



Outdoor Pig Husbandry: A stockperson's guide to farrowing





GLOSSARY & GUIDE



Know the Rules

Legislation applicable to the task being undertaken.

Relevant extracts are cited from:

- ◆ The Welfare of Farmed Animals (Scotland) Regulations 2010
- ◆ The Welfare of Farmed Animals (England) Regulations 2010
- ◆ Prohibited Procedures on Protected Animals (Exemptions) (Scotland) Regulations 2010



Equipment needed for task

Each section will have a list of likely equipment you will need for the task.



Tips and extra information

Practical tips or where extra information is provided.



Further information

Internet-based resources that can offer more advice.



Video links

QR code can be scanned to view videos and download extra information.

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Hut, Paddock & Sow Preparation

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



HUT & PADDOCK PREPARATION



Know the rules

“Animals not kept in buildings shall, where necessary and possible, be given protection from adverse weather conditions, predators and risks to their health and shall, at all times, have access to a well-drained lying area.”

“All pigs over two weeks of age must have permanent access to a sufficient quantity of fresh drinking water.”

The Defra Pig Welfare Codes recommend that: “All arks/huts used for housing outdoor pigs should be liberally provided with bedding and have a warm, draught-free lying area. This is especially important for the sow and litter at farrowing.

You should properly maintain arks/huts, especially to ensure that damage through handling does not produce sharp edges that may injure.

Adequate shelter must be provided to protect the animals from extreme weather conditions, from wet and cold to the sun in summer.”



Equipment

- ◆ Electric fencing for farrowing paddock
- ◆ Suitable farrowing hut or ark (insulated)
- ◆ Fender
- ◆ Removable plastic curtain for weather protection
- ◆ Safety gate for front of hut
- ◆ Feeder and drinker
- ◆ Pig handling board
- ◆ Chalk



Sows split by electric fence. One sow per paddock and hut is recommended

HUT & PADDOCK PREPARATION

Procedure

Individual farrowing paddocks should be approximately 20m², be on free draining soil and weed free (ideally). One farrowing hut per sow will reduce incidents of piglets being overlaid (crushed) by sow.

If multiple sows are due to farrow, split sows down individually into paddocks using electric fencing.

Make sure drinkers are not in contact with electric fence and that the pigs would not be at risk of electric shock when drinking.

Hut condition

Inspect hut for any sharp edges, check the curtain, entrance gate and access hatch work for each hut.

Make sure fender fits the hut and place to the side of hut prior to farrowing so sow can access hut easily.

Make sure any repairs that are needed are carried out before pigs enter the paddock.

Check electric fences regularly for current.

Hut position

Make sure the farrowing hut is placed on level ground with as little gap as possible around the base. Free draining soil is best. Position fender and hut at least 1.5m away from any electric fencing.



Sow drinking trough.
No contact with electric fence



Huts on flat, dry ground ready for farrowing with fenders to the side until after farrowing



Poor hut position

CLIMATE CONTROL & HEAT STRESS

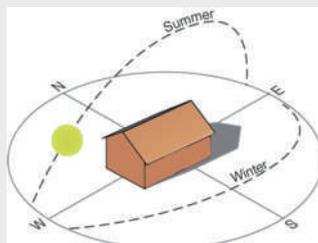
In winter put the back of the hut facing the worst of the weather (i.e. front of hut sheltered from in coming wind, rain, snow).

In summer turn the hut 180 degrees so that the front of hut is in the shade when the sun is at its highest and hottest point (see diagram).

Observe the weather and monitor hut temperature.

Either fix on or leave off plastic curtain depending on conditions.

The access hatch at the back of a hut can also be used for ventilation.



Recommended summer hut position with entrance in shade at hottest part of the day



S-L.A. Schild ©

Ideal paddock and hut set-up with shade, wallow and extra hut ventilation



Heat stress occurs when body temperature rises above certain limits. Sows are most comfortable in environmental temperatures between 10-22°C, so they are easily prone to heat stress and they are already producing a lot of heat during lactation. If they experience heat stress this can affect their health and welfare but also the welfare and performance of the piglets. Sows can stop producing milk and/or fail to return to the hut to suckle the piglets which affects growth rate but could also be fatal.

Sows and piglets can suffer from sun-burn. Access to shaded areas and a muddy wallow help prevent this.



John Harvey©



<https://pork.ahdb.org.uk/pig-production/outdoor/heat-stress/>

CLIMATE CONTROL & HEAT STRESS

Make a wallow.

Wallows are essential in summer.

Pigs use the wallow to cool down and the mud protects them from sun-burn.

A wallow is not just a puddle of water. An ideal wallow will have mud which will give the sow (and piglets) protection from sun-burn.

If possible position the wallow away from the drinker to avoid contamination of drinking water.

Access to shade is very important. The hut can provide some shade if positioned correctly but tree-lined paddocks can offer additional protection.



S-L.A. Schild ©



Sunburnt sow (top). Mud protects the sow and piglets from sun-burn



S-L.A. Schild ©

Poplar trees offering good shade



Sows overheat easily. Cool them down and establish a wallow

SOW HEALTH, CONDITION & FEEDING



Know the Rules

“All animals must be fed at least once a day”.

“No person shall feed pigs...any catering waste” (Animals By-Products Order 1999).

Sow health

Sows may require certain vaccinations pre-farrowing. This will depend on your herd's health.

Each farm should discuss the veterinary, biosecurity and nutritional requirements for their individual farm and create a **Herd Health Plan** with their vet. The plan can also include the best timetable for farrowing and weaning throughout the year (working back from when you plan to send pigs for slaughter) and what to do if things change (e.g. supply chain demands).

Biosecurity is key to minimising disease risk to your own pigs as well as the national pig health status. Scan the QR-code (right) to get more information.

Vaccinations and prescription drugs that might be needed for farrowing and lactation can be discussed and ordered through your vet.

Health checks

Sow udder, leg and foot health are particularly important to monitor throughout pregnancy.



