# PIG FARMING

## Introduction

Pig farming is a branch of animal husbandry that deals with raising and breeding of domestic pigs. Pig farming can also be said to be the act of rearing piglets or weaners until maturity for commercial purposes. This involves getting the right piglets, vaccines and vaccination and the management of a piggery. Pig farming is becoming popular day by day

There are also other opportunities to gain from pig farming, ranging from revenue generation in the sale of pigs, to its processing as pork chops, ham, bacon and sausages. Pig farming delivers a diversity of by-products. These by-products are often sold at a premium especially to foreigners.

## *About the Course*

The United Nations' Food and Agriculture Organisation reports that pork forms about 38% of all the meat consumption in the world. This means there is a huge market for more pig farmers as the demand for pork and other products of pig meat will only keep increasing.

This course will guide you through your journey into a lucrative Piggery enterprise, including what to look out for and pitfalls to avoid. At the end of the training, you will be confident enough to start your business assured of a rewarding and profitable investment.



## Module 1: The Economy of Piggery

The value of trade in pig products around the world runs into billions of dollars every year and Nigeria enjoys less than 2 per cent of this action. China is both the largest producer and net importer of pig products.

***Advantages of Pig Farming in Nigeria***

- The reproduction period of pigs is faster than other livestock like cattle or goats.
- Pigs can convert more energy/nutrient into protein and as a result, they grow faster than cattle, goats or other livestock animals.
- Pigs can survive and produce more by consuming little amount of low-quality foods. You can feed them roughage, kitchen garbage, agricultural waste, etc. to reduce feeding cost.
- They require less amount of investment. Although, investment depends on the size of your farm.
- Pig farming can help solve the problem of malnutrition of many individuals through the provision of pork with high protein content. By raising pigs, we can meet up this demand.
- A large amount of daily necessary protein derives from plant and a little amount from animals. Animal protein is very essential for the human body because of its high biological value and contains the building stones for good health and proper growth. By raising pigs, we can easily meet up this demand.
- A sow generally gives birth to piglets twice a year. And the gestation period is not more than 115 days. So, even when you start with a small number of pigs, you can upscale quickly.
- The weather condition and geographical location of Nigeria are very suitable for pig farming.
- Piggery is a very profitable business with great ROI (Return of Investment) if handled professionally.

***The Economy of Pig Farming***

**Food Production:** The consumption of pork and other pig-related products is at an extremely high rate around the world.

**Leather:** Pigskin, though sensitive, can be great leather products used in manufacturing American footballs, boots, furniture, shoes, belts, gloves, saddle seats, and many more items.

## Module 2: Breeds of Pigs

One of the most important secrets of successful pig farming in Nigeria is the type and quality of pigs you have on your farm

The most common pig breeds for commercial pig farming in Nigeria are the Yorkshire, Landrace, Hampshire, Duroc breeds and their crosses.

**Yorkshire -** They are white, long body with erect ears, they make good mothers and have a live weight for a mature male 300 to 450kg and female 250 to 350 kg.

**Landrace -** They are white with large drooping ears, long body and they make good mothers. They are one of the newest breeds of a Danish origin. They are noted for having the highest number of pigs per litter

**Hampshire -** They are black with white belt and are muscular. They are good for bacon production. They have a high prolificacy, with a litter size of 9 with high weaning rate.

**Duroc -** They are red, muscular with partially drooping ears and desirable as sires. They grow the fastest out of all the other breeds.

## Module 3: Breeding in Piggery

**Pure Breeding-** Pure Breeding is mating purebred individuals of the same breed. The major objective of pure-breeding is to identify and propagate superior genes for use in commercial production.

**Out Breeding -** Out Breeding is mating individuals of the same breed but who are less closely related than the average of the breed.

**In Breeding -** In Breeding is mating between individuals of the same breed but which are more closely related than the average breed.

