

## **The Sustainability of Community Development in Area Pig Farming with *Serasah* System Based on Spiritual and Cultural Aspect**

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**ABSTRACT:** The aim of this research is to evaluate the sustainability of pig farming with *serasah* system based on spiritual and cultural aspects in Kertek region, Wonosobo regency. The research was performed at six villages located in Kertek region, i.e : Candimulyo, Candiyasan, Kapencar, Pagerejo, Purbosono and Reco, with three steps activities : preparation, data collection and data analysis. The preparation step consists of collecting information from literature review required for starting this research. Data collection was conducted to gain primary data which is related to pig farming with *serasah* system by observation method, *in depth interview* and questioner survey to identify factors that having role on pig farming sustainability with *serasah* system. *In depth interview* is started by interviewing some informants of pig farmers which have farming with *serasah* system. The next step is analyzed each aspect from the obtained data. The result of sustainability of spiritual and cultural aspects showed that the application of sustainability concept is a good method because inherited by their ancestors. It has been well done by their descendant and the spiritual of farmer is still strong. Therefore, the farmer belief toward their religion did not lose as well.

**Keywords:** Sustainability, Spiritual, Cultural, Pig Farming

### **INTRODUCTION**

Livestock was a sector that has a tremendous opportunity to be developed as a business in the future. For Moslems, the pig is the animal that is illegitimate for eaten. However, in several regions in Indonesia, pigs farming are still survive such as in Sub District Kertek in Wonosobo regency. The professions as pig farmers are often become controversy in public both from the standpoint of population and religion. It is unique from one sample of pig farming in the sub district Kertek that public acceptance can receive pig farms based on *Serasah* system for the composting process even though the majority of the population in Sub District of Kertek were moslem. Sub district of Kertek is a mountainous area that was suitable for farming and plantation. Population of pigs in Wonosobo regency in 2013 was as much as 2,135 tails and all pigs are concentrated in Sub District Kertek (Department of Animal Husbandry Regency of Wonosobo, 2014).

Pig manure potentially contaminates settlements but pig farmers in Sub District of Kertek cope with the presence of swine livestock waste by processing the manure into compost. The purpose of waste to be processed is to prevent pollution in addition as fertilizer for local farms and plantations. According to Hartoko (1988), the motivation of pig farming based on *Serasah* systems were getting acceptance from the surrounding area, ease of licensing to build a pig farm of the village, safe from thieves, It didn't takes many times, cheap, and practical. The phenomenon sustainability of pig farming based on *Serasah* system in the Sub district Kertek needs to be research on spiritual and cultural aspects to identify the factors that play a role in these farms.

### **MATERIALS AND METHODS**

The study was conducted on the pig farming based on *Serasah* system in the sub district Kertek in Wonosobo regency. Sources of information were derived from the pig farmers (breeders). Primary data were collected by questionnaire tool. This study used a total sample of 71 respondents

and 21 respondents of which are used to test the validity and reliability and 50 respondents in the main study to determine the sustainability of a system pig farms based on *Serasah* system from the spiritual and cultural aspects. The study activities carried out in three phases: preparation, data collection, and data analysis. The preparation phase included gathering activity through library information needed to begin study.

The preparation phase included gathering activity through library information was taken from the literature/documents and can be obtained from several parties concerned. Results of literature were in the form of information about the condition of the study sites, culture/behavior of farmers and people in study locations, and policies at the sites.

The data collection phase for the assessment of the sustainability of pig farms were based on *Serasah* system of spiritual-cultural aspects. Questionnaire survey to obtain data on the sustainability of pig farms was based on *Serasah* system from the spiritual and cultural aspect. Total respondents of the survey were 50 breeders with early stage were divided in quota 25% then continued at second stage. It were analyzed using simple random sampling method to select respondents. Quota sampling purposes that respondents per each village can be elected in proportion of 25%. The total sample of 25% had already represented the number of population for descriptive study (Gay and Diehl, 1992).