There is an increased risk of African Swine Fever spreading to the UK

Feeding pigs kitchen scraps and catering waste can spread this disease and is illegal

#PigKeepers

Do not feed pigs kitchen scraps

Pigs should receive the correct nutritional requirements from their feed rations



Practical Biosecurity for Pig Farmers, Smallholders and Pet Pig Keepers in Scotland



QMS The Scottish Government



Scan me

https://www.qmscotland.co.uk/sites/default/files/pig_biosecurity_leaflet_final_22102015_0.pdf

SOW HEALTH, CONDITION & FEEDING

Sow body condition

Sows should not be too fat or too thin going into farrowing. You must monitor sow body condition (BC) during pregnancy to ensure appropriate condition for farrowing.

Adapt amount of feed and diet during pregnancy based on BC score.

Sows are typically restricted to ~2.5-3.5 Kg per day of an appropriate pregnancy diet but thin sows (BC score 1 or 2) should receive more feed away from others (during feeding) to avoid bullying.

Ideal body condition for sows going into farrowing is score 3 to 3.5.

Sows should be fed ad libitum between weaning and service to replace lost condition during lactation.

Target BC score at weaning is 2.5 to 3.

Feeders and water source

Individual feeders in the farrowing paddocks should be covered/protected to prevent birds or vermin getting the feed and to prevent spoiling if the sow does not consume all of her food in each meal.

Fresh water is essential. Check drinkers daily. In winter ensure pipes do not freeze and have emergency water provision in place in case of frozen water sources.



Thin.
Ribs, hip and back bones are obvious or easily felt with minimal pressure

Moderate
Ribs, hip and back bones are barely obvious without firm pressure

Fat.
Ribs, hip and back bones cannot be seen or obviously felt. Can see fat deposits

Sow body condition score
Adapted from ProPig©



For sow feed curves visit:

<http://orprints.org/28853/1/Handbook-ProPig.pdf>

SOW HEALTH, CONDITION & FEEDING

Pre-farrow feeding

In the week leading up to farrowing, start introducing a lactation diet but cut back on concentrate and add in more roughage.

Sows will naturally forage if material is present in the paddock and this will help reduce the risk of constipation around farrowing.

Do not be tempted to overfeed pre-farrowing. Overfeeding risks development of metabolic conditions such as the mastitis-metritis-agalactia complex (MMA) which can develop ~12h to three days after farrowing.

Post-farrowing and lactation feeding

After farrowing gradually increase the feeding ration to ad libitum feeding by 5-7 days post-farrowing. Feed a high energy lactation feed.

i Feeding stations with markers to indicate how much feed each sow is getting helps staff monitor intake. Once sows are on ad libitum feed, a good rule-of-thumb is feeding a kilo of food above the maintenance ration for every piglet the sow is nursing (usually up to 12 kilos per day).

i 80% of energy absorbed by sows during lactation is used to produce milk.

Lactating sows have high water requirements. On a warm day they can drink up to 50 litres.



Wallows are not suitable as drinking water. Fresh water should be available for both sows and piglets



Contentedproducts.co.uk ©

Individual feeder, close to water source and protected from birds, vermin and the elements



Contentedproducts.co.uk ©

Feeding station with kilo marker for feed levels helps all staff know what level sow is on each day

Straw Management

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



STRAW MANAGEMENT

Procedure

Old straw from previous farrowings should be removed from the paddock before new sows enter.

Store new straw in a clean, dry environment to maintain quality.

Straw for bedding up should be dry.

Wet straw should be discarded as it will:

- ◆ Become mouldy.
- ◆ Harbour pathogens.
- ◆ Risk piglets becoming chilled.



Mouldy straw could harbour listeria, fungal spores and bacterial organisms which could put sows at risk of abortion.

Mycotoxins could affect lactation, cause birth defects and scour in piglets.

Barley straw is recommended as it is soft and easily broken up.

Wheat straw can be used to dry up areas or plug gaps but barley straw is better for the young piglets.

Adjust your strawing up routine according to weather conditions. Increase levels in poor weather.



Vion Food Group ©

After weaning, huts should be moved and old bedding destroyed



Large Hesston bale stored inside to keep dry



S-L.A. Schild ©

Picture demonstrates typical floor coverage using 4 leaves of a large straw bale

STRAW MANAGEMENT

Pre-farrowing

Bed floor by using approximately 4 leaves of a mini Hesston straw bale covering floor and ensuring any gaps are plugged using straw. Any draughts can risk piglets being chilled.

Bedding levels should be inspected daily.

Recommended depth of bedding is 10-12cm.

Sows are moved into farrowing paddocks approximately 10 days before their due date.

About two days before their due date sows will nest-build with the straw and find other forage if available. Allow for this but check daily. When the sow is out of the hut remove any rotting grass or wet straw, plug up any gaps and flatten out prior to farrowing.

 Act like a sow! Break up the straw and flatten the nest by rolling back and forth to either side of the hut. Only do this when the sow is safely away from the hut.

Recommended that any hut inspections are done when the sow is eating.



Let sows nest-build but safely remove any rotting grass from hut



Lumpy nests should be checked before farrowing and flattened



Example of flat nest with good floor covering of straw and no gaps

STRAW MANAGEMENT

Post-farrowing

Leave bedding and nest undisturbed for the first 48 hours post farrowing. Disturbing the nest can disturb suckling activity and establishment of mother-young bonds.

You can remove placenta, any dead piglets and check health but keep nest disruption to a minimum.

Little and often is the key for small pigs; Providing too much straw too quickly can cause problems. Young piglets will not have the strength to push through the straw and get to the udder or get out of the way of a moving sow.

The bed must be kept level and even, this will help keep the newborn piglets warm and dry and prevent hypothermia.

If there is a step in and out of the hut consider placing some straw in the fender area to make a temporary ramp. This will help piglets climb back in if they fall out of the hut.



[http://practicalpig.ahdb.org.uk/
uploaded/documents/
outdoorupdatesaug13/
outdoorpreparing%20farrowing%
20arcs.pdf](http://practicalpig.ahdb.org.uk/uploaded/documents/outdoorupdatesaug13/outdoorpreparing%20farrowing%20arcs.pdf)



Sow and piglet bonds develop over the first 48h. Leave undisturbed



If there is too much long straw it is difficult for the piglets to get to the udder



AHDB Pork ©

Plug fender gap with straw

Farrowing & Sow Behaviour

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



NEST-BUILDING

Prior to farrowing the sows udder will become heavy looking and the vulva will become red and swollen, she may become restless and lose her appetite.

