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Knowledge Contestation on Organic and Non-Organic Agriculture in Sustainable Agriculture (Case Study of Horticultural Farmers in Waihatu Village, West Seram District)

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Abstract - This study aims to analyze the process of contestation between organic and non-organic agricultural knowledge in agricultural practices in Waihatu, West Seram District. This is a qualitative research which explores descriptive data in oral, written form and attitudes obtained from farmers and other related parties as agents of sustainable agriculture in Waihatu Village, West Seram District. This is a case study focused on hermeneutics. The data used in conducting this research are primary and secondary data. The results of this study indicate that the contestation between organic and non-organic farming knowledge about seed supply, fertilization, or land management is given a response from each of the local subsystems such as households, government, local communities, and marketing. For some people, in Waihatu village especially West Seram District, organic farming knowledge is actually deconstructed agricultural knowledge that is generated from field experience and some information from agricultural consultants that is enhanced from independent practices. Meanwhile, the part of agriculture that has mainly changed is an important part, namely maintenance using vegetable pesticides and fertilizing using organic fertilizers. The novelty of this research is an ontology that focuses on knowledge or skills in organic farming as a social reality by assuming that behind knowledge and skills there is the power and authority to turn knowledge into social practice and then gradually transform into social reality.

Keywords - Organic Agriculture, Non-Organic, Sustainable.

I. INTRODUCTION

Organic farming is agriculture without fertilizers and synthetic chemical pesticides. In principle, this improves the condition of plant roots by regulating irrigation, only carrying one plant, setting the initial planting time and improving soil quality, thereby reducing water and seed consumption. Several groups of farmers and respondents at the study site showed their great interest in implementing the agricultural system. Even gradually developing land productivity. However, feeling uneasy to face difficulties is an important factor, especially how to apply the organic farming component. This system also requires a lot of organic material. As a result, land expansion by farmers is relatively limited to land owned and again by adopting the organic farming component step by step. In relation to the risks at the study site, there are some farmers who are not interested in this farming system.

This then becomes the starting point of contestation between organic and non-organic farming practices. In the organic farming community itself, at first a large number of farmers felt somewhat doubtful. They even predicted that their organic farming patterns would lead to product reductions. Farmers who have adopted organic farming since the beginning have received negative perceptions from the surrounding community. Doubts to maintain agricultural productivity occur not only in the community, but also for the central and regional governments. However, this situation does not become an obstacle for the organic farming community to participate in applying their own creativity and experience. This condition causes more or less competition between organic and non-organic farming

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practices. After the extraordinary success of the green revolution in Indonesia, especially when rice self-sufficiency in 1984, there was a systematic marginalization of local farmers' knowledge. Knowledge of non-organic farming has put farmers to sleep, moreover knowledge has been proven early for instant success among farmers. Traditional knowledge of farmers, namely organic farming, tends to fade.

Evidence of its success requires a long time by struggling, even struggling against strong institutions or foundation structures. To answer the main problem above, the question of research is: What is the process of contestation between the knowledge of organic and non-organic agriculture from agricultural practices in Waihatu, West Seram?

The purpose of this study was to analyze the process of contestation between the knowledge of organic and non-organic agriculture in agricultural practices in Waihatu Village, West Seram District.

II. Literature Review

2.1 Knowledge contestation in social practice

Foucault (2012) explains the relationship between power and knowledge. In his book Archeology of Knowledge, Foucault defines power as a strategy that means power to practice. Power is everywhere and cannot be localized. In Foucault's view, power determines formation, rules, and relationships within, such as relatives, communication media, and others. In Foucault's eyes, the relationship was structural. Foucault wants to clarify that power is inherent in all aspects, including knowledge. Foucault also saw knowledge being used as a force for a group of people, but bureaucracy. The power for Foucault is hidden and complicated. Power can be found in the realm of truth, discourse, outside the body, mind, and subjectivity.

Fahmid (2012) clarifies that for Foucault; power is distributed in social relations and cannot be reduced to centralized economic determinants or legal character. From Foucault's view above, based on current phenomena, organic and non-organic farming methods are utilized as a strength for farmers.

