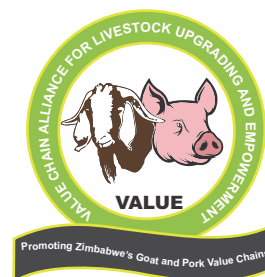




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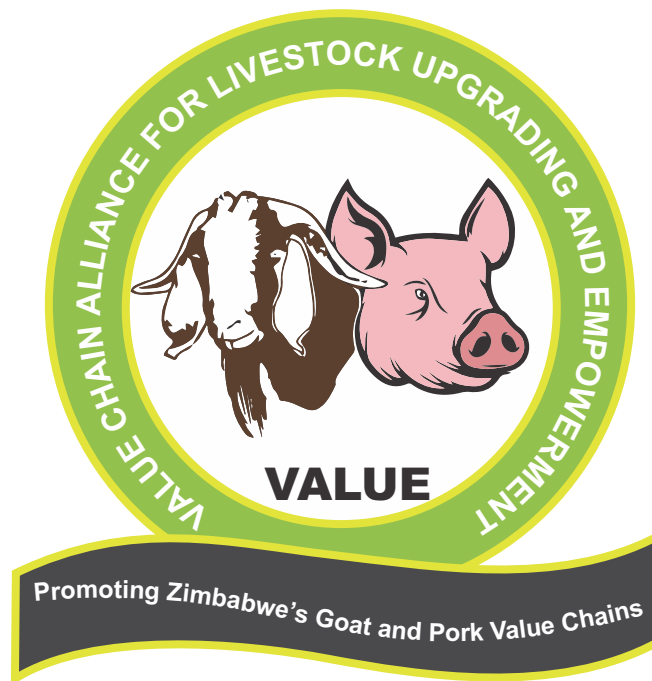
Training Manual on Pig Housing and Welfare



**Value Chain Alliance for Livestock
Upgrading and Empowerment**



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Training Manual on Pig Housing and Welfare

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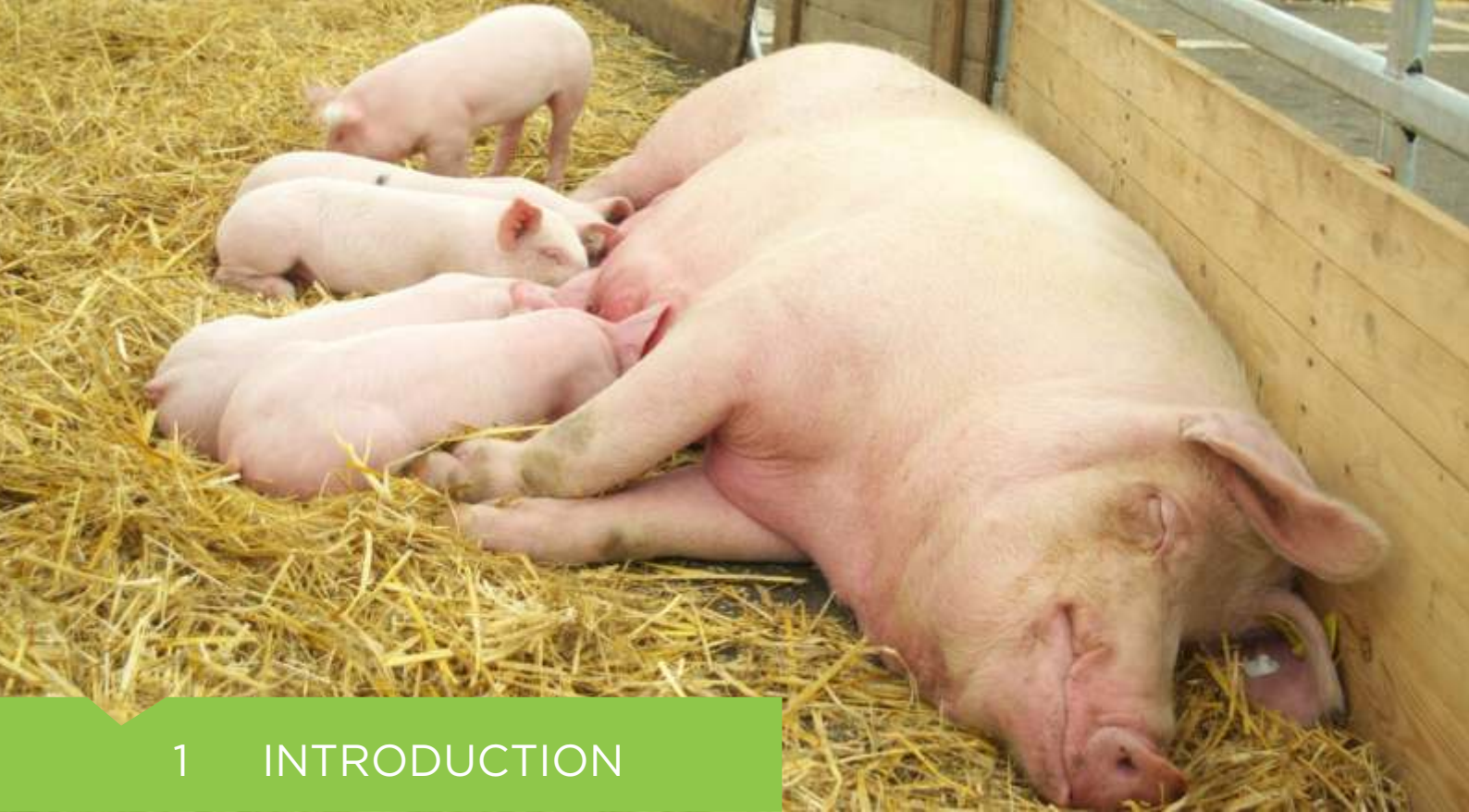
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1 INTRODUCTION

Healthy pigs can tolerate a wide range of temperatures if they are acclimatised and have adequate feed and water. However, good housing can improve the welfare of the pigs and reduce production losses. Pigs need to be housed according to age and production status to realise optimum productivity. Without proper housing and house planning pigs will need to put more energy into normal functioning and less into production. Therefore, pigs must be provided with shelter all the time. This can minimise the impact of climatic extremes and prevent suffering or possibly death especially to piglets.