Nest-building

Prior to farrowing the sow will show natural nesting instincts that include pawing straw bedding and bringing in grass from outside. It's important to allow for this behaviour as well as checking the bed is comfortable and flat with gaps plugged.

When the sow is feeding remember to inspect the hut and remove any grass that she has used to nest with. The grass will rot if left in.

Note: Gilts can farrow before their due date and not show as many of the signs mentioned above, therefore monitor closely.



Nest-building is a highly motivated, natural behaviour that prepares the sow for farrowing. The different behaviours she performs (carrying straw, digging, rooting, arranging) all relate to hormone production that will help with a quick and easy farrowing and encourage good maternal behaviour.

View nest-building:



Scan me



<https://www.freefarrowing.org/info/10/why-free-farrowing/31/why-is-nest-building-behaviour-so-important>

WHAT TO EXPECT DURING FARROWING

When about to farrow, the sow may not want to come out of her hut for food. Leave her and check back again later.

When she starts to farrow, if everything is progressing normally, leave her alone.

Normal farrowings last between 2-6 hours but can be longer. Quietly check periodically if you think she is not progressing well. Sows usually farrow with their rear at the back of the hut, so you can use the back access hatch to check progress without disturbing the sow.

i Use chalk to write on the access hatch. Note how many piglets you see and time of checking. This will help you and other members of staff monitor farrowing progression.



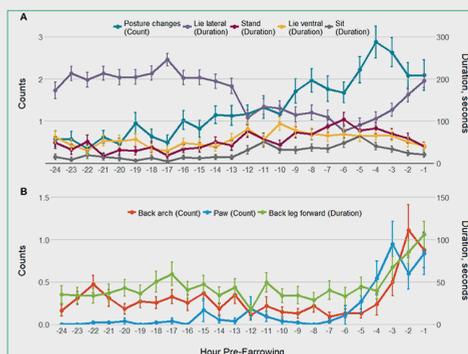
i A sow could nest-build for up to 48 hours before farrowing but she is most active 16-6 hours pre-farrowing.

From 6 hours pre-farrowing she increases her lying behavior.

About 1 hour pre-farrowing she enters the “quiet” phase, lying on her side (lateral) in the nest she has built (see graphs).

You will see an increase in back arching, pawing with the front legs and stretching out the legs as she strains. She may show trembling.

Immediately before a piglet is born she will flick her tail and more fluid will be produced.



Frequency of different postures and behaviours leading up to farrowing

S. Ison ©

NORMAL FARROWINGS

You should see fluid before the first piglet is born.

Piglets can be born forwards or backwards and from either horn of the uterus (there are two horns).

Once farrowing starts piglets will be born every 15-25 minutes.

The sow might get up and inspect the first piglet but she will usually settle back down to lying on her side with her udder exposed.

The piglet umbilical cord will snap naturally and stop bleeding. It will dry and shrivel over the next 24 hours.

Piglets are born with good survival instincts and will root and nuzzle at the sow as they make their way to the udder.

They will find a teat and suckle colostrum within the first 20 minutes after birth.



Piglets can be born forwards or backwards



Piglets will quickly move towards the udder, find a teat and suckle

View a typical farrowing in an outdoor hut:



Scan me

<https://vimeo.com/348135591>

NORMAL FARROWINGS

Physiologically piglets are quite vulnerable. They are born with no immunity and must get immunity by suckling colostrum.

They are also born with very little hair and no brown fat (this is used to generate heat).

Suckling colostrum and being near the sow helps them gain heat.

Placental fluids will dry naturally through evaporation and as the piglets move around in the bedding. The sow will not lick the piglets to dry them.

As farrowing progresses the sow will seem less swollen (more hollow) and she will start to rhythmically grunt to encourage the piglets to suckle.

Piglets will move up and down the udder as they settle on a preferred teat.



Teat orders: Piglets will sample up and down the udder. They want to settle on a favoured teat. They develop a teat order over the first 2-4 days post farrowing which they will keep until weaning. Some may fight for the same teat. Once a teat order is established each let-down of milk is much calmer for the sow and the piglets. This is good for growth, development and survival. Any fostering should be done within 24 hours to avoid disrupting a developed teat order.



Thermal image illustrates different surface temperature in suckling piglet compared to piglet yet to suckle



Piglets developing teat order

COLOSTRUM INTAKE

Colostrum key facts

Colostrum is key to survival.

Colostrum provides piglets with:

- ◆ Immunity
- ◆ Warmth
- ◆ Nutrition/energy

The sow will produce colostrum continuously from the udder during farrowing and for about 12 hours after the birth of the first piglet.

Thereafter colostrum is available from the teats approximately every 20 minutes. Ejections of colostrum (and later milk) at this time are called “let-downs”.

Colostrum is available at each let-down for 48 hours. After this time colostrum turns to milk.

Piglets can only get immunoglobulins from colostrum during this time. After 48 hours their guts change (“gut closure”) and they can no longer absorb the immunoglobulins from colostrum. This gut closure is needed to prevent pathogens getting in.

On average piglets will consume 150-280g per kg of body weight of colostrum soon after birth. But a minimum colostrum intake of 100ml within 16 hours of birth is needed for survival.

