

# Scientific Pig Farming



**ICAR RESEARCH COMPLEX FOR GOA**  
(Indian Council of Agricultural Research)  
Old Goa - 403 402, Goa



**Threadworm and Large white worm  
(Strongyloides ransomi) (Ascaris suum)**

around the head, ears, legs and tail but will spread over the body if not treated. The lice feed on the skin and irritate the pig, which will scratch and can cause wounds, which become infected. Parasitic infestations can be treated by spraying of medicine or by dipping animal while treating animal pig house also should be sprayed with the same medicine.

### How to improve profit in piggery By producing better quality meat

Profitability can be increased by producing better quality pig i.e pig having faster growth and better conversion ability. This reduces production cost as less feed and time is required to grow such pigs. Pig having better disease resistance will perform better as less expence on medicine.



**Mange affected Pig**

By sale of products  
It is not economical to sale live pig but to get more returns if pork is sold there will be more profit. Profit can be increased to many folds if it is convetred to products like sausages.



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### Care and management of pregnant sows

Average gestation period in pig is 114-120 days. Pregnant animals maintained in group should be protected from fighting each other to avoid abortion. Pregnant sows should be provided with rations containing sufficient nutrients to support the growth of foetus and the need of mother. Pregnant sows should be kept clean. The sows should be separated and brought to the farrowing shed two weeks before the farrowing so that the sow get familiar with place. The farrowing room should be disinfected before bringing the sow and should be kept clean always. The farrowing sow should be fed with laxative ration to avoid constipation by including the rice or wheat bran in diet. Guard rails and creep space provisions should be made available in the farrowing rooms. The room temperature in farrowing pen should be maintained at around 30 °C and during winter and rainy days heat lamps can be used for maintaining room temperature to protect the new born young piglets.

### Raising orphan piglets

The death of a sow after farrowing, poor lactation capacity of the sow results in orphan piglets. The orphan piglets may be transferred to another sow that has farrowed recently. To ensure acceptance of orphan piglets the sow should be separated from her own litter for short time and the orphanage piglets and her own piglets are to be applied with some strong odour giving substance like tincture iodine/ benzoin and brought back altogether to the mother. Orphan piglets can also be raised with milk replacer prepared by mixing one egg yolk to one litre of cow milk.

### Weaning

Separation of piglets from her mother is to be carried out at 6 to 8 weeks of age. The sow should be separated from the piglets for a few hours each day to prevent stress of weaning and feed is reduced gradually. The piglets should be dewormed after 2 weeks of weaning. The piglets should be gradually shifted from 18 % protein creep feed to 16 % grower ration over a period of two weeks. Group of 20 piglets of more or less the same age should be housed in each pen.

### Health management

Like other livestock pigs also get sicknesses due to bacterial infections, viral infection and parasitic infestations. Many times stresses due to climate change or sudden change of feed or faulty food material causes illness in pigs.

Vaccination All the newly born piglets should be vaccinated at least against Swine fever at the age of 2 months. Vaccine against Pasturellosis (Haemorrhagic septicaemia HS) and Foot and Mouth Disease vaccine like cattle is also preferred in pigs.

Deworming In young pigs, infection with roundworms can cause diarrhoea, weight loss, lung problems and death. Hence, the piglets should be dewormed regularly once in every three months.

### Piglet anaemia

Sow is unable to supply the needed iron through the milk to the fast growing piglets. Piglets maintained in concrete floored rooms are commonly suffering with anaemia. Piglet anaemia can be prevented by injecting the piglets with iron dextron preparations or by smearing the pigs' mammary gland with ferrous sulphate solutions.

Skin diseases Skin infection is commonly occurring ailment which may be caused by several organisms like bacteria, lice, ticks, mites and fungi this results in thickening and crusting of the skin. Mange occurs

## Introduction

Pigs convert inedible feeds, forages, certain grain by-products, damaged feeds and garbage into valuable nutritious meat. Pig is a highly prolific breeder which gives 10 – 12 piglets at a time and it grows faster with minimal inputs. With a small investment on building and equipments, proper feeding and sound disease control programmes the farmer can profitably utilize his time and labour in this subsidiary occupation. Rearing of pigs will be a suitable option for small and landless farmers, farm women and it can also be carried out as a part time work by the employed personals to get additional income.

## Breeds of pigs

Breed of the pig plays major role in the profitability of pig rearing. Breed of the Pig selected should adjust to the prevailing local agro-climatic conditions, should have resistance to diseases and should have faster growth rate.



Goa Local

Better adoption, sustains on scavenging. Early maturity and good mothering ability. These pigs are difficult to handle as wild in nature. This breed is better for crossbreeding with exotic breed so as to get better adaptability and disease

resistance.

This is well suited in Goa conditions. This breed has good growth rate and feed conversion ability under intensive care.

This has more back fat. This can be used



Large White Yorkshire

for crossbreeding with Goa Local.