This training manual is intended to serve as a guide for the trainers so that they provide the necessary and relevant training methodologies and techniques to enable the value chain members in the pork value chain to understand pig housing and welfare. Some farmers in the Pork Value Chain have been operating without proper pig housing and welfare. This module is a training tool developing the capacities of extension personnel and agents on good pig housing and welfare.

The target group is the small to medium farmers (including youths and women farmers), lead farmers (anchor, champion), farmer groups, Business Management Unit (BMU), syndicate or cooperatives and integrators, who will be trained in this program to enhance their skills at individual and organizational levels. The trainees are expected to utilize the skills in their respective activities in Pig Value Chains. Improved pig housing and welfare will contribute to the overall growth and development of pork value chains in the country.

2 INFORMATION AND INSTRUCTIONS TO THE TRAINER

This manual should be used purely as a facilitator's guide. The sessions under each module are presented with an outcome(s) to facilitate the assessment of participants' understanding and depth of knowledge at the end of each session. Following the outcomes are the topics to be covered and facilitating methodology. However, the

facilitator should feel free to adapt the methodology suggested to the needs of participants. To enhance a participatory learning process, some methods of presentation and the steps to follow are therefore outlined. The manual also provides some background information on each session. The information is also meant to aid the facilitator in the preparation for the session. Like all participatory methods, the involvement of the participants in all stages of the learning process is vital. However, all users of this manual must study and research into the content of each module before the presentation. Start each sub-topic and group activity by explaining the objective and learning outcomes expected of them, and ensure they are met. Though contents for each sub-topic are provided, lead the participants into giving their points, copy them in the flip chart/whiteboard/chalkboard, some of their points will or may coincide with the contents in this Module, and then mention to them the sub-topic that were not pointed out by them.

The session should be interactive, participatory, lively and interesting. Let the participants express themselves in vernacular language for them to understand the concepts. Encourage them to ask questions especially on concepts that they do not understand. Switch to either English or vernacular language when you find some farmers or all of them do not understand you in one of the languages.

Start the session with greetings, welcoming remarks, and introduce yourself. Ensure you have the necessary stationery, equipment, and materials for the trainees: projector, flip charts or whiteboard, whiteboard markers, marking pens, and handouts. Be time conscious as you facilitate the Session.

This Manual is organised around aspects of pig housing and welfare such as the housing of pigs, basic pig house, types of pig pens, pig welfare, competencies of pig owners/keepers and specific needs of pigs.

3 USERS OF THE MANUAL

The manual is intended to be used by facilitators at various levels of the pork value chains in Zimbabwe.

4 PRESENTATION METHODOLOGY

The methods of presentation outlined in the manual are suggested as a guide to the facilitator. The facilitator is expected to use his or her judgement in selecting the appropriate method or combination of methods in presenting each session.

5 ASSESSMENT

At the end of each session, the facilitator is expected to assess/evaluate the participants' understanding and level of knowledge by using a simple question and answer session as appropriate. In some of the sessions, assessment questions are suggested as activities whilst in some, the facilitator is given a free hand in determining the kind of questions to be asked. However, all assessments must relate to the session.

6 PIG HOUSING AND WELFARE

LEARNING OUTCOMES

By the end of this module, farmers should be able to:

1. Explain the purpose and objectives of housing pigs.
2. Describe basic pig house.
3. Name the types of pig pens.
4. Explain welfare of pigs.
5. Describe competencies of pig owners/keepers.
6. Explain specific housing needs of pigs.

6.1 Introduction to Pig Housing

Pig house is a structure for sheltering pigs which should provide an optimum environment for growth meeting the welfare needs including their need to exhibit normal behaviour, their need to be housed with, or apart from, other animals; their need for a suitable environment; an appropriate diet and to be protected from pain, injury, suffering and disease.

6.2 Ideal site and Pig sty siting

- > The site where the pigsties are positioned must be at least 100 m from the residences.
- > The buildings should face North-South to avoid direct exposure of the pigs to the sun which can result in heat stress and sunburns.
- > Preferably the pig sties should not be erected too close to sources of cold temperatures like dams and rivers.
- > The pig sties should be sited on downwind direction.
- > Logging soils that are poorly drained must be avoided, as these can become wet basins.
- > It is essential to set pigsties close to a portable water source because pigs require water for drinking as well as cleaning the sties.
- > Spaces should be left between structures to create ventilation corridors.
- > There should be enough space for the future expansion of the project.
- > The different pen structures should be positioned according to the flow of production that is pregnant sows close to the farrowing house and finisher pens should be close to the loading bay.
- > The structures should provide easy access to feed delivery vehicles.



Figure 6-1
Pig sties

6.2.1 Floors

- > The floor of the house must be raised about 60 cm above the ground.
- > Floors should be made from concrete and should neither be slippery nor too rough, as well as easy to clean.
- > The floor should have a 1 or 2% slope toward a drainage area.
- > The other part of the floor can be covered by dry matter (sawdust, wood shavings, hay, maize stalk, sorghum straws, twigs, or small branches to provide comfort for the animals and keep them warm.
- > If floorboards are being used, they should have spaces of 2 cm between them.
- > Floor strength should be able to sustain the strain from the pigs.



Figure 6-2 Concrete floor boar pen

6.2.2 Walls

- > Walls for the structures 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.
- > Strong iron or wooden poles can be used for internal subdivisions.
- > Strength of the poles and walls should be able to sustain the strain from the pigs.
- > Farrowing house needs provision of flaps that can be opened when it is hot and closed to contain warmth when it is cold.