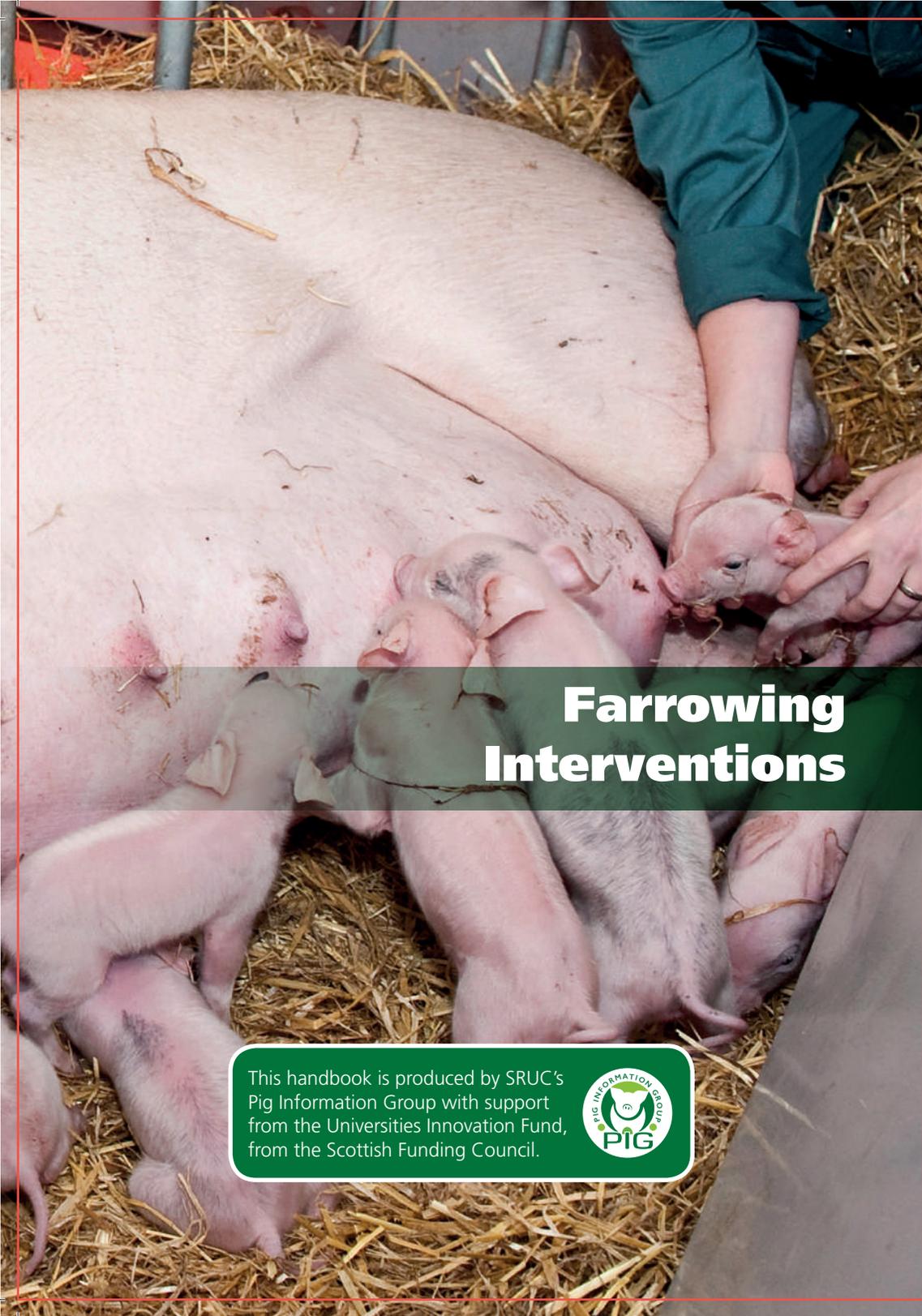
If piglets have to be fostered they must have colostrum first. Recommended that piglets suckle colostrum for at least 12 hours before being moved (see *Cross-fostering* section).



Suckling colostrum gives immunity, warmth and nutrition



Settled teat order at colostrum/milk let-down. This leads to calm sucklings, good growth and development



Farrowing Interventions

Farrowing Interventions

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



FARROWING PROBLEMS

Try to do as little as possible. Give the sows time after the first signs of fluid. Gilts can take more time and need more attention as the cervix and birth canal are tighter and they may be producing fewer and heavier piglets than sows.

Signs of a problem farrowing:

1. Overdue. A normal pregnancy is 115 days so be aware you may need to monitor her farrowing more closely if she is overdue at farrowing.

2. No progression. All the pre-farrowing signs are present (see *Farrowing and Sow Behaviour* section) and farrowing does not take place within 12 hours of the udder filling with milk and the vulva relaxing.

You may need to intervene (and/or be ready to assist piglets) if:

- ◆ No birth of first piglet 60 minutes after fluid has been seen (for sows).
- ◆ No birth of first piglet 90 minutes after fluid has been seen (for gilts).
- ◆ No birth of next piglet 30-40 minutes after previous piglet has been born.
- ◆ Sow is straining hard and breathing heavily with no piglets.
- ◆ There is a lot of bloodied fluid and foetal faecal pellets (meconium) discharged without signs of straining.
- ◆ There is foul smelling, brown /grey discharge.
- ◆ Sow has a very swollen, tight and red udder.

3. Other issues. Sow may start to farrow outside but move inside or vice versa (e.g. when too hot). Litter becomes split and needs to be reunited. Sow may show piglet directed aggression (see *Piglet Mortality* sub-section).



Sows who have had litters before are likely to have less problems than gilts (1st parity sows). However it is important to **keep good records** and know your sows. If the sow has a history of problems during farrowings (e.g. still-births, interventions, treatments) check her more frequently.

FARROWING PROBLEMS

Interventions

The sow typically farrows with her head at the hut entrance and rear at the back. Use the rear hatch to check and access if needed.

Stay quiet and keep calm around the sow. If she is in farrowing distress she is likely to be tired and allow the intervention.



Internal exam

- ◆ Water and mild disinfectant
- ◆ Long disposable gloves (shoulder length)
- ◆ Lubricant gel
- ◆ Possible drug requirements (Oxytocin, Antibiotics, Non-Steroidal Anti-inflammatory Drugs (pain killers). **Note:** These are prescription drugs, speak to your vet about ordering and responsible use
- ◆ Needles, syringes and sharps container



<https://thepigsite.com/disease-and-welfare/managing-disease>

Procedure

- ◆ Clean area around the vulva with water and mild disinfectant.
- ◆ Decide if your arm will go into the birth canal without damaging the sow.
- ◆ Wash your hands and disinfect thoroughly. If available wear long disposable gloves. Use generous amounts of lubricant gel.
- ◆ Prior to entering the birth canal cup your fingers together to form a cone.
- ◆ Gently insert your hand into the vulva and into the birth canal.
- ◆ Can you feel a piglet?
- ◆ Can your hand be inserted any further without causing damage? If not seek assistance from other staff.



