

Starting a Piggery - Quick Manual

By Pig Industry Board

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Basic Decisions When Starting a Piggery

Meticulous planning is needed when one embarks on setting up a piggery project. Proper planning is essential in order to avoid making costly mistakes. The following factors should be carefully considered when starting a piggery project.

a. Capital

It is difficult to be precise on the amount of capital required. The amount required depends on the intended scale of production. Capital is required for developmental purposes, that is, building sties and purchasing breeding stock. Working capital is required for feed, drugs, labour and other running costs. It is important to remember that cash inflows will start eleven months after the start of the project in most cases. Peak capital requirements are between the tenth and eleventh month. It is therefore critical to have enough capital for the first year of operation.

Sources of capital

It is advisable for an aspiring pig producer to use own resources or cheap funds for developmental purposes. Loans that carry high interests are not ideal it will be difficult to service the debt especially if the loan repayment period is short.

The Pig Industry Board (PIB) assist farmers to determine how much money is needed for different sow herd sizes.

b. Housing

Production systems in Zimbabwe entail that pigs are housed. The amount of money invested in the buildings depends on the scale of production and the type of sties constructed. Simple structures (multi-purpose pens) are suitable for producers with

small herd sizes (30 sows and below). For unit sizes above 30 sows it is recommended to construct specialized housing.

c. Breeding Stock

High quality breeding stock is essential for maximum output. Inferior stock give rise to small litters, have poor feed conversion efficiency, increase housing costs and attain inferior grades at the market. This consequently reduces the margins. It makes economic sense to invest in high quality stock from the start.

d. Feed

In Zimbabwe feed accounts for about 75-80% of the total production costs on a piggery. The aim is to have a least cost diet, well balanced and palatable to the animals. Pig feed contains at least 60% cereals, which are mainly grown by producers. For budgeting purposes about 3.4 tons of maize are required per sow for a farmer who is compounding his diets using maize and concentrates from local stock feed manufacturers. The tonnage of maize quoted caters for the requirements of the sow and 18 growers marketed at a live weight of 100kg.

Water is an essential nutrient and it should always be available. For budgeting purposes the farmer is advised to budget 150 litres of water per sow per day. This amount is enough for drinking and cleaning. Borehole, dam or flowing water from the river can be used for pigs.

e. Knowledge

It is critical for the producer to have some knowledge on how to run a pig production enterprise. Sound knowledge and skills in the running of a piggery enterprise help to improve production efficiency and hence viability of the business.

f. Market Outlet

Pork competes with other meats like beef and chicken. A glut on the market of competing products can lead to a drop in demand of pork. Pigs can be marketed through abattoirs like Colcom or they can be customer slaughtered and marketed through private butcheries and large retail outlets. A reliable market should be secured to avoid unnecessary expenses. Farmers have to identify the market for their pigs before they start producing them. A guaranteed market is critical for the smooth running of a pig production enterprise as it enables the producer to plan with confidence. In choosing a market, price offered and the distance to the market needs to be considered.

Factors to consider when constructing a piggery

Siting

Pigs are kept intensively and land needed for the sties is normally not a limiting factor. A 100-sow unit can be housed on one acre. The site where the sties are located must be at least 100m from the residential quarters. The buildings should face North-South in order to avoid exposing the pigs to the sun. Exposing the pigs to the sun can result in heat stress and sunburns. Ideally buildings should not be erected too close to dams and rivers as these areas become too cold in winter and at night. Poorly drained areas must be avoided, as these can become wet basins.

Pigs require water for drinking as well as cleaning the sties. It is imperative to set a piggery close to a water source. It is also important to ensure that the water is not contaminated.

Corridors, at least the width of a building, should be left between buildings to ensure adequate ventilation. When siting the piggery it is wise to take into account the need for the future expansion of the project.

Pig Flow And Building Layout

The positioning of pens should take into account the flow of production. The finisher pens should be close to the loading bay and the dry sow pens adjacent to the farrowing house so that the distance traveled by pregnant sows to the farrowing house is minimized.

Feed stores should be positioned in such a way that lorries and/or tractors easily access them.

Design

Buildings should be strong so that repairs and maintenance costs are minimized in the first years of production. Improper designs adversely affect production. In the tropics, provision of enough ventilation is important to avert the problem of heat stress.

Floors

Hard concrete floors with a wooden float finish are ideal. Depending on resources the floors can be fully slated or partially slated. Fully slated floors are hygienic but can be

expensive to install. The floors should be easy to clean because clean floors help to prevent the build-up of disease causing pathogens and parasites. Too smooth floors should be avoided, as they are slippery especially when they are wet. Rough surfaces cause injuries to the pig's legs and udder.

Walls

Walls should be strong so that the pigs are contained within the pen. A 115 mm wall is strong enough provided the mortar used is of the right mix of cement and pit sand. In enclosed buildings, like the farrowing house, provision of flaps is essential as these can be opened when it's hot and closed to contain warmth when it's cold.

Roofing

Pig sties need roofing to protect the pigs from rain and sun's rays. Several materials can be used for roofing but it is advisable to use durable material. Ideally thatch should not be used for the farrowing and weaner pens because the cold environment that ensue in thatched buildings adversely affects the piglets and weaners. There is also the risk of fire with thatched buildings.

Provision Of Feed And Water

A feed trough is needed in any pigsty and for growing or finishing pigs a feed space of 30cm per 100kg pig is enough. As pigs can be fed from the passage, it is best to site the trough against the passage wall for ease of management.