Figure 6-3 Cement plastered brick walls

6.2.3 Roof

- > Pigsties need roofing to protect the pigs from rain and direct sun's rays.
- > Several materials can be used for roofing but it is advisable to use durable material.
- > The roof must be made from iron sheets, asbestos and polythene.
- > In resource constrained situations locally available resources like thatching grass can be used.
- > Thatching should be avoided on the farrowing and weaner pens because the cold environment that result in thatched buildings adversely affects the piglets and weaners.
- > There is also the risk of fire with the use of thatched structures.
- > The gradient of the roof should be at least 1:40 to shed rain water.



Figure 6-4 Roofed pens

6.2.4 Feed and water troughs

- > If fixed feed and water troughs are built, they should be placed on opposite sides to encourage exercising as pigs move from one trough to another.
- > Moreover, if the troughs are fixed, they should be built along the wall.
- > A space of 30 cm is allowed to each pig in a feed trough and the water trough should be at least 30cm in height.
- > If mobile water troughs are used, they need to be shifted frequently to prevent over wetting the same spot in the pen.
- > It is highly recommended to use plastic troughs since these can easily be cleaned to maintain high levels of hygiene.
- > Unfixed troughs are recommended as they can be easily shifted to create more room for exercise after the pig has fed and drunk water.
- > A small water trough with a ball valve to control the level of the water or preferably a nipple drinker can be used.
- > The nipple must be placed at a 45° angle with the vertical and between 550 and 650 mm from the floor.



Figure 6-5 Feed and water troughs

6.2.5 Housing Welfare

- > The housing for pigs should provide an environment that will enable the pig to grow or breed optimally.
- > The pig sties should be constructed in a way that will allow the stockman to carry out his daily duties with ease.
- > The design should not be costly, and it should allow effective effluent disposal.
- > Poor housing designs can lead to disproportionate food sharing, inefficient utilization of space, feed wastage and poor performance of the pigs among other things.
- > Housing should protect pigs from climatic extremes (direct sun, rain, wind), allowing for normal behavior patterns of the pigs and minimize overcrowding.
- > A pen should have pigs of the same size, age and physiological condition (lactating sows, pregnant sows).
- > Proper housing should reduce discomfort, increased susceptibility to disease, poor weight gain, increased cases of fighting and tail biting.

6.3 Housing systems

6.3.1 Specialised

- > In specialised modern pig houses, there are boar pens, breeder pens, sow gestation pens, sow farrowing pens, piglet pens, fattening pens and back-up pig pens.
- > The design of the house is determined by the number of pigs and proposed management system.



Figure 6-6 Specialised pig houses

- a. Environmental Control and Ventilation system**
 - > In specialised houses the central controller is the core part of the environmental control system.
 - > It controls the operation of fans, ventilation windows, curtain, cooling pad, lights, heating and other devices by sensing the temperature, humidity and pressure of the inside and outside air.
 - > The central controller determines ventilation modes for different seasons automatically for different pigs to provide suitable environmental conditions.
- b. Walls and Roof**
 - > External walls of specialised houses can be made from bricks plastered with cement, insulated fibre glass.
 - > The roof is made from iron sheets, asbestos or polythene.
- c. Floor system**
 - > Specialised houses may have cement, plastic, triangle steel, cast iron floors and all these types of flooring have different specifications for options.
- d. Automatic feeding system**
 - > The dry feeding system in specialised housed includes silo, feed transportation system and feeder.
 - > The automatic feeding system is closed design to improve efficiency on management and reduce cross infection.
 - > The transportation line can use auger or chain disk.
- e. Drinking system**
 - > Modern specialised pig houses use duck-billed or nipple drinkers that are considered to save water.
 - > Suckling piglet and weaning piglet access fresh water through duck-billed or nipple drinkers.
 - > While sows, boars and fattening pigs use bowl-style drinker or trough drinking, so that they can drink adequate water.
- f. Pig Manure removing system**
 - > In specialised pig houses manure removing system use automatic scrapers to clean manure.
 - > The scrapers use simple operation for scraping manure which is highly efficient and effective in saving manpower and material resources.

6.3.2 Multipurpose

- > The multipurpose pen can be used for different classes of pigs depending on the accessories that are fitted in the pen.
- > Most smallholder pig producer house pigs in multipurpose pens.

6.3.3 Pens for different classes of pigs

a. Boar pen

- > Boars are kept in a separate pen but close to the sows and gilts.
- > Sows are served in the boar pen.
- > The breeding ratio of 1 boar: 15-20 sows is normally used.
- > On a pig farm with only 20 sows, it is prudent to keep at least two boars, an older boar for older, heavier sows and a young not too heavy boar for young sows and gilts.
- > Boar pen should be an average of 9 m² that is 3 m × 2.5 m for young boars to 3.0 m × 3.0 m for older and larger boars.
- > The floor should be made of cement and must not be slippery with a slope of 1-2 % to allow urine and wastewater to drain into a manure channel.
- > The walls at least 1.5 m high must be of solid concrete, cement plastered brick or strong round iron pipes.
- > Gates can be made of round iron pipes, with a 20 mm diameter, spaced vertically not further apart than 75 mm.
- > The height of the gate and the walls should be at least 1.5 m.
- > A sleeping area about a third of the size of the pen must be covered in bedding (straw, grass or sawdust).
- > A feed trough is placed in the sleeping area in such a way that it does not get filled with bedding.
- > The trough for each boar should be 45 to 60 cm long, 15 to 20 cm high and 50 mm wide.
- > The boar pen should be well ventilated and draught free to have a temperature lower than 22 °C most of the time (for optimum sperm production).
- > Water can be sprinkled over boars on extremely hot days.