Internal exam in farrowing crate.
Pictures used to illustrate potential length arm can be extended for piglet extraction

FARROWING PROBLEMS

Delivering the piglet

Depending on the orientation of the piglet either:

- ◆ Clasp the piglet's feet with your fingers above the knees or hocks.
- ◆ Clasp the piglet's head with your index and middle finger (behind the ears).

Then:

- ◆ Gently pull the piglet through the birth canal and out of the vulva.
- ◆ Try not to tug on the umbilical cord. If it is intact it should still tear on its own. However if the piglet needs lots of assistance gently break the cord leaving at least 3cm of umbilical on the piglet.
- ◆ Clean the mucus away from the nose and mouth so that the piglet can breathe easily.

Piglet assistance

- ◆ Piglet is breathing and moving; place at the udder.
- ◆ Piglet is not breathing but has heart beat: use your finger to scoop out any mucus from inside the mouth and dangle the piglet from the back legs and gently dislodge fluid from the lungs. If still no breathing lay piglet down on side and use straw to vigorously rub the chest. You can insert a short piece of straw in the nostril to stimulate a sneeze. If all else fails and there is still a heart beat take a deep breath and blow into the piglet's mouth several times. If resuscitated, dry with straw and place at udder.
- ◆ Piglet is not breathing and there is no heart beat; piglet is stillborn and should be removed from the hut.

If you are unsure about any of these procedures or how to perform an internal exam call your vet. Oxytocin may need to be administered if everything else has not worked. This is best given under veterinary advisement and only after other methods have failed. You must not give Oxytocin without first checking for blockages.

Sows should be treated with a long-acting antibiotic after an internal exam to reduce risk of infection. Please speak to your vet about appropriate treatment and the responsible use of antibiotics. Sows, especially gilts, can benefit from treatment with a Non-Steroidal Anti-inflammatory Drug (pain killer) after a difficult farrowing.

Note: These are prescription medications, refer to your Herd Health Plan and speak to your vet.



When the sow has not finished farrowing or placentas have not been passed, manual investigation through the open cervix is still possible for another 24 hours before closure of the cervix.

FARROWING PROBLEMS

Causes of prolonged farrowing

Failure of farrowing can be due to:

- ◆ The cervix not opening.
- ◆ A physical blockage of the cervix and exit from the uterus by a piglet that is either oversized, abnormally presented, malformed or dead.
- ◆ Twisting of the uterus.
- ◆ The sow's uterus has given up (uterine fatigue) or the sow has given up (maternal fatigue).
- ◆ Sow nervousness. Gilts can be very anxious when farrowing. This is their first time and everything is new. They maybe experiencing some pain which will not help with anxiety.



Maternal fatigue can happen because the sow does not have enough energy. It is important not to overfeed sows before farrowing but high fibre diets can help with sustained energy release (see *Pre-farrowing Feeding* sub-section). Sows must have easy access to fresh water.



During a problem at farrowing naturally occurring oxytocin may not be produced as much. Udder stimulation will stimulate colostrum and oxytocin production.

Rub the sow's udder, see if milk is coming from the teats. If she starts to suckle grunt (rhythmic low pitched grunts) it is a good sign.



<http://practicalpig.ahdb.org.uk/indoor-breeding/farrowing/assisted-farrowing>

<https://pork.ahdb.org.uk/media/276877/phwc-good-practice-guide-sep18-final-v2.pdf>

PIGLET BIRTH CONDITIONS

Born in the bag

If a piglet is born in the placental bag, you should break the bag if you can easily reach it but do not enter the farrowing hut if the sow is intolerant of your presence. Clear the fluid from the piglet's nose and mouth, dry it off with straw and, if the umbilical cord has broken, place at udder.

Stillborn

Piglets might be born dead. Signs of this include the absence of breathing, periople or "slippers" on the hooves and the skin may look almost translucent.

Mummified

Sometimes piglets die during pregnancy and become mummified. They appear dark grey/brown or in rotten placenta. It is important to remove these from the hut when you spot them. If the sow has a large number of mummified piglets you should call your vet.

Keep records of how many stillbirths and mummified piglets the sow has.

Difficult birth (Dystocia)

Piglets that are born alive but have had a difficult farrowing process can be very vulnerable. Signs of a difficult birth include:

- ◆ Meconium staining (foetal faecal matter on the skin).
- ◆ Lethargic behaviour (slow to get up and get to the udder).
- ◆ Excessive shivering.

If you spot these piglets, you can help them by drying them off with the straw bedding and putting them on the udder.



"Slippers" on hooves are a sign of stillbirth



Mummified piglets and multiple stillbirths could be a sign of disease. Call your vet



Meconium stained piglet

PIGLET MORTALITY

Mis-mothering - savaging

Sometimes sows will attack their own piglets. There are different reasons for this (e.g. pain, fear, gilts more likely to savage than sows). If the sow fails to kill a piglet immediately you should extract the injured piglet, assess its condition, treat or euthanase.

Crushing

When sows change posture the piglets are at risk of the sow lying or treading on them. The straw bedding is very protective but you may have to rescue an injured piglet. You should do so calmly as you do not want the sow to over react to your intervention and cause greater risk to the other piglets.

Chilling

Piglets are born with very little thermal protection and if they do not get to the udder quickly and suckle colostrum they will become hypothermic. Dry straw bedding is good insulation but straw management to plug up any gaps around the hut base and providing door curtains for the winter are important husbandry tasks to help prevent chilling.

Low viability

Sows produce multiple offspring and often can produce low birth-weight or runt piglets. Low birth weight is often associated with low viability. These piglets are more vulnerable to chilling and find it difficult to compete at the udder. They may need help to get warm and suckle colostrum.