**Tabel 1.** Total of respondent

Village	The population of pig (tail)	The amount of breeders (People)	Quota Sampling 25%
Candimulyo	18	11	3
Purbosono	107	24	6
Kapencar	593	49	13
Candiyasan	632	86	22
Pagerejo	31	12	3
Reco	754	96	24
Total	2135	278	71

Source : Statistic Central Agency, Wonosobo Regency (2014)

The data analysis stage were analyzed descriptively by outlining all aspects of the potential and constraints of pig farms based *Serasah* system in accordance with the existing material in the questionnaire. The results sustainability of pig farms based on *Serasah* system from spiritual and cultural aspects with the average score was divided by the highest score on the questionnaire and then multiplied by 100%. Details of the calculation were:

$$\frac{\text{The average score}}{\text{The highest score}} \times 10$$

The criteria of sustainability pig farms based on *Serasah* system on spiritual and cultural aspects can be seen from the results the maximal percentage reduced minimum percentage divided by the number of categories. Details of the calculation were:

$$\frac{\text{The maximum percentage} - \text{the minimum percentage}}{\text{The number of categories}} \times 100 \%$$

$$\begin{aligned} \text{Percentage of criteria of sustainability} &= \frac{100\% - 0\%}{3} \\ \text{Percentage of criteria of sustainability} &= 33\% \end{aligned}$$

The criteria of Farm sustainability were:

66.7 to 100% : Indicates progress towards sustainability,

33.4 to 66.6% : Indicates a good start toward sustainability, and

0 to 33.3% : Indicates the need for further action to achieve sustainability.

## RESULTS AND DISCUSSION

Validity measurements carried out by using Statistical Product and Service Solutions (SPSS) for Windows Version 16.0, by looking at the value of total Correlation corrected item on each item question has a negative value or the correlation value was smaller than the value of r table, it can be said to be invalid. The validity test use bivariate correlation and testing was conducted by using the Pearson correlation so that the results of 21 respondents in the spiritual-cultural aspects showed significant results. Items that are not significant can be eliminated so that the question of variable item has been able to measure what we want to measure (Cooper and Schlinder, 2011).

**Tabel 2.** The result test of validity in spiritual and cultural aspect

Variables	Items					
	1	2	3	4	5	6
Cultural Sustainability	0.626*	0.508*	0.497*	0.445*	-	-
The culture and enjoyment in raising	0.676*	0.497*	0.433*	0.825*	0.497*	-
Entanglement between breeders	0.552*	0.733*	0.433*	0.665*	0.610*	0.652*
Kink breeder	0.527*	0.462*	0.743*	0.819*	0.672*	-
The beliefs of breeder	0.665*	0.569*	0.564*	0.463*	0.433*	-
Peace	0.764*	0.595*	0.866*	0.668*	0.668*	-

Note: \* = Correlation is significant at the 0.05 level (2-tailed).

**Tabel 3.** The result test of reliability from spiritual and cultural aspect

Variabel	<i>Cronbach Alpha</i>	Limitation	Reliability
Cultural Sustainability	0.605	0.60	Reliable
The culture and enjoyment in raising	0.600	0.60	Reliable
Entanglement between breeders	0.684	0.60	Reliable
Kink breeder	0.678	0.60	Reliable
The beliefs of breeder	0.665	0.60	Reliable
Peace	0.753	0.60	Reliable

Reliability measurements carried out also with SPSS for Windows Version 16.0. Reliability was measured by the statistical test *Cronbach alpha*. *Cronbach alpha* measurement results on the spiritual and cultural aspects are all reliable because the *Cronbach alpha* values > 0.60 and these variables can be said to have reliability as a measuring tool.

In the spiritual and cultural aspects indicate progress toward sustainability with a percentage of 90.1%. Thus, the level of sustainability of pig farms based on *Serasah* system in the Sub district Kertek, Regency of Wonosobo shows that these farms have the potential to reach a ecovillage farming from spiritual and cultural aspects.

**Table 4.** Assessment of the spiritual-cultural aspects

No.	Sub aspect	The highest score	The average score	Percentage(%)
1.	Cultural sustainability	17	15.9	93.8
2.	The culture and enjoyment in raising	25	21.7	86.9
3.	Entanglement between breeders	25	22.5	90
4.	Kink breeder	22	20.2	91.8
5.	The beliefs of breeder	20	17.6	88.1
6.	Peace	20	18.2	91
Total		129	116.1	90.1

Description percentage:

66.7 to 100%: Indicates progress towards sustainability,

33.4 to 66.6%: Indicates a good start toward sustainability,

0 to 33.3%: Indicates the need for further action to achieve sustainability.