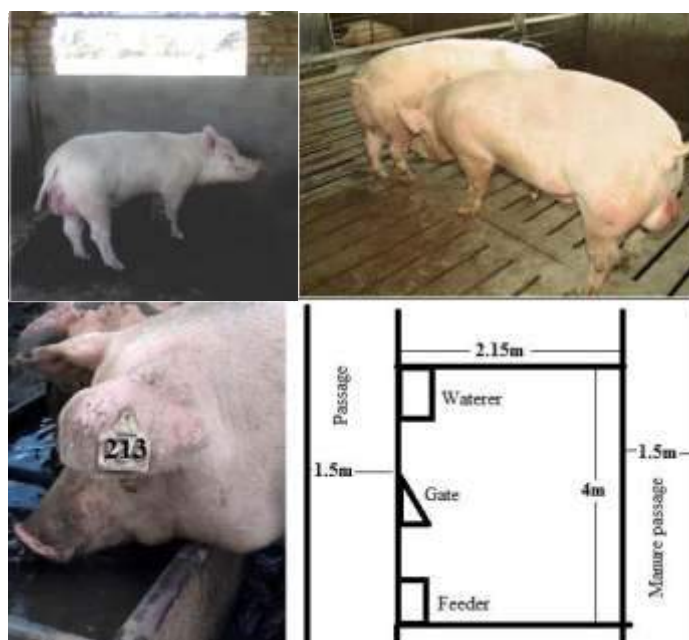


Figure 6-7
Boar pen

b. Sow pen

- > On average a dry sow requires floor space of 1.5 m² that is 1.5 x 1 m.
- > The walls must be of cement plastered brick or strong round iron pipes.
- > Gates can be made of round iron pipes, with a 2.0 cm diameter, spaced vertically not further apart than 7.5 cm.
- > The height of the gate and the walls should be at least 1.4 m.
- > A feed trough is placed in the sleeping area.
- > The feed trough for each sow should be 45 to 60 cm long, 15 to 20 cm high and 50 cm wide.
- > A water trough with a ball valve to control the level of the water or preferably a pig-drinking nipple can be used.
- > The nipple must be placed at a 45° angle with the vertical.
- > The sow pen should be well ventilated and draught free.
- > Pregnancy in pigs lasts 112 to 118 days.
- > Sows are moved to the farrowing pen seven to ten days before farrowing.
- > The sows stay in a pregnant sow pen which is similar to dry sow pens for about 85 days.
- > The sows in each pregnant sow pen should be of the same size; up to five pregnant sows can be kept in one pen.
- > An individual feed is encouraged in the pregnant sow pen to make sure that each pig receives the correct quantity of feed.
- > Functional areas in the pen are required like separate feeding, resting and activity areas.
- > Inadequate space in group housed sows can increase the level of aggressive behaviour, particularly during feeding and mixing.
- > Foot lesions and lameness in sows are associated with slatted flooring and lack of bedding.
- > The flooring should be non-slip clean and dry.



Figure 6-8 Sows pen

c. Gilt pen

- > On average a gilt requires a floor space of 1.5 m² that is 1.5 x 1 m.
- > Avoid keeping gilts and sows in the same pen.
- > The walls must be of cement plastered brick or strong round iron pipes.
- > Gates can be made of round iron pipes, with a 20 mm diameter, spaced vertically not further apart than 75 mm.
- > The height of the gate and the walls should be at least 1.4 m.
- > A feed trough is placed in the sleeping area.
- > Feed trough for each gilt should be 45 to 60 cm long, 15 to 20 cm high and 50 cm wide.
- > A water trough with a ball valve to control the level of the water or preferably a pig-nipple drinker can be used.
- > The nipple drinker must be placed at a 45° angle with the vertical.
- > The sow gilt pen should be well ventilated and draught free.