Starvation

Piglets failing to suckle can quickly succumb to starvation. Fostering between 12-48 hours after farrowing should lower risk. Piglets should not be left to suffer. Humane euthanasia prevents suffering.



Low birth weight piglets.

Piglet on right shows signs of low viability



Assist low viability and chilled piglets. Try not to disturb the sow.

Assistance is easiest during farrowing when the sow is at her most quiet



Piglet showing signs of starvation

PIGLET MORTALITY

Sickness

If piglets fail to get enough colostrum in the first 48 hours after birth they are susceptible to disease.

Scour is one of the most common diseases for piglets and it affects the gut.

Scour outbreak

Scour can affect suckling piglets of different ages and can broadly be split into two age groups:

Up to 5 days: Watery scour, wet tail area, shivering and slow. Dehydrated with waxy skin. May be found dead.

7 to 14 days: Yellow, creamy scour with a distinctive smell. Loss of body condition resulting in thin and hairy piglet with its backbone showing.

The straw bedding may be wet and waxy to touch, it is important to keep the bed dry and flat with fresh straw.

If you have an outbreak of scour in a litter, do not foster these piglets.

Check ill piglets once all the other healthy litters have been dealt with to avoid infecting healthy litters.

Wash hands properly after handling the piglets and do not eat until you have done so.

If you see any signs of scour seek expert veterinary advice.



Piglet with scour. It has been marked with a dab/crayon marker showing it is receiving treatment



Older piglet suffering from scour



Piglet Management & Maximising Survival

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



POST-FARROWING CARE & PROCEDURES

Equipment

- ◆ Gloves
- ◆ Post-farrowing medication (e.g. Pain relief (e.g. Metacam), Antibiotics (e.g. PenStrep), syringes and needles)
- ◆ Container to dispose of sharp objects
- ◆ Supplementary colostrum or energy boost (e.g. Littercare)
- ◆ Litter record cards or notebook
- ◆ Chalk
- ◆ Piglet box (a box filled with straw to easily transport piglets between huts if needed)
- ◆ Teething and tailing equipment
- ◆ Vaccination medication
- ◆ Dab marker/crayon
- ◆ Waste bags
- ◆ Sow feed

Procedure

At morning feeding, encourage the sow out of her hut for food and water. She may not want to leave the hut. You can check the piglets and sow through the access hatch and remove any stillbirths, mummified piglets and placenta. You must dispose of this material according to official guidelines.



www.gov.uk/guidance/fallen-stock

Try and help any piglets in need of assistance. Note sow functional teat number.



It is best to check piglets when the sow is feeding away from the hut



If the sow won't leave the hut a shepherd's crook can help access piglets for health checks or treatments

POST-FARROWING CARE & PROCEDURES

Look in the access hatch and check to see if piglets are dry, suckling and have dry umbilical cords. If cords are wet, make a note of the number of piglets on the hut door and check later. Leave processing (health checks etc.) until the next day.

If piglets are old enough to be processed make sure you have all the equipment you need before entering the hut.

Once the sow is out of the hut, lock yourself in with the piglets using the hut gate. Leave quad bike/tractor running to muffle any piglet noise.

Record number of live-born, stillborn and mummified piglets. Check all areas of the hut, including under the straw. Remove any dead piglets and record cause (e.g. crushed, bitten or "other" if unknown).

Pick each live piglet up and check health and feel for fullness of the belly. Any low viability or skinny piglets could be given a dose of colostrum and/or energy supplement (e.g. Litter-care). Mark any treated piglets with dab crayon marker for easier monitoring later.

Perform teething and tailing (if necessary/ permitted). See *Teething & Tailing* subsection.

Use straw to plug up any air holes, flatten nest and exit safely when you can.

Remove gate from front entrance. Write on the hut, in chalk, the current litter size for that hut.



If litter size is more than the sow can feed, place a large rock on roof or mark the hut to indicate need for cross-fostering.



Thoroughly check each piglet



Good litter records are essential to manage current and future litters

CROSS-FOSTERING

If the sow does not have enough functional teats to feed her piglets you will need to foster piglets off. Make a note of sows that have smaller litters and could manage some foster piglets.

Fostering – when, who, where?

Don't foster before every piglet has had a chance to get at least 6-12 hours of colostrum.

Don't foster if the litter is even numbered and even sized and there is no fighting.

You need to foster if there are not enough teats.

Foster off the largest piglets, making sure they have full stomachs before moving.

Litters that have large differences in piglet weight could benefit from standardisation (i.e. small with small, large with large).

Check your sow's udder. If you have small piglets on an udder with large teats the piglets may not manage.

Gather small piglets and large piglets and match with appropriate udders.

Only foster into litters of a similar age.

Do not foster after 48 hours.



Large weight differences can mean smaller piglets cannot compete for a teat



Make sure piglets have colostrum before moving



Small and large piglets for fostering into litters with same size piglets and appropriate udders



<http://practicalpig.ahdb.org.uk/outdoor-breeding/farrowing/cross-fostering>

TEETHING & TAILING



Know the rules

“Neither tail-docking nor reduction of corner teeth must be carried out routinely. Only where there is evidence that injuries to sows’ teats or to other pigs’ ears or tails have occurred.

Before carrying out these procedures, other measures shall be taken to prevent tail-biting and other vices, taking into account environment and stocking densities.

Inadequate environmental conditions or management systems must be changed.

Tail-docking and/or castration must not be performed after seven days of age unless performed under anaesthetic and additional prolonged anaesthesia by a veterinarian. The method of castration must not involve tearing of tissues.”



Pigs can bite each other’s tails causing pain and costly damage



Tail docking is sometimes performed to reduce the risk of tail-biting later on in the pig’s life. Causes of tail-biting are multifactorial, but if pigs are reared under high welfare, low stress conditions throughout their lives tail-biting behaviour is rare and there is little justification for tail-docking. Smallholders should not need to perform this procedure.

Castration is rarely performed in UK production. Most assurance schemes will not permit castration and therefore accredited slaughterhouses will not accept castrated finisher males.



