



Recording of body weight in piglets

Grower management

Piglets kept for growth are grouped according to size and group size vary between 7-10 numbers. Optimum floor space provided to minimize tail biting and fighting among the groupmates. 16% crude protein is ideal for grower ration. Piglets drenched or fed with deworming tablets or liquids (Fenbendazole/ Piperazine) immediately after weaning to control internal parasites.

Care of breeding boar and sow

Sexual maturity attains in male pigs at 6-7 months of age, but they are used in breeding at 10-12 months of age to get better vigour and fertile sperm count for successful breeding. The males are fed after service rather than before mating with sow. Boars are dewormed before one week of breeding. Outdoor exercise is must. Boars are housed individually with 1.5-2.2 square meter close space. Generally, in farmer's field, Boar to Sow ratio should be 1:10. Optimum number of services are 2-4 per week. Mating in early morning or late afternoon is desirable. Rotational breeding is followed to avoid inbreeding in the flock.



Artificial insemination in farmer's field

Disease management

External parasites: Mites bite and burrow into skin causing itchiness (mange). Ivermectin injection or chemical wash like acaricides (Amitraz) used to treat the animals. Lice causes scratching over skin and move freely, but less severe than mites. Insecticidal wash like Malathion or Coumaphos can be used to treat the pigs. Ticks attach to skin and suck blood, but don't move. Chemical wash like acaricides (Amitraz) is used against ticks.

Deficiency diseases: Mineral and vitamin deficiency occurs in pigs. So multi vitamin drugs like Groviple, Vimeral, Ostovet, and Agrimin forte mineral mixture, etc. given as supplementary nutrition to the pigs.

Infectious diseases: Classical Swine Fever, African Swine Fever, Porcine Respiratory Reproductive Syndrome, Foot and Mouth Disease, Swine Erysipelas, Swine influenza, etc. causes severe disease and flock mortality. Proper biosecurity measures, vaccination for prevention and judicious use of Antibiotics for treatment is required to keep the pigs healthy and profitable pig farming.

Vices in pigs: Pigs exhibit abnormal behaviour or vices like tail biting, ear biting, flank biting, snout biting, pen fouling, navel sucking, etc. Hence, the animals should be given proper space, isolation of aggressive animals, feeding with sufficient salt, etc. to avoid vices in pigs.

Vaccination in pigs: Newly born piglets should be vaccinated at an age of 2-3 months against Classical Swine Fever (CSF) and Circo virus diseases. Vaccine against Foot and Mouth Disease virus is also recommended in pigs maintained near dairy farms. The vaccines against emerging diseases in pigs like Porcine Respiratory and Reproductive Syndrome (PRRS) and African Swine Fever are commercially available in some countries like Vietnam.

Stress management in pigs

Heat stress management: During hot summer days pigs show sign of open mouth breathing, vocalization (squealing), blotchy skin, stiffness, muscle tremor, increased heart rate, increased body temperature, etc. Animals become lethargic and decrease feed intake. Boars have reduced libido and less weight gain. External (high humid) and internal (low humid) sprinklers are used to make animals cool. Micro droplets of water from pressurized nozzle fall down that doesn't wet floors. Ventilating fans like ceiling fans, exhaust fans and paddle fans are used to pass out hot air inside the room. Wet curtains and air coolers in low humid area can also be used. Common wallowing pond should be prepared in open space in the campus to keep the pigs cool during hot summer. Roof can be painted with white paint on exterior side and black on inside. Provision of shades near pig houses by planting trees. Insulating materials like thermocol can be used below the roof. Reduce stocking density and provide cool drinking water. Avoid feeding between 10 am-4 pm. Supplement electrolytes and antioxidants through water supply. Increase dietary energy density. Minimise excess non-essential amino acids and fibre. Increase availability of antioxidants through diet.

Winter stress management: During cold stress, pigs show sign of shivering, coughing, sunken eyes, etc. Skin colour changes from white/ dark colour to reddish. Pneumonia and respiratory diseases commonly affect the animals. For winter stress management, extra bedding of wheat or paddy straw, gunny bags are given to save the lives of piglets. Lighting the covered area to increase the

room temperature. To make pig sty or shed warm, small hot box using plywood for walls and ceiling, and heat lamps from roof can be hanged. Warm food and water can be fed frequently and feed quantity can be increased to increase the body metabolism and feeding efficiency.