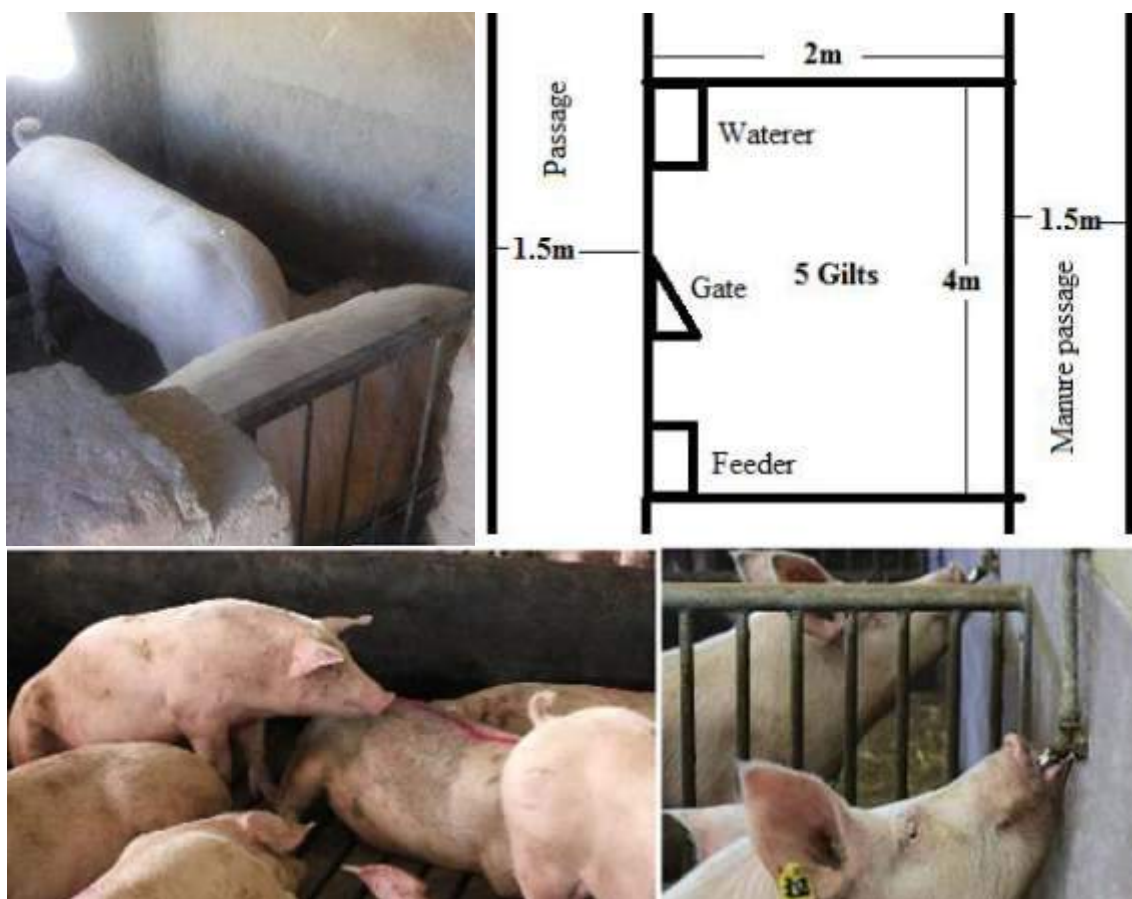


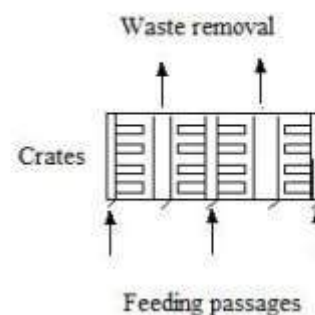
Figure 6-9 Gilts pen

d. Farrowing pen

- > The farrowing pen is the most important pen on the farm because that is where we obtain our replacement stock.
- > The design of the farrowing pen should allow the right temperatures to be provided for the sow and her piglets.
- > Crushing and overlying of piglets should be prevented as far as possible.
- > Ventilation in the farrowing house is important hence, must have windows on both sides. The sow must be exposed to temperatures less than 21 °C.
- > It is recommended to build a farrowing house (large room) containing 4-5 farrowing pens.
- > Each pen will be 2 x 2.25 m with a 1 m wide feed passage on one side of the pens and a 1 m wide dung passage on the other side.
- > Every farrowing pen must have a farrowing crate where the sow is kept from one week before giving birth until weaning of piglets after 28-35 days.
- > The crate is placed in the pen allowing a space of about 1 m on the one side and 0.5 m on the other side.
- > The feed trough (50 cm long and 20 cm high) for feed and water is on the feed passage side of the pen.
- > If water is laid on in the farrowing house a nipple drinker can be placed above the feeding trough.
- > Piglets in the farrowing pen need a creep made of a steel or wooden box, 60 x 60 cm which is large enough for the litter to creep into.
- > The creep helps to reduce deaths as a result of crushing and provides a draught-free area where the piglets heat one another.
- > The creep area is capable of maintaining the required temperature of 27-32 °C for piglets during the first 10 days of life.
- > To keep piglets healthy and alive, they should stay warm, and the sows to have enough milk for the piglets, they should stay cool.



Figure 6-10
Farrowing pen



e. Weaners pen

- > Piglets are usually weaned on day 28-35 after birth.
- > They must be kept in weaner pens at a temperature of 17- 25 °C and where draughts and wet conditions are prevented.
- > Each pen must be able to accommodate a litter of 10-12 weaner pigs.
- > The pigs are kept in the pen from the age of 4 weeks until they are 8-10 weeks old.
- > The individual pens should be 9 m² or 3 x 3 m with 1 m high concrete walls, and two 1 m wide dung passages along the opposite walls of the building with a feeding passage, 1 m wide in the middle between the two rows of pens.
- > Water troughs or drinking nipples are fixed to the pen walls facing towards the dung passages at the lower end of the pen.
- > The pigs will lie down and sleep along the inside wall of the pen where the feed trough is placed.
- > Growing pigs must always have access to feed.
- > It is therefore ideal to use individual feeders.
- > A long concrete trough built next to the feed passage wall can also be used, but usually causes the pigs to waste feed and is therefore not recommended.