Piglets have sharp “needle” teeth that can damage siblings during fights over teats

TEETHING & TAILING



Equipment

- ◆ Tooth grinder (fully charged) or clippers
- ◆ Clippers for tails
- ◆ Antiseptic liquid
- ◆ Dab marker/crayon



Procedure

Make sure you are handling the piglets safely. Entice the sow away from the hut and feed her. Lock her out and yourself in the hut. Ideally perform procedures as a pair and have one of you keep an eye on the sow. Leave the quad bike/tractor running to muffle any noise from piglets.

Tooth resection

This does **not** need to be done routinely. If your average litter size does not outnumber the sow's functional teat number you should not need to resect teeth. If it is necessary grinding is preferable to clipping as there should be less chance of accidental damage to the tongue and/or gums of the piglet.

Only the tips of the needle teeth need to be removed.

Tooth grinding

Make yourself familiar with the manufacturer's instructions.

Charge the equipment before use.

Make sure grinder and grinding stones are well maintained to ensure abrasiveness (see manufacturer's recommendations for use).



Good operator training is essential to minimise stress for piglets during tooth resection

TEETHING & TAILING

Carefully pick up a piglet and cradle it firmly between your forearm and body.

Grip the piglet according to the following procedure:

Insert your index finger at the side of the piglet's mouth to hold it open.

Put your second and third fingers at an angle to the side of the piglet's head.

Use your fourth to clamp the piglet's front leg.

Take care not to clamp the piglet's throat.

Place the grinder parallel to the jawbone and gum line.

Turn the grinder on and place on the tip of the corner tooth.

Only grind to blunt the tip – take care not to touch the tongue, lips or gum.

Check the tooth tip to ensure a smooth finish.

Adjust your grip to grind the remaining corner teeth on the other side.

Clean grinder after use with a small brush dipped in disinfectant.

Tooth clipping

Follow a similar handling procedure as for grinding but be careful to only clip the tips of the teeth and not catch the gum, lips or tongue. Dip the clippers in antiseptic after use.

Use a dab crayon marker to mark each piglet once done.

Take the opportunity to check the health of each piglet.



Good, supportive grip of piglet for optimal teething position



Example of clipper risk. If operator is not careful tongue can get caught in clippers. [Photo staged for protocol, piglet was not harmed]

TEETHING & TAILING

Tail-docking

If docking under outdoor conditions where the huts will be bedded with straw it is recommended to use clippers rather than a cauteriser.

Make sure the clippers are sharp and dip them in antiseptic solution before docking a litter.

Make sure the sow is safely away from the hut when performing piglet husbandry tasks.

Carefully pick up a piglet and take the opportunity prior to docking to check its overall health.

If handling in pairs one person should hold the piglet as pictured above and the other should perform the docking.

If operating alone hold the piglet in one hand with the head under your arm.

Hold the tail with your thumb and forefinger and use the other hand to dock the tail.

Use a dab/crayon marker to indicate piglets that have been docked.



[http://practicalpig.ahdb.org.uk/
outdoor-breeding/farrowing/piglet
-management](http://practicalpig.ahdb.org.uk/outdoor-breeding/farrowing/piglet-management)