Water can be supplied to pigs through water troughs and/or nipple drinkers. The water trough or nipple drinkers should not be located near the feeding trough except for sows confined in a farrowing crate. The ideal site for nipple and water troughs is the tail end of the slope in the dunging area. The water trough should have an outlet to facilitate cleaning. The troughs should be big enough to hold enough water at any given time to enable the pigs to have water whenever they need it.

Pig Abattoirs in Zimbabwe

No.	NAME OF ABATTOIR	PROVINCE	LOCATION
1	Colcom	Harare	Harare
2	Kaola Park	Harare	Harare
3	Reinham	Mashonaland West	Harare
4	Koala Beatie	Mashonaland West	Kadoma
5	Glen Clover	Mashonaland West	Chinhoyi
6	Red Dane	Mashonaland West	Marirangwe
7	Pama Meats	Mashonaland West	Zvimba
8	Bemba	Mashonaland East	Marondera
9	Tilisa	Mashonaland East	Melfort
10	Pig Industry Board	Mashonaland East	Arcturus
11	Mbano	Mashonaland East	Ruwa
12	Lisheen	Mashonaland East	Ruwa
13	Kwekwe Municipality	Midlands	Kwekwe
14	Pentland	Midlands	Gweru

15	Mdhomboyi	Midlands	Gweru
16	Oenem Meat Products	Mashonaland Central	Glendale
17	Mutare Prison	Manicaland	Mutare
18	Madziyire	Masvingo	
19	Nesta	Masvingo	Masvingo
20	Acacia	Bulawayo	Bulawayo
21	Unguza	Bulawayo	Bulawayo
22	Broadwell	Matebeleland South	
23	Siyaduma	Mashonaland East	Seke

Classification of Carcasses

The classification of carcasses is based on Cold Dressed Mass (CDM) as stated below

Class of Pig	Live mass range (kg)	Cold Dressed Mass (kg)
Undermass	< 50	<35
Porker	50-90	35-64.9
Baconer	90-115	65-85
General Purpose	115-150	85-105
Manufacturing	>150	>105

The dressing out percentage ranges between 70-75 % of the live weight, lighter pigs having lower percentages.

Services provided by Pig Industry Board

Promotion of production and marketing of pigs

Farmers can only continue to produce if there is a viable market for their pigs. The PIB helps farmers to comply with the law by offering service slaughter facility to farmers. It is a requirement in Zimbabwe that pigs should be slaughtered in registered abattoirs. The PIB occasionally buys pigs from farmers for its butchery outlet. It also provide market intelligence to farmers so that they are well informed when they dispose their pigs.

Training

PIB conducts practical courses in the field of pig husbandry. The most popular practical course offered is the 3 week practical course. The practical course is conducted at the PIB stations in Arcturus and Bulawayo. The course involves the trainee working alongside experienced stockman during the three week period. During the course the trainees will be given lectures on pig production aspects.

The practical courses are run throughout the year and farmers are advised to book for the course in advance as the number of participants per given period is limited. Long back farmers used to shy away from such courses leaving it to the stockman, but they have realized that they were shying away from profits and also offered to farmers who do not have the time to spend 3 weeks at PIB. PIB also conducts theory courses on different pig production aspects. The courses are conducted throughout the country.

Artificial Insemination

Artificial Insemination is a cheaper and effective way of improving genetics on your enterprise. Apart from improving your genetics, it should also guarantee that each mating is carried out using viable sperm, which could not normally be achieved cost-effectively by natural service. The success of the procedure depends on many factors including but not limited to the use of a teaser boar, proper heat detection and timing of service, proper semen handling and transportation from purchase up to when the semen is used, hygiene and good animal husbandry practices.

You can now purchase approved semen from grandparent Large white, Landrace, Duroc and Daland boars at an affordable fee. Training on how you conduct Artificial insemination is also done at our Arcturus Station. Future research will focus on adoption of semen sexing techniques to manipulate the sex of piglets

For your bookings and questions please call the Technical Department on;
+263733847431 or +263772234651

Research

The PIB undertakes research in the fields of nutrition, breeding and production. The research is mainly applied and is aimed at finding solutions to the problems that Zimbabwean pig producers will be facing. Due to resource constraints most of the research is done in collaboration with other research institutions and companies in Zimbabwe. Two research projects were done in collaboration with the University of Zimbabwe from 2013 to 2014. One of the studies involved assessing the meat consumption patterns in urban and rural Zimbabwe. The other study was on mitigating the occurrence and the effects of undersized piglets in a litter.

Extension

The PIB offers advisory services to pig producers and aspiring producers. The advisory services are currently provided for free. Anybody interested in getting the service can contact the PIB technical department either through email or over the phone. The technical department can help aspiring producers to site their piggeries and in preparing their project proposals for submission to funders. The department welcomes farmers and students for study tours of its facilities.

Genetic Improvement

The genetic make-up of a pig sets a ceiling to which it can be improved by manipulation of the environment. Genetically superior pigs have the potential to improve the viability of pig production. In view of this fact PIB is involved in trying to upgrade the national herd through the importation of grandparent breeding stock from internationally reputable breeding companies. PIB has completed the set up of the Artificial Insemination laboratory and currently semen from grandparent Large White, Landrace and Duroc is now available for sale. Artificial insemination is one of the ways through which genetically superior pigs can be made available to many farmers at least cost.

Contact Pig Industry Board

Arcturus Station (Harare)

Pig Industry Board,

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Highlands

Directions: 25.5 km from Harare Along Mutoko road

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Bulawayo station

Pig Industry Board,

Box 3217

Bulawayo

Directions: 15km from Bulawayo along Bulawayo-Harare road

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