2.2 Organic and Non-organic Agriculture

At first, organic farming was a movement popularized in the European Union, as a form often called the "Green Revolution". Organic farming systems try to remedy the negative effects of the "Green Revolution" by standing on fertile soil as a key to successful production that takes into account the natural ability of soils, and both plants and animals to produce good quality agricultural products or the environment. The organic movement then developed into a philosophy that is implemented in a holistic agricultural system, so that eventually the term organic agriculture emerged as an alternative in sustainable agriculture systems.

According to Susanto (2002), the practice of organic crops is highly dependent on local knowledge of farmers and local agricultural conditions. However, the practice of organic crops is generally easier to do and be measured in the circle of farmers, including: the use of organic fertilizers, the use of seeds of local varieties, control of pests and plant diseases and the separation of land organically and organically non-organic plants. The practice of organic crops is a minimum certainty that must be fulfilled by farmers if they want to be recognized as organic farmers. This is caused by organic plants, which can not be seen from the use of organic plants, but seen from many aspects, including the attitude of farmers to nature. In addition, organic plant soil will be completely released from chemical synthetic residues and can be stable and optimal for production, if it has gone through a phase of conversion from organic plants to organic plants without becoming contaminated from synthetic chemicals. for three or more years.

2.3 Conceptual Framework

Foucault (2012) states that knowledge is the power to have other people. The relationship between power and knowledge is reciprocal. This means that power and knowledge influence each other. Knowledge exists in social reality. Social reality in agricultural development is far more advanced than non-organic knowledge with characteristics of the use of hybrid fertilizers, and pest control with chemicals. When inorganic agriculture is found to be flawed, then organic plants emerge marked by the application of fertilizers and even organic pesticides. Two applications of knowledge occur in Indonesian agriculture. Moreover, both of these sciences have their own support from various interested parties. The government side, as the owner of the policy, has the power to determine the application of agricultural knowledge which is considered more profitable. That makes farming practices recommended by the government considered legal.

But in reality, the problem is more complex. When a structure or institution is an extension of the government, or vice versa, the institution is in conflict with the government,

therefore there are two applications of knowledge that appear in the field. Thus, during the development of agriculture in Indonesia today, there are ongoing two applications of knowledge with their own strength and domination to influence any party. Both of this knowledge is non-organic knowledge on the one hand and organic farming on the other.