<https://farewelldock.eu/>



If docking is necessary no more than one-third of the tail should be removed

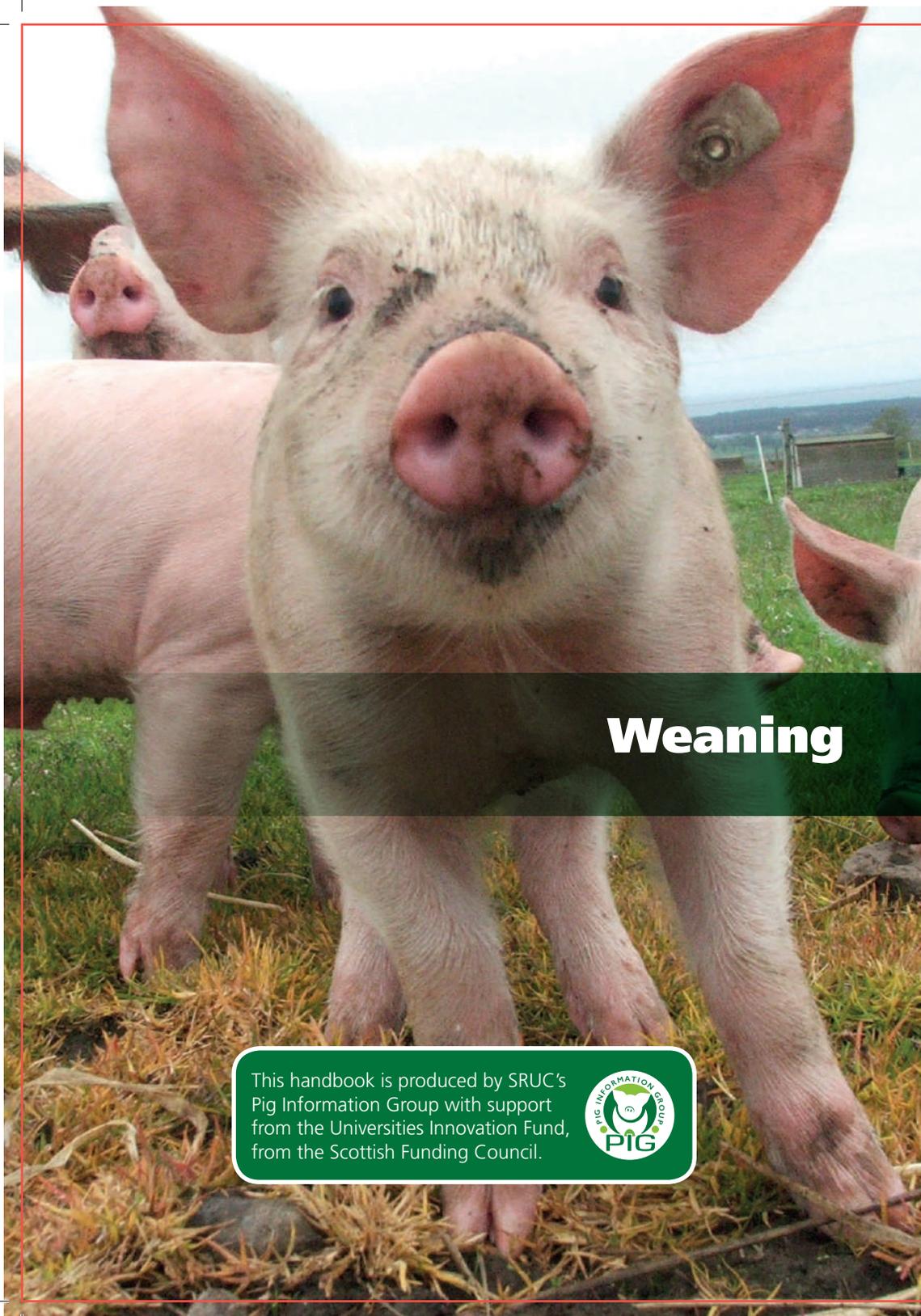


If tail biting later in life is a significant problem docking half the tail is practiced (under veterinary advisement)



Tails should not be cut this short.

EU Council Recommendations for pig welfare state "no more than half of the tail should be removed during docking"



Weaning

This handbook is produced by SRUC's Pig Information Group with support from the Universities Innovation Fund, from the Scottish Funding Council.



WEANING



Know the rules

“No piglets shall be weaned from the sow at less than 28 days of age unless the welfare or health of the dam or the piglet would otherwise be adversely affected.”



Equipment

- ◆ Hut gates
- ◆ Pig handling boards
- ◆ Dust masks
- ◆ Weaning trailer and quad bike
- ◆ Sow feed and empty feed bags
- ◆ Vaccinations, needles, syringes and container for sharps
- ◆ Dab/crayon marker

Preparation for weaning

The aim is to wean whole rows of sows at a time and then any sows in spare paddocks where the piglets are a minimum age of 28 days, and averaging 7 kg + in weight.

Note: Weights and weaning ages reflect typical commercial outdoor production. Rare breed piglets often wean later and heavier.

Day before weaning

Reduce individual sow feed to no more than 3kg. This will ensure they are hungry on weaning day and wanting to follow you out of the paddock.

Check in each hut that the piglets are in good health and of good weight.

Make sure the fender is on and secure.

Put one hut gate on top of each hut.

Take down the middle electric fence wires between sows – this will enable them to mix.



Healthy litter just before weaning



Sows and litters mixing pre-weaning

WEANING

Prepare the trailer for weaning (bed with straw) ensuring buckets of feed for the sow are available.

Weaned piglet accommodation should be bedded up, water sources cleaned and checked for flow rate.

Sow pens should be prepared by rolling out fresh straw and leaving some whole bales in for sows to hide behind (from dominant sows) during mixing.

Cull sows must be spray marked to prevent them being re-served.

Weaning day: Sows

Early morning, quietly go to the farrowing rows to be weaned and attach a gate to each hut and close pigs in securely.

Secure all the ropes and gates along the route the sows will be moving through.

Once all sows are shut in go to each hut individually and entice the sow out with a few feed cobs being careful not to release piglets.

Once the sow is out close the gate and shut the piglets in the hut.

When all the sows are out of each hut in each row take down the end gate and entice them out with some feed.

Let the sows walk away from the farrowing paddocks to their weaning pens. They will usually follow the quad bike. Staff can follow behind them with a length of rope or using pig boards.

Shut the sows in weaning pens and then feed at least 5 kg per sow evenly spread throughout the pen to avoid fighting.

Monitor sows throughout the day and take action if bullying is occurring.



Entice each sow out of hut and shut piglets in hut



Pig handling boards help direct sows



Weaned sows following quad bike with food

WEANING

Weaning Day: Piglets

Once the sows have been taken out of the farrowing rows go back with the weaning trailer.

Remove all the fenders and put to the side of the hut.

Drive the quad bike and trailer along the front of the hut.

Line up the chute with the hut door and slide chute down into position.

Apply the quad brakes to prevent rolling away.

Remove the hut gate.

One person stay to the side of the chute at the hut door to prevent any piglets escaping.

The second person go to the back of the hut, wearing a dust mask and encourage the piglets out. Waving empty feed bags can shoo them out.

Slide the chute back into the trailer and move to the next hut and repeat.

Once the trailer is full, carefully drive to piglet weaning pens.

Vaccinations and tagging

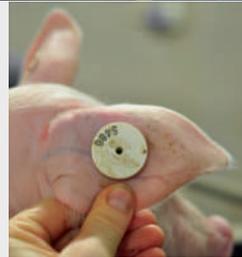
At the piglet weaning pens tagging and vaccinations and health checks can be performed.

Tagging: If you are ear-tagging use an appropriate tag and tagger for the size of piglet.

Make sure the sharp point is positioned at the middle point of the ear but avoid ear veins before application.



Weaning trailer with weaning chute lined up in front of hut door



If tagging - use button or flag tags, position correctly and use an appropriate tagger

WEANING



Remember pigs' ears grow! Avoid metal or plastic tags that are closed at one end as they can cause damage when the pig's ear grows and are difficult to remove.



Close-ended metal weaning tag causing injury as pig's ear grew. Despite tag removal ear was left damaged with an infection risk.

Button or flag tags are recommended instead

Ear tattooing can be done instead of tagging to provide a permanent mark.

Vaccinations: Check your Herd Health Plan and consult with your vet about vaccinations.

At this point perform full health checks and treatments before each piglet is placed in new accommodation.

Separating sexes and low weight pigs

At this time the piglets can be separated into the huts by male or female.



Write either M or F (or B and G for boars and gilts) in large letters on the hut front.

Note the number of weaners per hut.

Any piglets with low weaning weight and/or with health issues that are of weaning age must be put into specialist weaner accommodation.

Specialist accommodation must have been thoroughly cleaned and provided with fresh bedding, water and feed suitable for weaners.



Pigs are often vaccinated at weaning. Consult vet for advice



Weaner pens should be clean with fresh bedding, a fresh water supply and weaner feed





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