

# Pig production - Environmental pressure and possible solutions

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Local experience from Vietnam

The director of the provincial Livestock & Production Development Company, highly motivated by the local pig production development, aims here to express here his own diagnostic.

The Red River Delta (RRD), an overpopulated region in the North of Vietnam, covers a natural area of about 15,000 square Km, with a human population of nearly 17.5 million of inhabitants, over 80 percent of which lives in rural areas and practices farming. RRD groups 11 different provinces, including: Hanoi, Hai phong, Vinh phuc, Ha tay, Bac ninh, Hai duong, Hung yen, Nam dinh, Ha nam, Thai binh, and Ninh binh province. Favored by natural condition, fertile soil and tropical monsoon climate suitable to a various number of short-term crops and animals, thank to that, RRD is well known as the key agricultural region of Vietnam. The agriculture sector, especially paddy rice and livestock production (especially pigs raising), is essential for rural incomes and poverty alleviation. That is reason why the RRD farmers have deeply experienced in paddy rice cultivation, animal raising technics, and also why it has long been the major source that almost providing the Vietnam Northern provinces, cities with living foods.

## Outline of livestock and pigs production in the RRD

Pig population in the RRD is 6,898,456 heads and including 26.2 percent of local pigs. Of which: Number of sows is 1,138,782 heads ? took 31.1 % of this of the country. Gross output of living pig weight is 621,975 tones ? took 34.6% of this of the country. And population of buffaloes and cattle is 759,266 heads ? took 27.1% of this of whole country (statistical data 01/10/2004).

Table 1. RRD livestock production compared to other ecological regions of Vietnam ( statistical data 01/10/2004. Unit : Thousand heads)

		No	Compared to Country	No	Compared to Country	No	Compared to Country
			(%)		(%)		(%)
1	RRD	6,898	26.2	59,084	27.1	770.0	11.6
2	The East North of Northland	4,391	16.6	39,51	18.1	741	11.2
3	The West North of Northland	1,176	4.5	7,875	3.7	609	9.2
4	The North mid of Northland	3,852	14.6	35,595	16.3	1,697	25.6

5	The Central Coastal	2,22	8.4	14,797	6.8	1,052	15.8
6	The High Land of Southland	1,489	5.7	8,682	4.0	616	9.3
7	The East South of Southland	2,403	9.1	17,05	7.8	705	10.6
8	The Cuu long River Delta	3,714	14.1	35,561	16.3	456	6.9
	<b>Total</b>	<b>26,414</b>	<b>100</b>	<b>218,153</b>	<b>100</b>	<b>6,646</b>	<b>100</b>

In recent years, the RRD provinces? yield of paddy rice has reached the level of some 12 tons per hectare per year (in Thai binh province, is over 13 tons). The outstanding achievement in intensive farming of rice cultivation and other varied cereal crops as well as the short-terim industrial plants, such as: maize, potatoes, sweet potatoes, cassava, and peanut, soybean, so on, these farm products and also by-products significantly considered as the favored sources of nutritious feeds ? those factors themselves have positively resulted in livestock sector and raising of pigs particularly. Thus, The RRD annual average growth rate of pigs production regularly obtained a high level of 10 ? 12 percent ( in Thai binh province, is over 13 percent), this is against the level of 6 ? 8 percent of that of the country.

## Environmental pressure appearing



**Table 2.**

The given situation in Thai binh province considered as a sample: ( Thai Binh: Total natural area: 1,542 Km<sup>2</sup>, Human population: nearly 1.9 mill., Human density: nearly 1,200 persons per Km<sup>2</sup>. Pigs population: 1.1 million heads )

	216	1,272	7,075
<b>Total of animals raising farms</b>			
Of which:			
Integrated farms	14	103	276
Poultry farms	25	253	3,012

<b>Pigs farms</b>	177	916	3,787
Of which:			
Pigs farmhouses ( farms very small)	89	574	2,452
( No of sows: 5 ? 10 and porkers: 20 ? 50)			
Pig farms in small scale	71	234	897
( No of sows: 20 ? 50 and porkers: 50 - 100)			
Pigs farms in medium scale	17	103	421
( No of sows: 50 ? 100 and porkers: 100 ? 300 )			
Pigs farms in large scale		5	17
( No of sows: over 100 and porkers: over 300 )			
Reference: Total No of small farmers (households) raising pigs of 1 ? 3 heads	419,19	403,12	411.798
(98.3%)	(96.7)	(96.8)	

Actually, livestock, especially pigs production, is greatly expected to be a way-out in making rich and also poverty reduction for farmers.

Beside the evident dynamical achievements, RRD pigs production is facing the environmental challenge due to overstocking of animals and also human-overpopulated. It is daily bringing in the strong pressure of environment, ecological environment, also the surface and even underground water sources. These factors themselves harmfully impacting directly into community?s living environment, especially the animals husbandry environment that causes the most catching diseases in animals. It is evident that if this problem could not be solved, RRD pigs production particularly would not be developed and state of environmental, water sources pollution may become more and more serious.

## Possible solutions to be suggested

The key questions now are how to solve environmental problems mentioned above, how to save animals from environmental pollution problems... so as to promote a sustainable development of livestock production. And also how to preserve ecological, living environment, and the sources of living water from pollution.

Regarding this, local expert from Thai Binh would like to give some opinions, as follows:

1. The local leader levels in RRD provinces should pay more and more attention to activities of **master planning program**

for a strategy of sustainable livestock development and further functioning of official macro management in environment.

2. Scientifically, synchronously establish **concentrated animal husbandry zones**

specializing in a type of animal, away from inhabitants? areas, schools, clinics, hospitals and living water source. Goods production zone should be established on orientation of ? A lot of raisers in one zone?, this is very important and suitable to facilitate the activities of controlling animals health, animals epidemics diseases, environmental pollution, and especially treatment of animals sewage, wastes, and processing of manure, microorganic fertilizers to return crops.

3. Construction of a new raising farm or a zone must be synchronously scientifically planned, designed, constructed and must pay more attention to system of sanitation, environmental treatment and sewage works.

4.

**Treatment of animals sewage**

- waste environment must be originated and thoroughly done at every farm and raiser.

5. Strengthening of official

**macro-management of performance in environment**

generally and animals husbandry environment particularly and also activities of applied researches in environmental technology, finding out effective, low-cost technology suitable to different types of animals husbandry farms, especially the farms in large scale. This is very important to control animals health and enlarge scale of farms.

6. Broadcasting information to farmers in order to improve their

**environmental awareness**

, and make them recognizing harmfulness comes from environment polluted to animals and also human health.

7. Enhancing and strengthening of activities of training up to raisers, improve their skills, knowledge, experiences, techniques - technology in how of raising and cleaning environment up.

8. At present, Biotechnology seems to be a most suitable one ? This should be popularized to raisers for development of

**treatment of animals wastes**

, protection of animals and living environment from pollution, processing microorganic manure ? a safe fertilizer, and collecting of biogas to serve animals production and living.

9.

**STOP using of raw dung for crops**

. All the animals dung must be well treated before manuring.

Fulfilling above mentioned measures is to take significant part in sustainable development of livestock and pigs production particularly, to take fully advantage, potentials for pigs production sector in the Red River Delta of Vietnam, and save living water sources and environment of ours as well.



Yes