**Cross Breeding -** Crossbreeding is mating two individuals from different breeds with the purpose of taking advantage of the observed improvement in the performance of the progeny above that of either parent - hybrid vigour or heterosis.

**Selection of Breeding Gilt**

It is extremely important to select a good gilt since it contributes half the quality of the herd. Areas to be considered while selecting breeding Gilt:

- Gilts selected to have at least 12 teats to accommodate a large litter
- Gilts to be selected from sows, which wean 9 -10 or more piglets per litter and are known to be good mothers and first farrowing at one year of age and farrowing interval of seven months.
- Select breeding gilts at the weaning period, further selection should be done 5-6 months of age.

- Select fast-growing weaners. These will likely consume less feed per unit live weight gain. Thus, less costly to keep. Select gilts which have developed hams and comparatively light heads.
- The selected gilts should have good body formation i.e. strong legs, sound feet, etc.
- Guilt must be at least 8 months old at first service.

**Selection of Breeding Boar**

It is extremely important to select a good boar since it contributes half the quality of the herd. Factors to while selecting breeding Boar:

- Boar should have sound feet with good, full hams, uniform curve at the back and of good length.
- Boar to have at least 12 nicely placed rudimentary teats
- Boar to be selected from sows, which wean 8 -10 or more piglets per litter and are known to be good mothers.
- Boar to be selected from the herd which is having normal sex organs, active, healthy and strong.
- Selection to be done before castration i.e. at 4 weeks. Select biggest from the litter.
- Boar must be at least 8 months old at first service.

**Heat Detection – Common Signs of Heat**

**1st stage: early heat sign**

- General restlessness
- Vulva turns red and is swollen
- White mucus discharge

**2nd stage: service period signs**

- Real Oestrus lasts for 40 - 60 hours

- Vulva becomes less red and swollen
- Slimy mucus discharge
- The tendency to mount and be mounted by others
- The sow or gilt will stand still when pressure is applied to her back (can accept a man's weight sitting on her. Thus, the right stage to send her to the boar

**3rd stage: post-oestrus-period signs**

- The sow/gilt will not stand still when pressure is applied to her back.
- The swelling of the vulva disappears.

**How to Induce Heat**

After farrowing, a sow may be slow to come into heat. Here are a few methods used by farmers to induce heat:

- Gently stroke the sow's vagina with a freshly cut papaya stalk every morning for 3-5 days.
- Spray the sow's (or gilt's) pen with boar urine every morning for 3-5 days.
- Grind 1 kg of fresh or dried lotus (Semen nelumbinis) seeds. Mix with 20 kg of dry feed. Feed to the sow twice a day for 5-7 days.
- Bring the sow to the boar, or place the sow in a pen next to the boar.
- Put the sow with the boar for a short period every day when the heat is expected.
- Always take the sow to the boar. This is less upsetting for him.
- Put the sow and boar together just before feeding.
- During her 24-hour peak heat period allow the boar to serve twice, with an interval of about 12-14-hour intervals between services. Do not mate animals during the hot time of day.
- If the sow doesn't conceive, she will return on heat again in about 3-weeks.

- 10 days before service, give the sow/gilt 1-2 kg of feed extra per day. Continue this for one week after service.
- During the last month of pregnancy, give 0.5 kg extra feed per day but decrease this gradually one week before farrowing. Provide plenty of water to help prevent congested gut during farrowing.
- Each boar should be kept in its own pen to avoid fighting. For mating, the sow is taken to the boar.

**Stimulating Regular Heat**

- Remove the sow from the piglets early (at 4 - 6 weeks of age) and all at once.
- Take the sow to a house with dry sows
- Put the sow close to a boar, in a way that makes direct contact (hear, see, smell) possible.
- The sow should not be given any feed on the day of weaning.
- The next day feed about 4 kg/day. This is called flushing and should be done for a maximum of 10 days or until the service takes place.
- Put the sows in groups (stress stimulates heat)
- If there are heat problems, change the type of feed for a few days.
- Maintain a good climate; see to it that there is sufficient light in the house.
- Sows should not be too fat or too thin when they are served. It is important to keep this in mind when determining the ration during the suckling period.