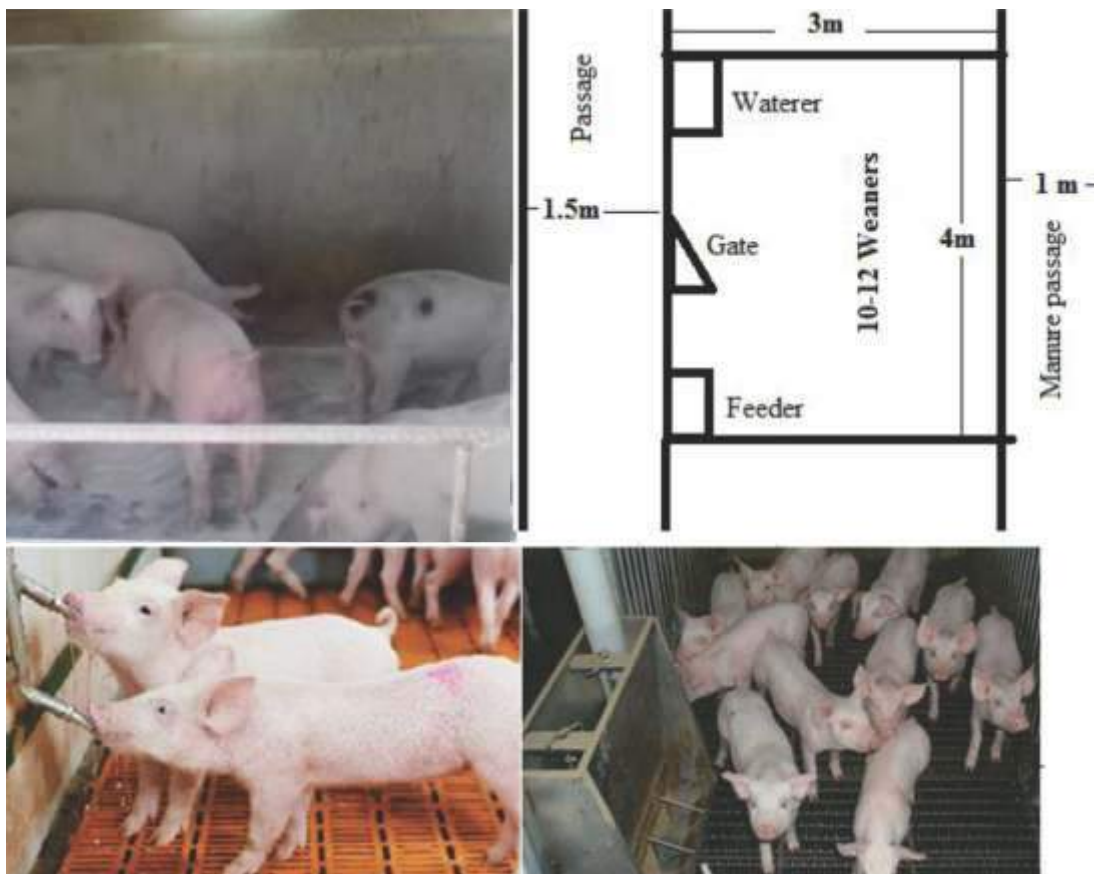


Figure 6-11 Weaners pen

f. Grower/finisher pen

- > It is not advisable to wean pigs directly into grower pens unless the environment can be adjusted to suit them.
- > The pigs are kept in the pen from the age of 8-10 weeks until they are sold at a live weight of 90 to 110 kg.
- > The individual pens should be 12 m² or 4 x 3 m with 1 m high concrete walls, and two 1 m wide dung passages along the north and south walls of the building with a feeding passage, 1 m wide in the middle between the two rows of pens.
- > Each pen must be able to accommodate 10-12 growers at 10 week to 7 growers at 90kg and above.
- > Cold ventilating air must be directed so it creates air circulation within the shed without flowing directly on to the pigs.
- > In a conventional, naturally ventilated shed, this usually involves using a ridge vent together with side wall vents.
- > Growers and finishers should have one drinker per 10-15 pigs hence, at least two drinkers per pen is recommended.
- > The pen should have solid and well drained concrete floors.
- > Water trough should be at the lower end of the pen.

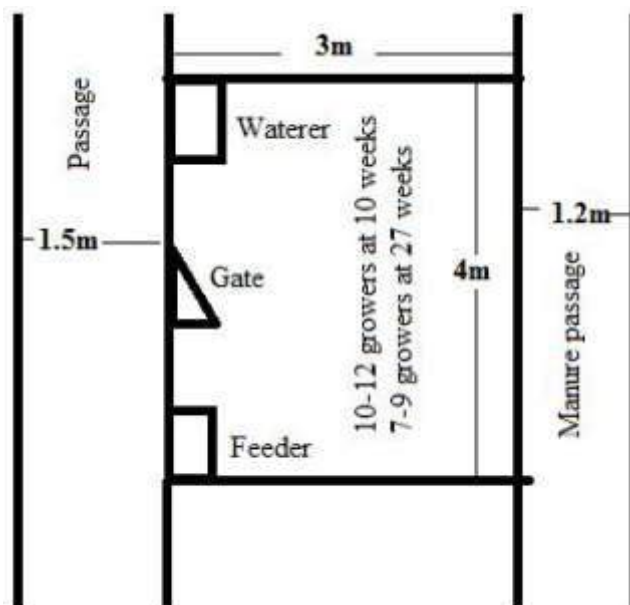


Figure 6-12 Growers/Finishers pen

Table 6-1: Standard housing requirements for different pig classes

	Stocking density		
	Low	Medium	High
Farrowing pen Manure passage width Farrowing crate, length excluding trough. Width depending on size of sow Free space behind the crate Piglet creep including in resting area	1.7m 2m 0.65 - 0.75m 0.4m ² 2 m ²	1.5m 2m 0.6 - 0.7m 0.35m ² 1.5 m ²	1.3 2m 0.55 - 0.65m 0.3m ² 1 m ²
Boar pen Pen without yard	9m ²	8m ²	7m ²
Pregnant sow pens Loose in groups of 5 - 10 sows a. Feeding stalls: depth x width b. Individual stalls with access to manure alley, length of stalls excluding trough Width of stalls Width of manure passage Confined in individual stalls Length x width of stalls	2.0 x 0.6m 2.2m 0.65 - 0.75m 1.5m 2.2 x 0.70m	1.8 x 0.55m 2.1m 0.60 - 0.70m 1.4m 2.1 x 0.65m	1.7 x 0.5m 2m 0.55 - 0.65m 1.3m 2.0 x 0.60m
Weaners pen (up to 25 kg or 12 weeks) Resting area excluding trough Manure passage width	0.35m ² 1m	0.3m ² 1m	0.25m ² 1m
Growers pen (up to 40 kg or 17 weeks) Resting area excluding trough Manure passage width	0.5m ² 1.1m	0.45m ² 1.1m	0.4m ² 1.1m
Finishing pen, resting area excluding trough For porkers to 60 kg or 21 weeks For baconers to 90 kg or 27 weeks Above baconers to 120 kg or 33 weeks Manure passage width	0.7m ² 0.9m ² 1m ² 1.2 - 1.4m	0.6 m ² 0.75m ² 0.85m ² 1.2 - 1.3m	0.5m ² 0.6m ² 0.7m ² 1.2m



6.4 Introduction to Pig Welfare

- > Pig welfare covers the state of the pig, the treatment it receives through care and animal husbandry when providing for its physical and mental needs.
- > Animal welfare makes owners and keepers responsible for ensuring that the needs of their pigs are met.
- > This includes their need to exhibit normal behaviour patterns; their need to be housed with, or apart from, other animals; their need for a suitable environment; an appropriate diet and to be protected from pain, injury, suffering and disease.

