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The Bokashi System in Pig Production

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Abstract

The Bokashi system has been introduced in pig production to reduce odors and improve overall health conditions of the pigs. By using Indigenous micro-organisms (IMO's), offensive smells are suppressed, fat layers are reduced, and robust pigs are produced without the need for antibiotics. Proper construction of pig sties, adequate feeding, and daily management are key to success in the Bokashi piggery system. This system allows producers to reach marketable weights for fatteners in 6-8 months and produce compost that can be used in organic farming and as fish feed.

Keywords: Pig production, IMO, robust pig, organic farming

Introduction

The nation's pig population and pork output are trending upward, in many regions of India, particularly in the North Eastern and South-Central Region (NER), pigs are domesticated. Each region has a specific breed of pig that is suited to the local environment, and the majority of households grow one or two pigs annually (Mahak *et al.* 2020). This trend is strongly impacted by population growth, shifts in attitudes, and rising living standards. These have been promoting prosperity and economic growth in society.

But contrary to this, piggery wastes especially the faecal and manure has been considered as serious environment pollutants in the country. Pork odour is mostly produced by the anaerobic breakdown of manure, feed materials, and wastewater, as these leak large amounts of airborne pollutants, including odorous chemicals and gases. Besides practical approaches like daily cleaning, ventilation, floor design, drainage and periodic removal of manure, the Bokashi piggery system has been introduced to produce healthy clean pig production

Bokashi in Japanese term which means fermented organic matter. Composting all organic food waste, including meat, dairy, and lipids, is done using the Bokashi process. Developed in Japan, it is a food fermentation method used throughout Asia before composting. Lactobacillus bacteria are used in the process to predigest waste material, removing odours and shortening the composting period.

The uses of Indigenous micro-organisms (IMO's) in order to promote growth and management of healthy pigs.

What Does Imo Do?

IMO suppresses offensive smell of manure by preventing flies in the pen, lowers the fat layer beneath the skin, produces robust pigs which do not need inoculation of antibiotics, at the same time it improves the digestive system of the pigs.



Key To Becoming Successful?

By proper construction of the pig sty, where the moisture will be controlled. Adequate feeding of pigs mainly feeding two hours before sunset. In addition to it, proper management of floor with proper ventilation is also essential. Thereby, Pigs will have minimum weight of 80 Kgs in 6 months.

Construction

- Approximately 16 sq. Ft. per pig will be taken into consideration
- Roof can be constructed like any other pen
- Walls should be made with 2ft above the ground in order to let the pigs access to the outside surrounding when standing on its feet
- The depth of the floor should be at least 3 feet.

Materials to be kept at the depth of the floor:

- 40% Saw dust
- 10% dried biomass
- 20% rice bran, rice husk
- 20% good soil
- 10% rice husk charcoal or other
- Black salt, bamboo vinegar should be sprinkle
- Addition of IMO



All the items added should be mixed thoroughly with 60% of water added. The moisture content in the mixture is most suitable in order to let the IMO multiply. Also, moisture content should be maintained as it will create smell in the flooring material. Wait for 1 week for the IMO to multiply after levelling the floor. After which, the pigs will be introduced. Here, the good signs will be indicated if the pigs started using their snouts in the flooring materials.

Management

- The level of the floor should be kept levelled and soft which is essential, for this it requires at least 15 minutes a day
- 3 hours before sunset is consider the main meal, where mixture of agro waste and rice bran which is fermented should be included.
- Morning meal can be given as grass and other green fodder.
- Feeder and water should be placed differently in the corner
- Pigs should be exercise daily

After 6-8 months, the pigs especially the fatterer should reach the marketable weight. Compost from the piggery can be used for organic farming as a manure at the rate of 1kg per sq.mt. Also, for paddy cultivation 120Kg per bigha. In addition to it, compost can also be used as fish feed. Accordingly, the sows, piglets and fatterers can be divided as per the managemental practises.

Conclusion

Among livestock species, piggery is the most potential source of meat production and more efficient feed conversion after the broiler, therefore the Bokashi system is a great practise in piggery production which uses the indigenous microorganisms in order to reduce the odour in the sty at the same time improve the overall health growth condition of the pigs. For the practise of Bokashi system, the construction is easy at the same time cost effective technique where the fatterers attain the marketable weight by 6-8 months approximately. Compost can be used in various cultivation as manure and as feed to aquatic animals as well. With the benefits and for key to success in the Bokashi piggery, the need to ensure adequate skill development of producers, making available technologies, enhance cost effectiveness.

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