**When Sow is in Gestation**

After 21 days of serving she does not show heat signs. Additionally, a scan can detect pregnancy from 23 - 35 days.

**Care and Management of Breeding Boar**

High priority should be given to the management of animals newly introduced into the breeding herd to achieve maximum reproductive efficiency.

The following boar and gilt management practices will assist in the maximization of fertility and longevity.

- Upon completion of their tests, boars should be fed at a level of energy that will prevent excessive fat deposition.

- Boars tested individually or in small groups in close confinement should be managed by providing fence-line contact with cycling females to stimulate their libido.

- Although boars tested in large groups and less confined settings are likely to require less physical conditioning and sexual stimulation before use, they may also benefit from exposure to the management procedures described for boars reared in close confinement.

- The *minimum* age for successful breeding in boars is 7 months.

**Care and Management of Breeding Sow**

- The energy intake of selected gilts should be restricted to prevent overweight conditions.

- Moving gilts to new pens, increased exercise, and daily exposure to boars beginning from between 160 and 180 days of age will help stimulate the onset of oestrus.

- Breeding should be delayed until the second or third oestrus to increase the probability of large litters and prevent dystocia.

- Gilts that do not conceive after mating at two oestrous periods should be marketed.

- Gilts that have not expressed heat by 9 months of age should be culled.

- Gilts should be bred on the second or third heat to take advantage of the expected increase in ovulation rate that usually occurs following puberty.

**Care and Management of New Born Piglets**

- A few minutes after the birth the umbilical cord may be pulled gently away or cut if necessary (to about 5 cm length).

- After birth, the navel of each piglet should be soaked in a cup of iodine solution to prevent inflammation and tetanus. Each piglet should be rubbed carefully, dry with a cloth.

- Make sure the piglets can suck from the udder as soon as possible after birth. Their sucking will encourage the sow to let down her milk.

- It is important that the piglets immediately take advantage of the first milk called colostrum. Colostrum should be taken by all the piglets on the same day they are born. If taken at this time the colostrum can protect the piglets against diseases.

- The piglets can be given additional feed of goat or cow's milk or a mashed bean porridge to which a little sugar has been added.

- If the milk produced by the sow is too little to meet the needs of the piglets or the sow completely neglects the piglets, they should be put on another sow or reared on cow or goat's milk.

**Feeding Piglets Whose Mother Does Not Produce Milk**

- If the sow does not produce enough milk the piglets should be given to another sow which farrowed or gave birth up to three days before.

- This sow should have fewer piglets than the number of teats on her udder. This is because the teats which are not being used by piglets dry off after three days.

- Piglets normally take control of one teat at birth and continue to feed from it until they are weaned. Transfer extra piglets to the sow with fewer piglets after disguising them with a spray which has a strong smell e.g. engine oil/kerol diluted with water to last at least 1 or 2 days.

- All piglets should be sprayed as soon as the introduction is done so that the foster mother doesn't identify the foreigners.

- If there is no sow to take over feeding the piglets, they will have to be given extra food by hand. Goat or cow's milk can be given to the piglets in the same way as for motherless or orphaned piglets.

**Teeth Trimming**

- It is usually necessary to trim the piglets' teeth to prevent them from biting the udder.

- Piglets are born with needle-sharp teeth which may injure the sow's udder.

- Only the points of the teeth should be removed.

**Anaemia or Iron Deficiency**

Anaemia is caused by iron deficiency. This iron is needed for the formation of haemoglobin. This is an important problem, especially for young piglets kept indoors.

**Oral Iron Supplement -** *Oral Iron Supplement* is an iron supplement for newborns. The ideal method of administering ***Oral Iron Supplement*** to the newborn piglet is by rubbing it on the teats they suckle.