Winter management of farrowing sow and piglets

Monsoon stress management: Protection of pigs from inclement weather conditions during rainy season is of utmost importance. Moisture present on ground produces a lot of bacteria that can cause diseases. Parasitic worms are mostly seen in rainy season. Flies are also found in increased numbers in wet season which irritate pigs and reduce productivity. The rapid spread of diseases during rainy season should be prevented with proper hygienic measures, periodical deworming and pre-monsoon vaccination.

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READY RECKONER ON MANAGEMENTAL PRACTICES FOR PROFITABLE PIG FARMING



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Introduction

Pig farming is a viable option to generate income and also contributes to the livelihood of rural poor farmers. It is very popular amongst the farmers of Goa and adjoining regions. Most pigs are raised for pork production. However, a small number are maintained primarily as a source of improved breeding stock. The sale of pigs which are to be used for breeding purpose has traditionally been restricted to purebred herds at Government pig breeding farms. The competition demands that breeder should develop herds that are highly productive for commercially important characters including high carcass quality. ICAR-Central Coastal Agricultural Research Institute, Goa facilitates elite germplasm production and supply, training and demonstration for entrepreneurship development of the farmers through various capacity building programmes. The farmers from scheduled tribe and scheduled caste communities are also benefitted through various inputs distributed under Schedule Tribe Component (STC) and Schedule Caste Sub Plan (SCSP) schemes.

Advantages of pig farming

- Pigs have better feed conversion efficiency as they gain more unit weight per kg of feed consumed.
- Pigs can survive and grow on wide variety of feed stuff and utilize waste products (table garbage, bakery waste, hotel and kitchen waste and unmarketable fruits and vegetables) as feed very efficiently.
- Pigs are prolific breeders and can produce at least two litters in a year. Sows have high fecundity producing 10-12 piglets in each farrowing.
- Pigs reach early sexual maturity and can be bred as early as 8-9 months of age.
- Pigs have shorter generation interval as compared to other farm animals.
- Offers quick returns since the market weight of 70-90 kg can be achieved in a period of 8-10 months of age.
- Offers employment opportunities to seasonally employed rural farmers and supplement income to improve their living standards.
- Pig products range from primary commodities such as pork, to processed food products such as sausages, nuggets and smoked hams.
- Pig fat can be used in poultry feed, soap, paints and other chemical industries.
- Pig farming creates profitable work for the available labour on the farm and successfully combined with integrated agricultural activities.
- Excreta and byproducts from pigs can be converted into good biological manure to use for maintaining soil fertility in agricultural lands.
- There is high demand specially the marketing can be done in the northeastern region, where every family consume pork as a staple food.

Housing management

Housing provides shelter and protection. Pig shed should be constructed on dry and raised ground. Long axis of house should be 30-35 meter and in East-West direction. The height of the roof should be 8-10ft. The sidewalls (up to 4ft from ground) of the shed

should be constructed with brick and cement plastered and polished. The remaining height (upper 4-6ft.) can be made up of wire net/ bamboo. The floor should be hard or pucca, non-slippery and slopy. Feeding and water troughs should be constructed in the pen and the corners of the walls. Troughs and drain should be rounded for easy cleaning. Provision for creep box should be made in farrowing pen. Provision for adequate open space for exercise, sufficient water and facility for proper disposal of faeces should be created. Individual pens should be of uniform size (80-100 sq. ft). Different categories of pigs, such as breeding boar, farrowing sow, piglets, growers (3-6 months old), fatteners (above 6 months old) and gilts/ dry sows can be accommodated in a pen of this size.



Housing in farmer's field

Feeding management

Balanced high-quality ration must be provided to the pigs to achieve the better growth at marketing age. Three types of rations are fed to pigs i.e. starter, grower and finisher rations. The starter feed is fed up to 3 months of age (attains up to 15-20 kg body weight), followed by grower feed from 4-6 months of age (attains up to 50 kg body weight) and finisher feed till marketing age (70-90 kg body weight). However, most of the farmers feed their pigs with easily available feed resources like hotel waste, bakery products, kitchen waste, vegetable waste from market, unconventional feedstuff.