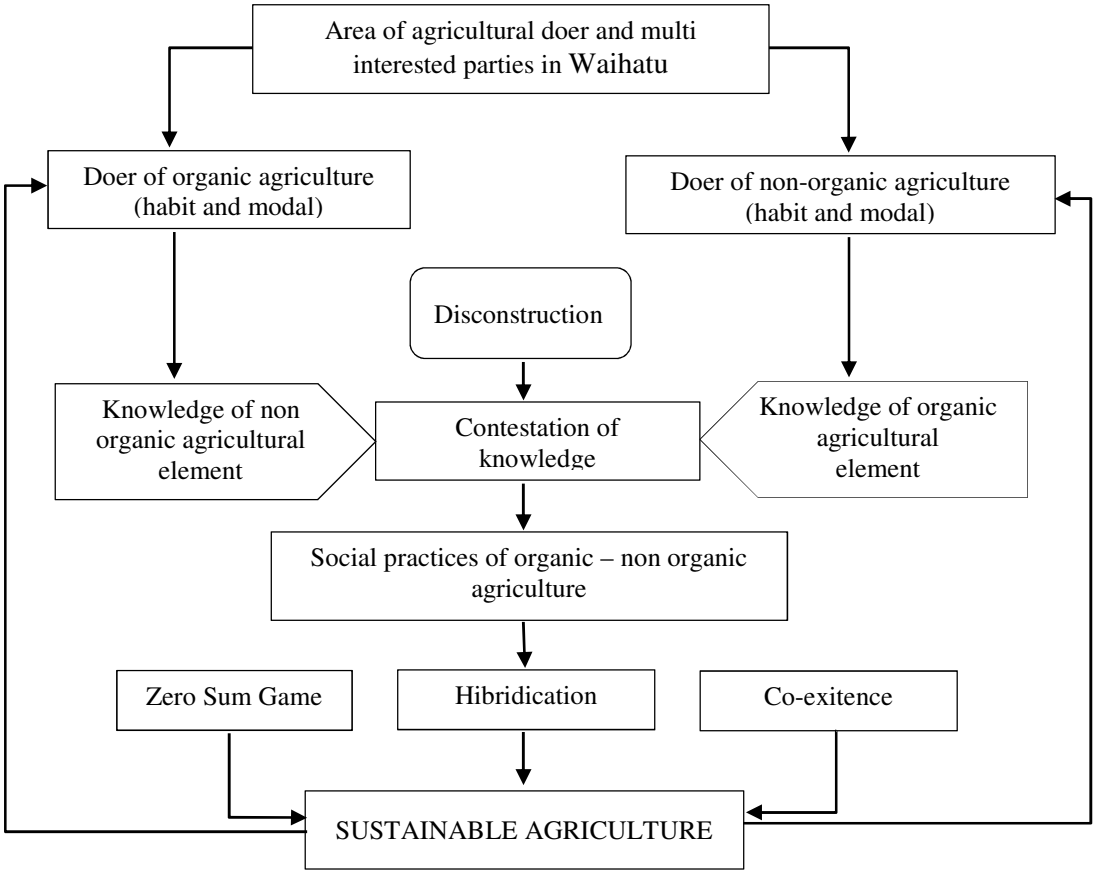

Figure 1. Conceptual Framework

III. RESEARCH METHODOLOGY

3.1 Type of Research

The paradigm of this research is constructivism, where discourse and knowledge are seen as social realities. The reality of deconstruction in context or social life is exploratory. This means theories that are born and develop in a field, emphasize meaning and value and also rely accurately on gathering data to reveal real situations precisely. This is a qualitative study, which is a study of descriptive data both oral and written and attitudes that can be observed through agricultural actors and various stakeholders as sustainable agricultural agents in Waihatu, West Seram District. This is a case study and focuses on hermeneutics. The case study strategy is in-depth exploration of information. Furthermore, according to Lubis (2014), the use of the benefits of strategies to explain the history of science and how the construction of scientific knowledge or discourse (concepts and theories) can be different in each era stated by Foucault. Researchers investigate events, activities, processes or even programs accurately. It aims to get a complete and in-depth description of identity, in this case the social practices of organic and inorganic agriculture. A case study provides data and then analyzes it to produce a theory. Case study data can be obtained by interview and observation. Hermeneutics is a theory or meaning-interpretation, knowledge and thoughts of people, and also related to the analogy meaning of a text.

3.2 Data and Data Sources

The data used in conducting this research are primary and secondary data. Primary data were obtained by conducting interviews and direct observation with farmers and various interested parties. The type of question is personal facts, namely the perpetrator provides personal information about himself, his attitude, and behavior as interested organic farming farmers or as non-organic farming farmers. While secondary data was obtained from research institutes and research organizations, such as the Agriculture Service in West Seram District, the Agriculture Office in West Kairatu sub-district, several other agricultural research results. In addition, secondary data also includes opinions, interpretations, and material forms as information. Furthermore, data and data sources can be seen in the table below:

Data:	Data Source:
The contestation between organic and non-organic farming knowledge covers many aspects, such as: 1. Seed management 2. Land management 3. Fertilizing 4. Eradication of pests and plant diseases	- Organic horticultural crop growers - Non-organic horticultural farmers - Researcher - The government - SKPD employees

3.3 Data Collection Techniques

Data collection techniques in this study were participant observation, documentation, in-depth interviews, and receipt of questionnaires. Participant observation is direct observation and listening, understanding social context situations, understanding phenomena, deter-mining reality, identifying disturbances and indications of social life from research targets, which are organic and non-organic agricultural actors and some many interested parties. Documentation is field notes (researchers as research instruments), and in-depth interviews/ non-structural interviews.