Piglets become very pale a few weeks after birth and their growth slows down when they suffer anaemia. This can be prevented by:

- Giving the piglet (3 and 10 days after birth) iron injection (1 and 2 ml respectively) IM preferably at neck muscles.
- Oral iron-paste containing iron is put in the mouth within 24 hours of birth Feeding compost- must be of good quality and supplied daily. Compost of poor quality may contain bacteria.
- Wood ash can also be put into the pen. This will not provide iron, but it does contain other important minerals.

**Creep Feeding**

- Creep feeding helps the piglets to get used to feeding at an early age.
- Young piglets from 7 days onwards should have high protein feed available to them.
- This has to be fed in a small area where the mother cannot eat the feed.

**Weaning**

Weaning is a great challenge to the young pig. However, early weaning of piglets at 14-21 days increases sow productivity through the potential increase in the number of litters per sow per year.

**Boar Replacement**

- Boars must be replaced when they become too large to serve most of the sows on the farm.
- Boars usually have a maximum working life of between 18 and 24 months. This means they should be replaced when they are 30 to 36 months old.
- A low sex drive (libido) can also be a problem. Some boars are slow workers and are sometimes reluctant and only now and then willing to work.

**Culling of Sows**

- Culled sows must be removed from the farm and sold as soon as possible. Replacement gilt can then be brought into the herd immediately.
- Sows that farrow regularly and rear large litters (nine or more piglets) and are free of other problems and diseases should rear five to six or even more litters before they have to be removed from the herd.
- A sow is usually removed from the herd when her litters start to become smaller (two small litters in succession) or when she does not readily come on heat after weaning.

**Castration**

- Male piglets are castrated to make them more manageable when they become sexually mature.
- Castration should be done in the first two weeks of a piglet's life.

## Module 4: Feeds and Hygiene

Good feed is necessary for growth, body maintenance and the production of meat and milk. You can use locally available feeds that are less expensive but can be nutritionally complete when properly prepared.

The nutritional needs of pigs can be divided into six categories or classes.

- ✓ Water
- ✓ Carbohydrates
- ✓ Fats
- ✓ Proteins
- ✓ Vitamins
- ✓ Minerals

### Formulated Feed

Creep feed: Creep Feed is the baby piglets' first and most important dry food. It contains 20% protein that is highly fortified with milk by-products and is available in small, chewable, highly palatable pellets for easy digestion.

Traditional pig feeds: Feeds should meet the animal's needs for maintenance, growth and reproduction. Good pig feed contains sufficient energy, protein, minerals and vitamins.

### Traditional feed processing

Different feeds are mixed and boiled to make the pig feed more palatable. There are 2 types of traditional processing:

- Mixing all different feeds (rice bran, broken rice, crushed maize and soya, dried legume leaves, etc) in proportion and giving it directly to the pigs.

- Cooking the different raw materials together to improve digestibility and to break- down toxins from some feeds as raw cola-cassia, banana stem, maize and soya grains, beans, kitchen waste, forage crops, etc.

Feeding Forest Products

Pig feed can also be prepared with forest products (wild vegetables, wild bananas, wild cola – cassia etc).

Feeding Alcohol Distilling Residues

Most popular for pig feeding is distillery wastes from millet. It should be mixed with other feeds such as rice bran and broken rice/maize grids. Distillers' residues can be fed to fattening pigs, but not to pregnant or lactating sows.

**Daily Feed Requirement**

Dry/pregnant Sows and Gilts: Dry sows and gilts give 2.5/kg day of sow and weaner meal. Give extra 1kg/day one week before serving gilts and sows and one week after service. Give lactating sows 2.5 kg/day of sow and weaner meal for maintenance and 0.25 kg/day extra for each piglet being suckled.

Boars: Give boars 2.0 kg/day. If the boar is regularly used give it 2.5 Kg.

