to store bedding, the openings used for putting down straw will answer for the ventilation. A cupola on the roof is necessary to carry off the steam, thus keeping the walls dry. Perhaps a better arrangement would be to build air passages connecting the pens directly with the cupola, which will cause a draught that can be opened or closed at will.

Trees planted around a piggery provide protection from the sun in summer and storms in winter.

If a piggery is desired to be built having pens on one side of passage only, the difference in building will be just the width of one row of pens. There are some advantages, however, in one sided pens, as by it the yards can all have a southern aspect, which is a great advantage in the winter months.

When the two-row pen has only one story, and is desired to face the south, the sun can be admitted by building the north slope of roof much higher, and having a row of windows to fill in forming a skylight perpendicularly above the centre of the building; but in most cases the two-row pen running north and south gives the best satisfaction, as the sun enters every part of the building during some part of the day, and the yards will be on the east and west sides.

The octagon has some advantages over the square or oblong shapes, as it requires much less wall than either for the same amount of space; also allows opportunities for more roomy yards. The feed-room can be arranged in the centre of the building, where also can the cistern or well be placed. The door should be on the north side, so that each yard will get sunshine at some part of the day.

For a Manitoba piggery warmth is an important feature to be sought. The walls as given above should answer very well, but care should be taken to well overlap the tar paper, or even a second layer might be put on to advantage. The roof, however, requires some change from an ordinary Ontario sheeting and shingle roof. To have it as frost-proof as possible is a desirable quality. A very good roof, recommended in an essay from that country by Thos. Grayson, Moosomin, is made by covering poplar rafters, which should be quite close together, with hay or straw, on which a layer of sods three inches thick is placed, then about an inch of fine clay well raked into the cracks. This roof is said to turn any amount of rain, and gives good satisfaction in that country.

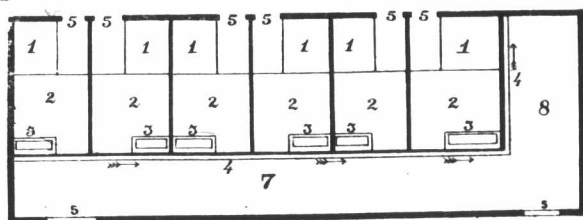


ILLUSTRATION A.

The accompanying illustration A shows the ground plan of piggery recommended by Thos. Grayson, Manitoba, with one row of pens, or one side of two-row plan. No. 1 shows position of sleeping apartment, which may be slightly elevated and enclosed by a partition just sufficiently high to hold the bedding; 2, feeding apartment; 3, troughs, which should extend across the entire pen or within the width of a door opening into the passage; 4, gutter placed beneath the trough and along the feeding passage (other positions are given above); 5, doors (those along the feeding passage will have to be placed at the ends in case of the double-row pens); 7, feeding passage; 8, feed room.

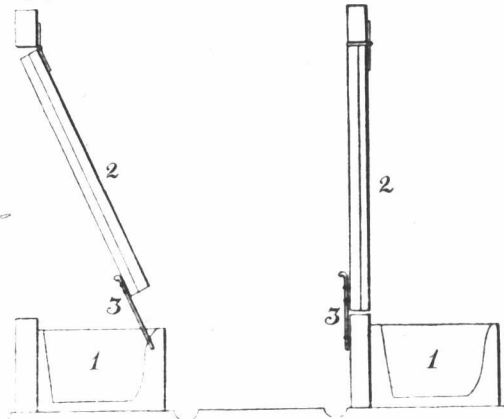


ILLUSTRATION B.

Illustration B shows the swinging partition between the feeding passage and pens. No. 1, trough; 2, partition; 3, sliding bolt to fasten the partition on either side of trough.

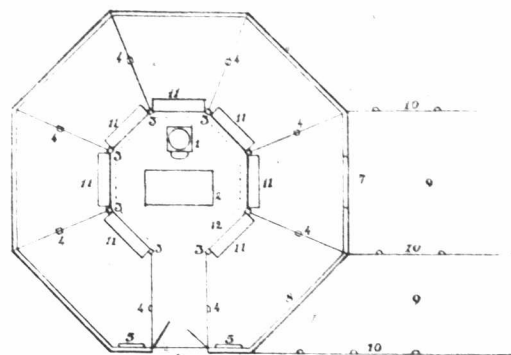


ILLUSTRATION C.

Illustration C is the ground plan of octagon piggery recommended by Alfred Eason, Manitou. No. 1 shows position of furnace; 2, feed bin; 3, posts, 1x4 inches and 12 feet long; 4, scantlings, 2x4 inches and 9 feet long; 5, windows, 2x2 feet; 6, entrance; 7, door; 8, pasture; 9, fences; 10, troughs, 5x1 feet and 1 foot deep.

FIRST PRIZE ESSAY.

Description of Plan for Piggery.

BY WALTER COWIE, VALENS, ONT.

Size.—28 ft. wide; 36 ft. long or more, according to number of pigs kept; 8 ft. siding.

Passage.—4 feet wide through entire length.

Pens.—10x12 feet, with swinging doors for egress to yards at side. Pens of such size ought to hold six pigs for feeding, or one sow and litter, although for latter special pens should be provided with small enclosure where sucking pigs may be fed separate from sow.

Troughs.—May be made by spiking 2-inch plank in the ordinary way that troughs are made. The front of pen should swing from bolts passed through the upright 1x4 inch supports, and be provided with a bar in the middle sliding up and down, so that the troughs may be filled without interference from the hungry hogs.

Feed-room.—6 or 8 feet wide, and the entire width of the pen; one side may be utilized for a plank boiler with sheet-iron bottom built into strong mason work, and with fire-place 18 inches at least above level of floor. The other side may be utilized for swill-barrels, etc. The whole should be separated from main pig-house by a partition.

Flues.—The feed-room should be supplied with a flue to carry off steam from boiler; two flues should also be provided for main pen.

Floor.—May be constructed of hardwood planks laid in cement upon a layer of stones covered with gravel. The planks (preferably oak) should be laid about 1 1/2 inches apart and this space filled with cement. By drawing the point of the trowel through the cement a shallow groove, say 1/2 inch deep, may be formed, which will carry down the surplus moisture to the gutters on each side of the passage.

Gutters.—May be formed in a similar way to above groove, only they should be deeper, terminating in a receptacle either in or outside the pen, which should occasionally be supplied with plaster to keep down foul smell, as well as to absorb the valuable manurial properties of the urine.

Walls.—Built balloon fashion, studs 2 feet 10 inches apart, boarded inside and out, and filled in with concrete; false girts should be placed between studs, about midway, to strengthen walls, and for nailing the outer siding to.

Guyot.—Above feed-room should be provided with bins, from which spouts lead downwards from bottom to provide easy and economical facilities for feeding.

Water.—Should be piped to pen from windmill or spring, or be provided by means of cistern or well, so as to be readily accessible.

Paint.—Paint the walls from motives of economy, as well as to make pen look neat. If paint is beyond your means, whitewash with water-lime and milk, or even with common lime. The inside of pen should be whitewashed at least once a year.

Provide a place for salt, ashes and lice destroyers, and use them.

Windows.—Place a window in wall for each pen. Have them constructed at such a height that manure can be readily loaded through them into a cart, and use the windows for such a purpose pretty frequently.

If the corn is too dry or wilted, through being over-ripe or frosted, and will not heat properly in the silo, Mrs. A. M. Bragg, a Wisconsin dairy-woman, overcomes this difficulty by sprinkling about four pails of water with a garden sprinkler on each load as it falls into the silo off the carrier's