

PHUC THINH COMMERCIAL PIG FARM

*Address: Phuc Thinh hamlet, Hoa Trung commune, Dong Hy district,
Thai Nguyen Province*

Capacity: 4,000 pigs per litter

Presenter: Mr. Nguyen Ngoc Lan, Owner of Phuc Thinh farm

CONTENT

- 1. Overview of Thai Nguyen's Livestock**
- 2. Pollution & waste treatment for livestock in Thai Nguyen**
- 3. Experience in applying Saibon – The constructed wetland system at Phuc Thinh Farm**

1 - OVERVIEW OF THAI NGUYEN'S LIVESTOCK

a/ Overview of Thai Nguyen province

- **Total area: 3,531.02 km²**
- **Population: 1,132,000 people**
- **9 administrative units: 2 cities, 1 town and 6 districts**
- **231,400 households, of which 80% are countryside**
- **As a midland and mountainous province, Thai Nguyen has many favorable conditions to develop livestock farms.**

b/ Thai Nguyen's Livestock development

By 2016, Thai Nguyen province has over 700 farms, of which 304 farms are pig farms.

These 304 farms can be divided into 3 types:

- **Breeding pig farms**
- **Commercial pig farms**
- **Both breeding big and commercial pig farm**

b/ Current outstanding issues of Livestock farming

- **Livestock breeds**
- **Nutrition**
- **Technology for livestock care**
- **Disease prevention and treatment**
- **WASTE & WASTE WATER TREATMENT IN LIVESTOCK , which accounts for 15-30% of total investment cost**

2 – POLLUTION & WASTE TREATMENT IN LIVESTOCK

a/ The consequences of poor waste treatment in livestock breeding

- **Adverse effect on human's health**
- **Decrease the resistance of livestock**
- **Increase the incidence rate of diseases, decrease productivity**
- **Increase cost of disease prevention**
- **Low quality of livestock's meat**
- **High risk of disease outbreaks**
- **Low economic efficiency in livestock breeding**

b/ Influential factors to the selection of environmental pollution treatment in livestock farming

- Cost of the treatment system
- Cost for operating the system
- Techniques for operating the system
- Sustainability of the system
- Energy consumption of the system
- Compatibility with surrounding landscape

3 – EXPERIENCE IN APPLYING SAIBON The constructed wetland system at Phuc Thinh Farm

a/ Saibon technology's advantages

- Stable treatment with various kinds of waste water.
- Stable operation in diverse weather conditions.
- Low power consumption.
- Low construction costs.
- Easy to install.
- Environmental friendliness.
- Low costs for both system maintenance and labor training for operation.
- Nice design & Compatible with surrounding landscape.
- Highly effective technology by combining the principle of mechanical filtration and biological filtration.

b/ Notes for installation

- The foundation of the filtration area must be compacted, $K = 0.85$ or higher.
- Use the high quality stainless steel material to avoid corrosion.
- Use the high quality concrete and waterproof cement in building tanks.
- Select the appropriate size of stone for filtration in accordance with design.
- This waste treatment technology requires large area for installation (Phuc Thinh farm's installation area is more than 1,500 square meters).

THANK YOU FOR YOUR ATTENTION!