Piglets: Give creep pellets i.e. 0.5 - 1.00 kg/day from day 7 up to weaning time (21 days) per piglet. The feed should be mixed with sow and weaner meal the last week before weaning.

Feeding of Growing and Finishing Pigs: Pigs weaned at 3 - 5 weeks of 11 – 13 kg body weight, should continue being fed on the starter diet until they reach 18 kg live weight. Pigs weaned at 7 weeks or older may be switched gradually to sow and weaner diet.

**Feeding Trough Size**

- The feeding trough should be firmly anchored to the floor to prevent overturning and wasting feed.
- Pigs must be fed on time. This makes the pigs familiar to the feeding regime.
- Pigs need to be fed according to their sizes and ages.
- Troughs must be anchored so they cannot be turned over

**Drinkers**

The feeding trough can also be used to supply water. At large farms, automatic drinkers are used (bowls or nipples). Insufficient water can reduce daily feed intake.

- ✓ A pregnant sow: 10 - 12 litters water per day.
- ✓ A lactating sow: 20 – 30 litters per day.
- ✓ A growing pig: 6 - 8 litters per day.
- ✓ A boar: 12 - 15 litters per day.

## Module 5: Housing Management

**Selection of Housing Locations**

The site should be at an elevated place that cannot be flooded by rainwater.
The site should be protected from the sun and have ample fresh air. The site should be away from residences (around 8-10 meter away downwind).

**Effects of Bad Housing**

- Abortion Slow/retarded growth and poor health
- Dysentery/Diarrhoea
- Piglets dead after birth due to Parasitic Infection
- Economic losses due to less meat production
- The spread of Contagious diseases

**Construction Plan for a Good Pig House/Shed**

The important points about the pig house are as follows:

- The floor of the house must be 3 X 3 m.
- The floor of the house must be raised about 60 cm above the ground.
- The floorboards should have spaces of 2 cm between them.
- The roof must be rain-proof.
- The high side of the roof should face in a direction where some sun can shine a little way into the house from this side: but there must always be shade in some part of the house.
- The house must be strongly built.
- A pigsty can be constructed cheaply by using locally available materials. It needs to be constructed according to climatic conditions and according to the pig production system.
- The pigsty should be comfortable for the pigs: good ventilation and ample shade, no overheating, no smells, no draft and no dampness.
- The building should be constructed with its long axis in an East-West direction (protected from sun and rain). The pig building needs to be divided into different pens for each phase of the production cycle. The number and the size of the pens depend on the expected numbers of pigs to be housed in each production phase.
- The costs of constructing the pigsty should fit the pig production systems. Efficient pig production is required to cover high construction costs.



## Module 6: Diseases and Parasites

Sick pigs generally have the following signs:

- It may not eat or nor show interest in feed /water
- It may breathe rapidly which is an indication of a fever
- In white skin-coloured pigs, the skin may become reddish.

- It may have diarrhoea which may sometimes be bloody or blood-stained.
- The ears may be droopy or pointing downwards.
- They may have dull eyes.
- Skin and hair may be dull.
- Its tail will become limp.
- It may isolate itself from the rest

**Parasitic Diseases**

Parasites are divided into external and internal parasites.

**Internal Parasites [Worms]**

Worms are one of the most serious threats to pig keeping. More than 30 types affect the intestines of pigs. The most important two are the intestinal roundworm and the tapeworm.

**Roundworms**

Symptoms

- Anorexia in advanced stages.
- Anaemia and loss of condition.
- Weight loss in later stages.

Prevention

- Roundworms Control with medicine in the food is useful and provides clean and dry pens.
- Rotational grazing and periodic disinfection of pastures is required
- Separation of young ones from adults. Washing sows before farrowing.
- Periodic deworming
- Herbal treatment: herbs such as moringa are considered to be anthelmintic (able to kill intestinal worms)

**Tapeworms**

Symptoms

- Poor growth
- Rough grey hair coat
- Swollen belly
- Emaciation
- Anaemia

Prevention

- Prevent the pigs from wandering about where they can feed on human faeces
- Make sure that people working with pigs use toilets (hygiene and sanitation)
- Deworming

**External Parasites**

External parasites mainly include mange, lies and myiasis.