Duroc

This breed has better growth and lean meat (Less fat). This is not well adopted in Goa conditions. It has poor mothering ability in Goa conditions. This can be used for crossbreeding with Goa Local.

These are the pigs produced by crossing Goa Local female pig with Large White Yorkshire male. These crossbred pigs are well adopted to Goa condition. These pigs have better growth rate and feed conversion efficiency. They do not require intensive care like pure exotic breed like Large white Yorkshire.



Cross Breed Pig  
(Goa Local X Large  
White Yorkshire)

## Performance of crossbred pigs

Average Birth weight	600gms to 700gms
Weight at weaning	7 to 8 kgs
Average age of puberty	190 days
Average age of sexual maturity	220 days
Age of first farrowing	335 days
Weight at 10 month age	85 to 90 kgs
Dressing percent	87.01%
Back fat thickness	3.36cms

## Housing of pigs

Housing should be simple and durable. The flooring should have a rough finish and made up of water proof cement mortar. Proper drains



Ideal Housing



Housing in farmers field

should be provided so that the effluents are disposed off. Generally under village conditions the housing can be made up of pens measuring 3 m X 2.4 m with an open yard of nearly the same dimension or in some cases slightly longer. Walls should be 1.2-1.5 m high from the floor. For the purposes of farrowing some of the pens could be converted into farrowing pens by providing guard rails made up of G.I pipes of 5 cm diameter, along the walls, 20-25 cm from the ground and the wall. In addition to guard rails, creep space can be provided for the piglets along the wall by making a partition or in one of the corners with separate entrances for the piglets. This space usually of 0.75 m X 2.4 m area.



Creaper corner

## Feeding pigs

The successes of the pig farming is dependent upon the efficient scientific feeding practices. In India, pigs are usually slaughtered at about 70 kg body weight, which is generally achieved in six months of age. To meet the intensified pork production, properly balanced high quality ration must be provided to the pigs. Three types of rations are fed to the pigs before they reach the market weight i.e. creaper/ starter, grower and finisher rations. The creaper/ starter feed is generally fed up to the attainment of 15-20 kg body weight, which is followed by grower feed up to the attainment of 50 kg body weight and then followed by finisher feed up to the attainment of 70 kg body weight. However, in Goa most farmers feed their pigs with freely available food materials like hotel/ kitchen waste, bakery waste, garbage from vegetable market,

## Commonly used feed materials for Pig in Goa



Bakers waste



Poultry Hatchery Waste



Poultry Offal

broiler offal etc. It is suggested that these unconventional feeds should be fed as the partial replacement for the ingredients in standard ration to economize the pig production.

*For references of the pig farmers, composition of three types of standard pig rations have been provided.*

Ingredients	Creaper/ Starter Feed	Grower Feed	Finisher Feed
Maize	50.0	45.0	40.0
Rice polish	22.5	35.0	47.5
Soybean meal	25.0	17.50	10.0
Mineral mixture	02.0	02.0	02.0
Common salt	0.50	0.50	0.50

## Breeding Pigs

Gilts should weigh at least 80 to 100 kg before breeding. Ovulation rate increases during successive oestrous periods (up to fifth) following puberty. Thus it is advantageous to delay the breeding of gilts until the second or third oestrous. Litter size increases on an average in succeeding pregnancies up to 5th or 6th litter. It is therefore advantageous to cull the sow from a breeding herd after her fifth or sixth litter as the litter size goes down thereafter.

Age to breed gilts	7-8 months
Weight at breeding	100-120 kg
Length of heat period	2-3 days
Best time to breed in heat period	Gilts – first day Sows- Second day
Number of services per sow	2 services at an interval of 12-14 hours
Period of oestrous cycle	18-24 days (Average 21 days)
Occurrence of heat after weaning	2-10 days
Gestation period	114 days

The average length of oestrous cycle in pigs is 19-21 days. The oestrous symptoms last for three to five days beginning with vulvar swelling and vaginal discharge. In true oestrous there is frequent urination, reduced appetite, mounting and standing for service detected by the erection of ears and immobility when normal pressure is applied to the back. Best time for breeding is during the latter half of the first day or early on the second day of oestrous. In many cases the gilts and sows continue to exhibit the standing heat on the next day. In these cases the animals should be rebred and the interval in the case of rebreeding should be 12-14 hours. This procedure will ensure a high conception rate in the herd.

Sows may come into heat two to ten days after weaning and may be bred at this time. But better results can be obtained by breeding them in the second post lactational oestrous. The animals which have been bred should be observed for the appearance of subsequent oestrous. If sows not conceived even after successful mating with a boar in two continuous oestrous cycles it is desirable to cull them from the herd. It is important not to overfeed sows which have been bred. Over fat sows are apt to produce weak pigs and crush more piglets at farrowing. Sows should gain about 35 kg and gilts about 55 kg from breeding to farrowing.