6.4.1 Responsibilities of owners/keepers

Owners/keepers who care for pigs should demonstrate:

- > Caring and responsible planning and management;
- > Knowledge of common diseases and disorders;
- > Skilled, well-informed and thorough stockmanship;
- > Knowledge of proper environmental design;
- > Caring loading, unloading and transport; and
- > Ability to undertake humane slaughter and culling.

6.4.2 The Five Freedoms of Animal Welfare

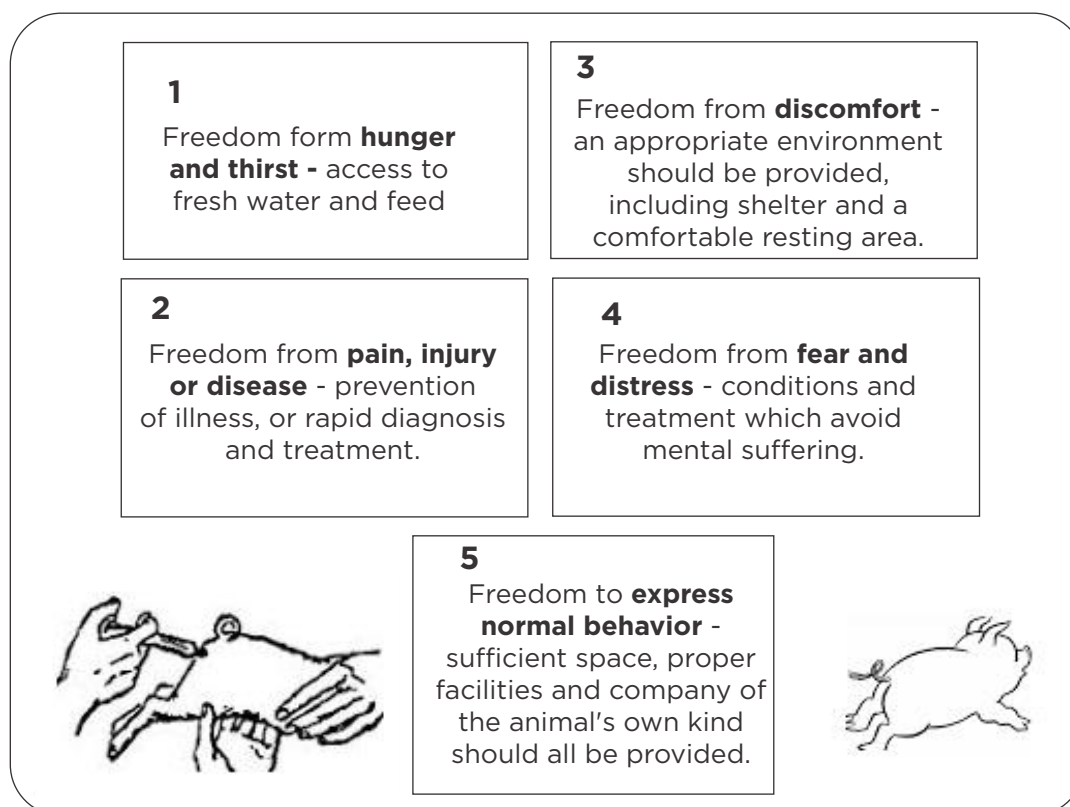


Figure 6-13 The Five Freedoms of Animal Welfare

6.4.3 Necessities of Stockmanship

- > Knowledge of animal husbandry techniques that is a sound knowledge of the biology and husbandry of pigs, including how their needs may be best provided for in all circumstances.
- > Skills in pig husbandry including demonstrable skills in observation, handling, care and treatment of pigs, and problem detection and resolution.
- > Personal qualities include empathy with animals, dedication and patience.

6.4.4 Factors to consider on animal welfare

a. Health and welfare plan

- > The owner/keeper should draw up and implement a written pig health and welfare plan with a veterinary surgeon and, where necessary, other technical advisors.
- > Owners/keepers should review and update this health and welfare plan regularly.
- > This plan should set out health and husbandry activities that cover the cycle of production and include plans to prevent, treat or limit disease problems.
- > It should also include strategies such as recording and evaluating on-farm and slaughterhouse findings to prevent, treat or limit health and welfare problems on the unit.
- > The plan should include enough records for owners/keepers to assess the basic output of the herd and monitor the welfare of the pigs, including animal-based measures.

RECORDING OF WEANING / FINISHING PIG DISEASES							
Period		Jan	Feb	Mar	etc	Total	Target%
Lameness	T	12	2	1		15	<1
	D/C	1	-	-		1	<0.5
Haemorrhage (Pale pig)	T	-	-	-		1	<1
	D/C	1	-	-		1	<0.5
Pneumonia	T	24	36	52		112	1
	D/C	1	4	6		11	<0.5
Scour	T	2	3	2		7	<2
	D/C	-	-	-		1	<0.5
Prolapse	T	16	14	14		44	<1.5
	D/C	-	-	-		-	<1
Blown-up (Rectal Stricture)	T	4	3	1		8	<1
	D/C	2	1	1		4	All
Fever	T	-	-	-		-	<1
	D/C	-	-	-		-	0
Stress (Fighting)	T	2	-	-		2	1
	D/C	-	-	1		1	0.5
Runt	T	8	7	9		24	<1.5
Poor pigs	D/C	1	1	1		3	<1
Meningitis	T	-	-	-		-	<2
	D/C	-	-	-		-	<2
Miscellaneous (Middle ear)	T	-	1	-		1	<2
	D/C	-	1	-		1	<1
Total deaths	D/C					22	<4
Total treated						214	<5
Total to cull pen							<1.5
Pigs at risk		2100	2010	2221			

T = Number treated D/C = Number died of culled

* As a percentage of the population at risk in your defined period.

Figure 6-14 Pigs Health Records

b. Disease control and biosecurity

Biosecurity means a set of management actions and physical measures designed to reduce the risk of introduction, establishment and spread of disease to, from and within the pig herd.