**Mange**

Symptoms

- The pig becomes itchy, and scratches and rubs against the walls of the sty and other objects with the skin between the legs, around the eyes, ears and neck being principally affected.
- The coat looks dull, and there are bare patches, heavy crusts, and lines on the body that look like ribs
- Restlessness and itching which can be very severe
- Red pimples on the skin, which turn into crusts and scabs. Later the skin looks very rough, is thickened and covered with flakes scratching. The skin may show red spots or bite wounds
- Thick skin and rough hair coat

- Anaemia in severe cases especially in piglets
- Death in severe cases

Prevention

- Wash the sow before farrowing at least twice at a one-week interval.
- Boars should be washed at least four times a year.
- Treat gilts upon entering the farm and before serving.
- Wash all pigs at the beginning of fattening if mange is already a problem.
- Maintain proper animal nutrition and health program to reduce the severity and spread of mange.
- Recommended control products are: ivermectin (1% injectable), or malathion (1% spray).
- General cleanliness.

Treatment

- Remove scales and dirt with soap and water and a stiff brush.
- Afterwards, the pig should be washed with organophosphate compounds.
- Repeat this treatment several times
- Ivermectin injection is a very effective treatment against mange and all other parasites.
- Spraying the animals with cattle dip also kills many parasites on the skin
- Herbal treatment: Smearing with coconut oil can be an effective control in cases of light contamination

**Lice**

Symptoms

- Itching
- The skin may show red spots or bite wounds.
- Thick skin and rough hair coat.
- Anaemia in severe cases especially in piglets.

Prevention

- General cleanliness
- Treat piglets before putting them in fattening house. Fatteners don't need to be treated
- Treat gilts before their first service
- Treat boars twice a year
- Treat new stock on arrival and seven days later. Piglets below three weeks should not be treated

Treatment

- The insecticide benzene hexachloride is a very effective remedy (0.1 - 0.25% solution) against lice. Treatment should be repeated after 7 days since the insecticide only kills adults and not eggs.
- Lice can be kept away to a certain extent by planting a pole sturdily in the ground at an angle of 45° with an old sack wound around it immersed in crude oil or used motor-oil.

**Myiasis**

Symptoms

- Infected wounds look very wet and dirty and the edges can be covered with a grey mass which are the eggs of flies.
- Later on, the larva can be seen as screw-shaped pinkish worms crawling through the wound.
- The pigs show annoyance and try to find a shabby place.
- Death may occur.

Prevention and Treatment

- Clean the wound daily with water and disinfectant then apply insecticide on the wound to cover edges too.
- Best working insecticides are the long-acting ones e.g. diazinon or supona.

- Good mange control program to prevent wounds smooth walls and floors.
- Do not use sharp objects.
- Avoid overcrowding to reduce fighting.
- Tail docking, ears notching and castration should be handled properly and the
- umbilical cord disinfected.

**Deworming**

Those dewormers that are currently approved for use are effective and usually safe when given according to label directions. These include

- ✓ ivermectin (Ivomec®)
- ✓ fenbendazole (Safe-Guard®)
- ✓ levamisole (Tramisol®, Levasole®)
- ✓ pyrantel (Banminth®)
- ✓ dichlorvos (Atgard®)
- ✓ piperazine

Specific strategic schedules should be arranged with your veterinarian for deworming.

- ✓ Boars - every 6 months
- ✓ Sows - 2 weeks before farrowing and after weaning
- ✓ Piglets - 1 week after weaning
- ✓ Fatteners - 1 week after weaning and 3 months later
- ✓ Gilts - 1 week after weaning, 3 months and at 7months of age at least 2 weeks before service.