Overall, the pig farms *Serasah* system in the sub district Kertek from the spiritual and cultural aspect and the six sub aspect in these aspects already demonstrated progress towards sustainability. Pig farming based on *Serasah* system inherited by the parent was still maintained by farmers and still follows the culture that has been carried from generation to generation through stories, written reports, village elders, and skills training based breeder statement by 66%. Forms of cultural maintenance performed by local custom and custom event were adjusted to the Islamic religion which becomes the majority religion of farmers in the village. These activities include events *selamatan*, *aqiqah*, circumcision, marriage, and death. 84% of breeders stated that until now they still follow the cultural heritage of his ancestors and always respect each culture inherited including the pig farms based on *Serasah* system continuously inherited by the parent.

Breeders perform daily activities such as breeding, farming and other work and it was not a forced thing to do. Breeders regard it was an obligation and they enjoyed. During their daily routine, farmers also strongly encourage local performing activities in the village based breeder statement by 78%. This was shown by the participation of breeders in the local performances and uses their spare time in addition to breeding, farming, and other work, and 12% stated they rather encourage these performances. In addition to following a local show, 76% of breeders expressed have more time to use their spare time doing hobbies or pleasures such as maintaining a bird and fishing in ponds and 24% stated they had many leisure times for hobbies.

Entanglement between breeders established on their daily activities, such as breeding, farming, other occupations, and often talked or discussed among breeders so that breeder still strong social relationships. Based on the statement of breeders which reach 76% and 24% stated they occasionally to have conversation among breeders. Socialization activities carried out routinely as recitals each week, *mauludan* each year, as well as the supplemental / incidental as informal meetings in shops, streets, and places in other villages thereby strengthening brotherhood rope between breeders based on 90 % statement breeders Sense of community can also be established because the relatively small size of the village, so that interactions between breeders from all parts of the country was quite high. Moreover, the patterns of houses in villages that face each other and without fences also allow for interaction were quite high. At the time of feeding in the morning and evening, breeders meet and talk

About the business of cattle and pig farming operation, additionally, during the afternoon the kids love to play and joke around pigsty. Social cohesion that existed around the pigsty was a social phenomenon that was unique and hard to be replaced and breeders together to enjoy life on

a regular basis by the 86 % breeder statement.

Based on the statement of 76 % breeders a sense of togetherness among farmers has been inherited by the parent, so if there were breeders who are struggling and need help, then the other breeders will try to find solutions together. In addition 76% of most breeders can help other breeders who are weak, troubled, or pain in farming activity. The officer of PPL also supports solve solutions to breeders. One of the efforts to overcome the difficulties farmers was to give them training to strengthen its ability to address the issue of farming pigs based on *Serasah* system. It was based on a statement from 82 % breeders.

Sense of breeders have already well established on the first, so there are rare of disputes. A sense of togetherness was inherited by the elders in the village and still exists today. Moreover, the principle of breeders living in six villages that have always lived in harmony with nature and simplicity, so that a sense of peace can emerge because of the tranquility of daily life. The sustainability concept on pig farms based on *Serasah* system has been reached because the local wisdom of community/breeders was in line with the concept of sustainability. This was shown in the case of breeders who appreciated and supported by the community in farming activities, harmonization of breeders in their activities for the benefit of society as a useful compost for agricultural products originating from pig farms based on *Serasah* system, and the breeders can receive and care suggestions/advice from the public. It was based on the statement of breeders that reach 70%.

## CONCLUSIONS

The sustainability of pig farming with *serasah* system based on spiritual-cultural aspect showed the progress of sustainability. The application of sustainability concept is well done because of the culture of pig breeding with *serasah* system that is inheritance by their ancestor is still exist till now. Besides that, the spiritual manner of farmer is still strong and the cultural activity was in accordance with the spiritual activity generating the farmer belief toward their religion did not lose. Therefore, the cultural activity still exists.

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