- > Incoming stock presents the greatest risk to the health of a herd as regards infectious disease.
- > When planning new sites or using existing buildings for new purposes, consideration should be given to providing the maximum possible distance between the proposed site and existing sites.
- > There is a legal duty to immediately report suspicions that any animal is suffering from a notifiable disease like anthrax, swine flu and foot and mouth.
- > All keepers/owners of pigs should be familiar with the signs and symptoms associated with notifiable diseases that affect pigs.
- > Limit external vehicle/equipment/people movement onto the unit and instigate appropriate cleansing and disinfection procedures.
- > High levels of hygiene/disinfection procedures during interventions, such as at farrowing / piglet treatments.
- > Preventive disease control programmes including vaccination and parasite control programmes, (including worming programmes for on-farm domestic animals that may present a risk to the pigs).
- > The health and welfare of animals depend on them being regularly inspected by the owner/ keeper.
- > All owners/ keepers should be familiar with the normal behaviour of pigs. Early signs of distress or disease in individual pigs and behavioural problems in pigs in the group (for example, aggression or other injurious behaviours) must be recognised.
- > Owners/keepers should be able to anticipate problems or recognise them in their earliest stages and, in many cases, should be able to identify the cause and put matters right immediately.
- > Recording such incidents in sufficient detail at the time is key to monitoring, evaluating and reviewing changes in pig health and welfare over time.



Figure 6-15 Farm Footbath

c. Handling

- > All owners/keepers should have access to easy to use and efficient handling systems.
- > This is to allow pigs to be routinely moved, managed and treated and ensures that they are quietly and gently handled.
- > Pigs should be moved at their own pace with the owner/keeper staying behind the pigs.
- > They move most freely in small groups where they can have visual and/ or body contact with one another.
- > Sharp corners should be avoided.
- > Any new building designs should consider pigs' needs during handling and movement.
- > Owners/keepers must ensure that all floors and walkways are well maintained and provide a non-slip, but non-abrasive grip surface, to avoid damage to feet and legs.
- > The floor should not slope too steeply, as this can increase the risk of slipping and injury.
- > Excessive force must not be used. It is not acceptable to strike or kick pigs. Avoid putting any pressure on the body of the pig, particularly the face, snout and belly.



Figure 6-16 Pig loading ramp

d. Transportation

A pig should be fit for the intended journey.

The following should be in order:

- > Loading and unloading facilities, including on the farm;
- > Veterinary permit and police clearance to move the pigs



Figure 6-17 Transporting pigs

Exercise:

- > Discuss the attributes of a good pen for pigs. Consider the siting, the size, the roofing, the eating and drinking area and general cleanliness within the pen. Talk about locally available resources that can be used to construct sties.
- > Discuss the importance of the farrowing house in pig production.
- > List animal husbandry techniques that are important in reducing or avoiding inducing stress in pigs.

7 CONCLUSION

At the end of the training, the facilitator is expected to highlight the most important factors on housing requirements for different classes of pigs. Animal welfare needs to be stressed as it is very important, it may affect productivity or lead to mortalities/losses if pigs are not managed humanely. The facilitator should assess if the participants have understood the concepts and assist where participants need clarification.

8 REFERENCES

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9 GLOSSARY

Baconer-A pig being reared for bacon rather than pork, and which will be slaughtered at 80kg - 100kg live weight, at about 8 - 10 months of age.

Boar - a male pig over 6 months of age that can be used for breeding.

Farrowing - birthing of a litter of piglets.

Gestation - the period of time between breeding and birth, approximately 114 days.

Gilt - a young female pig that has never given birth.

Grower - a pig that is intended to be raised/sold for slaughter.

Hand mating - A female pig and male boar exposed in a small, enclosed space for the purpose of breeding.

Litter - a group of piglets born to a single sow.

Market weight - Acceptable weight at which a pig can be sold

Mating - The process of sex for reproduction.

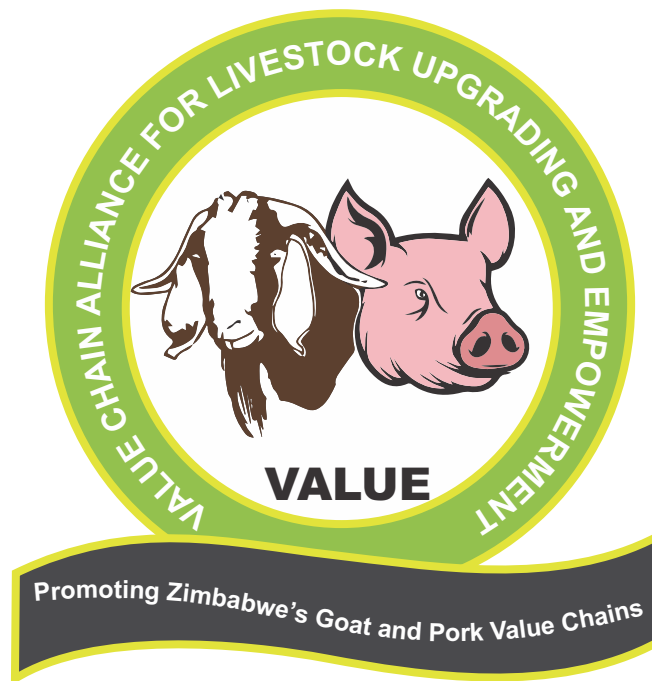
Porker -A pig reared to pork weight, normally about 60kg live weight, rather than to bacon weight. Usually achieved between four and six months of age, depending on breed.

Service-deposition of semen into the cervix of a sow or gilt. May be by "natural" boar or artificial insemination.

Sow - an adult female pig that has farrowed a litter of piglets.

Wean - to transition an animal from mother's milk to adult food.

Weaner-A piglet separated from its mother and eating only solid food. Weaning can take place anytime between five and ten weeks of age.



Training Manual on Pig Housing and Welfare



Promoting Zimbabwe's Goat and Pork Value Chains

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