## Module 7: Reproductive Disorders

**Anaphrodisiacs:** When the sow does not come on heat

Symptoms

No heat signs; This could be caused by low body weight due to poor feeding, overweight, mineral deficiency, intestinal worms, chronic disease, the animal has just given birth, heavy infestation with parasites

Prevention

- Improve feeding of mineral-rich feeds.
- Regularly deworm your animals.
- Allow the female to stay with the boar.

Treatment

- Gilts should not be treated at all because they may show anaphrodisiacs after every litter if this hormone is used
- Sows should be treated on the same day as weaning, and in very severe cases, 3 weeks after weaning
- Repeating treatment is of no use

**Leptospirosis:** a contagious disease of swine.

Symptoms

- Fever, anorexia, diarrhoea, bloody urine, nervous symptoms caused by meningitis.
- Abortion in last trimester.
- In sows which are affected later, weak piglets are born.
- Mummified and macerated foetuses are common in the litters.
- Infertility associated with venereal spread may be responsible for repeat breeders.

Prevention and Treatment

- Elimination of mites, rats and other rodents
- Vaccination and hygienic measures. Vaccines are not available for all types of the diseases and vaccination may not prevent bloody urine.
- Treat all sows with injection or streptomycin before serving.

- Use antibiotics especially streptomycin for all ages.

**Brucellosis**: a bacterial infection

Symptoms

- Anorexia, fever, stiff legs, occasional lameness, early abortion (returns to oestrus 5 - 8 weeks after service as a result of infection of service)
- Infection later in pregnancy gives rise to litter with mummified, stillborn or weak piglets.
- Bloody vulva discharge and endometritis.
- Retained placenta.
- Boars usually develop orchitis (inflammation of one or both testicles) and epididymitis within seven days of infection.
- The testicles are swollen and painful and permanent sterility can be the result.

Prevention and Treatment

- Prevention is based on hygienic measures and purchase of stock from clean herds only.
- Never treat by antibiotics.
- No treatment/vaccination is 100% effective
- Slaughter all animals and do restocking.
- Restocking should be after one month.

**Uterine Prolapsed:** uncommon but usually occur in old sows with large litters or where large piglets have been born.

Symptoms

- The appearance of the uterus outside the vulva.

Prevention and Treatment

The uterine prolapsed reduction is often not possible since it is very traumatic and the best therapy is to amputate the whole uterus. However, 50% of sows do not survive this operation, therefore slaughter should be considered.

**Mastitis:** a bacterial infection which causes an inflammation of the mammary organ.

Symptoms

- Swollen, hot and painful udder.
- Absence or reduction of milk in the affected udder.
- Sow refuses to suckle her piglets. As a result, piglets squeal due to hunger.
- Sow has depression and often fever.

Prevention

- Provide adequate bedding
- Keep pig pens clean, dry and free of sharp objects, clip milk teeth of baby pigs.

Treatment

- Gently massage the affected udder with lukewarm water.
- Do not allow the young to suck milk from the infected sow.
- Remove the milk from the infected udder and discard.
- Separate sow from piglets and reduce access to teats (allow a few piglets to suckle at a time). If possible, foster piglets to lactating mothers.
- Use antibiotics. Inject penicillin-streptomycin into the muscle of the hip or neck.

**Birth Diarrhoea**

Symptoms

- Acute diarrhoea in piglets is watery, yellowish-grey and within a very short time, piglets become thin with sunken eyes due to dehydration.

- Death can occur within 2 - 3 days. Death in piglets can occur even within one day before any sign of diarrhoea is observed.

Prevention

- Keep pens, feed and watering troughs clean.
- Separate affected animals from healthy animals.
- Do not change abruptly an animal's ration.
- Make sure that piglets have sufficient colostrum within 36 hours of birth

Treatment

- Vaccination
- Plenty of drinking water with electrolytes
- Use of antibiotics.
- Herbal medicine: Fresh leaves of guava or star apple. This will treat the symptoms only.