Feeding in circular tray in farmer's field

Care of pregnant sow

Balanced ration is given for nourishment of sow, development of fetus and better birth weight. Avoid unnecessary stress to sows and provide plenty of drinking water. Avoid overcrowding, mixing of new and old stocks and over exciting of pregnant pigs. Separate, clean and dry sty with non-slippery floor (before 10 days). Bedding of 8-10 cm of chopped straw under covered area. Deworm 2 weeks before farrowing (Fenbendazole @ 5mg/kg bw). Treatment against external parasites (Deltamethrin or cypermethrin @ 0.01-0.05%). Trim overgrowth toe, scrub with soap and warm water in sides, udder and inter-digital spaces

Care of sow at farrowing

Good care and management practices lead to better survival. 30% of pigs farrowed never reach weaning age and 5% extra mortality post weaning. Clean and disinfect farrowing pen (ammonium, iodoform or phenolic compounds) and provide light bedding, chopped straw and fresh drinking water. Reduce ration by 1/3rd till farrowing, bulky ration and withdraw feed 12 hrs before farrowing. Clean sow with lukewarm water and allow her to suckle young ones. Feed sow after 12 hrs of farrowing (slowly increasing the quantity). Check rectal temperature (if above 40.2°C, consult a veterinarian for appropriate treatment). An important disease during this period is Mastitis, Metritis and Agalactia (MMA) syndrome which is characterized by anorexia, lethargy, high fever, swollen udder, mucopurulent vaginal discharge. Antibiotics and oxytocin injection recommended. Swab the udder with saturated solution of ferrous, zinc and copper sulphate.

Care and management of suckling sow

Sows are fed more for its body maintenance as well as milk production (2.5 to 4 kg of milk per day) to nurse piglets. A sow requires about 4 to 6 kg of feed daily depending on its nursing ability and litter size. Practically 1.5 kg of feed for sow and add 0.5 kg of feed per piglet (maximum 5 to 6 kg of total ration). Ten days after farrowing, sow may be allowed to graze along with its litter (Lucerne hay or succulent fodder). Creep area: concentrate feed for piglets prevent sow from eating. Maize or other grains, groundnut cake, fishmeal, meat scrap, dairy products, etc. included in ration (14-15% CP) along with minerals and vitamins. Few days prior to weaning, quantity of feed is gradually reduced to restrict milk flow and dry out udder (to reduce complications like mastitis).

Care and management of piglets

Pen should be clean and hygienic to minimize disease occurrence. Piglets within few minutes of birth starts suckling and each piglet suckles to a particular teat and doesn't allow others. Weaker piglets starve, so need assistance.



Assisted feeding of piglet

Naval ill prevention: Naval cord tied off, cut 3-5cm distal to legation and dipped in 2% iodine solution or 70% ethyl alcohol.

Needle teeth cutting: Two pairs of sharp teeth on each jaw can irritate sow's udder during nursing or cause injury to another piglet. Needle teeth can be removed shortly after birth (0-3 days).

Creep feeding: Piglets begin to develop an appetite for dry feed at age of 2-3 weeks. Provision of high protein feed for growth and development. Small area fenced by sides to prevent sow's entry where piglets fed.

Piglet anaemia: Iron deficiency and anaemia are common in confined rearing (pasture reared piglets get iron from soil). Oral administration which consists of spraying and swabbing in sows udder with saturated solution of ferrous sulphate (0.5 kg of ferrous sulphate in 10L of hot water). Oral iron paste can be administered within 24 hrs of birth. Iron injection after 4 and 14 days of birth @ 1 and 2 ml (I/M) respectively.

Castration: Male piglets not selected for breeding castrated early (3-4 weeks of age) to prevent uncontrolled breeding. Fattening male pigs can be castrated to maintain quality of meat and to minimise unpleasant odour (boar taint) in pork.

Identification: Weaning is the ideal time for giving identification to piglets (Notching, Tattooing and Tagging). Notching: common method, at age of 10-15 days old. Tattooing: using tattooing forceps at inner side of ear devoid of blood vessels. Tagging: By plastic tags, brass tags or polyurethane tags. RFID (Radio Frequency Identification): Piglets are injected sub-cutaneously with microchips mostly in ear to make permanent marking and identified by microchip reader.



RFID microchipping

Deworming: Piglets dewormed at time of weaning or 1-2 weeks after weaning. Ideal drug to deworm piglets is Fenbendazole given @ 1ml/ 5 kg body weight.

Orphan piglets: Piglets become orphan when sow dies, or mother has scavenging behaviour, or mother suffers from agalactia (no milk in udder), mastitis (infection of udder) etc. Orphan piglets should be transferred to the sow with fewer piglets after masking them with a spray which has a strong smell (e.g., kerosene diluted with water). In non-availability of sow, orphan piglets can be hand fed with goat or cow's milk.

Weaning of piglets: Piglets should be weaned at an early stage (30 days of birth). Average weight of piglets at weaning is 5-7 kg. Normally piglets are weaned by weight not by date in farmers' field. At weaning, sow should be taken away from piglets not in the reverse way.