**Transmissible Gastroenteritis:** a common viral disease of the small intestine.

Symptoms

- Very high mortality mainly in piglets up to 14 days old.
- The piglets often vomit and have severe greenish-yellow watery diarrhoea, dehydration.
- In sows the diarrhoea is greyish, they vomit, abortion may occur.
- In fatteners, the symptoms are like those in sows

Prevention and Treatment

- Give electrolytes to piglets and keep them warm.
- Antibiotics prevent secondary infection but don't provide a cure.

**Fat Diarrhoea**

Symptoms

- Faeces are pasty and fatty, white or yellowish

Prevention and Treatment

- Remove creep feed for a few days.
- Use antibiotics as prescribed by a veterinary doctor.

**Post Diarrhoea**

Symptoms

- Diarrhoea with no traces of blood.
- Death from dehydration or blood poisoning (septicaemia).

Prevention and Treatment

- Increase creep feed before weaning.
- Avoid stress to piglets by not mixing piglets from different litters.
- Good hygienic measures include roughage in the diet.
- Use antibiotics as prescribed by a veterinary doctor.

**Salmonellosis**

Symptoms

- High fever, dullness, anorexia, weakness, nervous symptoms.
- Bluish-red colouring of the ears, limbs and the centre of the belly.
- Bloody spots all over the body.
- Wasting and persistent greyish diarrhoea sometimes mixed with blood and shreds or necrotic material from the gut.

Prevention and Treatment

- Normal hygienic measures pelleted feed, thorough cooking of the swill.
- Remove feed for two days and provide clean water.
- Use antibiotics as prescribed by a veterinary doctor.

**Swine Dysentery:** Known by several names, including bloody diarrhoea, haemorrhagic enteritis and black scours.

Symptoms

- In acute cases wasting and passing of diarrhoea containing varying amounts of mucus, blood and necrotic material.
- Fever.
- In chronic cases, pigs have greyish or brownish faeces, rough hair coat and low growth rate.

Treatments

- Some herbal medicines (moringa tree leaves) can be used to relieve the symptoms of diarrhoea and dehydration
- Use antibiotics as prescribed by a veterinary doctor

**Arthritis**

Symptoms

- Inflammation of joints.
- Thick soft joints.

Prevention and Treatment

- Use antibiotics as prescribed by a veterinary doctor.

**Streptococcal Infections**

Symptoms

- Septicaemia (blood poisoning) which may cause immediate death.
- Young pigs rarely recover
- Sudden death in older pigs.
- Fever, nervous signs and arthritis mostly in weaners and fatteners.

Prevention and Treatment

- Proper hygiene.
- Wash sow before it enters the farrowing pen.
- Use antibiotics as prescribed by a veterinary doctor.

**Other Diseases**

**Foot and mouth disease (FMD):** Foot-and-mouth disease is an acute, highly contagious, viral of animals with hooves, such as cattle, water buffalo, goats and pigs.

**Swine Fever/Hog Cholera:** Classical swine fever is a highly contagious, viral disease of swine that in its most virulent form causes morbidity and mortality approaching 100%.

**Anthrax:** Rare in pigs and associated with contaminated feed containing meat.

## Module 8: Pig Market

- Pig farming has been called **The Untapped Goldmine** and for good reason. You can market pork both on the local and international markets.
- Pig farming can also generate income in other ways than selling pork (raw, frozen or processed).
- Pig farmers can also make money through selling newborn pigs and selling pig manure which is used for fertilizing.
- Pig meat that we process by making sausages, etc. will be worth a lot more.
- Before you even start a pig farming business, you must plan exactly who will be your buyers.
- Get in touch with the chefs of local restaurants, you can also sell on the farmers market, and to individual customers.
- One of the best ways to maximize pig farming income is own meat processing followed by the sale of already processed pork.