The documentation technique is done by collecting secondary data. In-depth interviews/ non-structural interviews are conducted in the afternoon or evening. The number of informants was decided after observing the location of the study. An informant was asked about the interview material which covers daily problems, social life, social structure, and social interaction of each government policy, institutions of relevance, and all matters related to sustainable agriculture. Acceptance of the questionnaire was carried out to determine the income of organic and inorganic farmers using closed questions:

3.4 Data Analysis Techniques

Data collected by conducting observa-tions, in-depth interviews, documentation, field notes, and non-structural interviews are then presented to find out more information. Data analysis consists of three parts: data reduction, data presentation, and conclusion drawing. Data reduction is the process of selection, centralization of interest in simplification, abstraction, and transformation of raw data. The data analysis technique used will be explained in the table below.

Data:	Data Analysis Technique
Contestation between knowledge of organic and non-organic agriculture	Analysis with knowledge analysis: How the influence/ cooperation/ competition between organic and non-organic agricultural knowledge consists of: content, sources, impacts, actions of knowledge

3.5 Validity

Research validity is a research accountability report. In this case, to validate the results of the study. In this study, the authors used extended observations, double checks, triangulation, peer discussions, negative case analyzes, member checks (Sugiyono, 2011).

IV. Results And Discussion

4.1 The Process of Contestation between Knowledge of Organic and Non-Organic Agriculture

4.1.1 History of Organic and Non-organic Agriculture

The people of West Seram Regency have learned about organic farming which they usually get from policy makers. As stated by informant H (2019), they know the knowledge of organic farming with the popular name "Healthy Vegetables". Knowledge of organic farming is non-organic farming, but by reducing the amount of synthetic fertilizers and pesticides. Organic farming is basically fine, but growth is slow. The process uses bokashi. Bokashi is made based on chicken waste, husks, straw, rice and bran mixture and EM4 which is fermented with cold rice. This is similar to the

statement G (informant), according to him, the use of pesticides is done if only the emergence of worms. The disadvantage of organic farming is that the price is not much different from inorganic vegetables, so in the end it is not profitable. In addition, organic vegetables rot easily because there are no pesticides. In this village, many groups of farmers use non-organic vegetables. This is caused by organic vegetables that cannot survive or rot easily in the rainy season. Vegetables are spinach, water spinach and mustard greens. Since the last two years, most farmers only use organic fertilizer and plant pesticides correctly in the rainy season, by putting plastic (mulsa) on the vegetables.

This method is to prevent plants or vegetables from too much water which can cause rot. Waihatu Village has been familiar with organic plants or vegetables since there was training that helped from Japan in 2008. It is a realistic company with JICA (Japan International Corporation Agency). The basic idea of JICA is to produce high quality plants or vegetables. Therefore, Indonesia joined JICA in Japan in 1999. Also Wardah (2012), stated that farmers' responses to the use of organic fertilizer for rice plants were in the average category, whether it was in cognitive, affective or even psychomotor aspects. There are several types of training programs such as how to make plant pesticides and organic fertilizers, while on the other hand, training materials are prepared by local farmers. The first way to make plant pesticides is to collect all kinds of leaves in Waihatu, such as mustard leaves, spinach leaves, cabbage leaves, etc. After being collected, the leaves are then put into a large drum with a much closed lid. If it has filled about three quarters of the drum, then water about the remaining quarter. Then, close the lid carefully. After one week, the green leaves will turn brown and smell. This stench then causes worms, and then the worms are sprayed with the pesticide plant. In addition, the manufacture of organic fertilizer is like: mixing manure (can be chicken or beef), husks, and rice and rice bran mixture with a ratio = 1: 0.5: 0.5. Then mix evenly. For faster fermentation, add EM4 at the speed of two shot glasses. EM4 around Rp. 15,000/liter. Next, add one glass of brown sugar that has not been finished made by local craftsmen, brown sugar that has not been finished together with two liters of water then mixed together and allowed to stand for about three days. When finished, the organic fertilizer is then put into a 50 kg sack and can be used immediately.

4.1.2 Power and Knowledge in Organic and Non-Organic Agriculture

The main objective of the agricultural sector is to increase production to the maximum extent possible, so that ultimately, food self-sufficiency will be achieved. Specifically for non-organic agriculture, this program is run by directive counseling. The government through NGOs and other institutions has a tendency to control farmers in a 'good' way. Namely to control knowledge, discourse, and make a good definition of whatever is considered a good way. This new model of conquest makes people the object of knowledge and the object of discourse. The main founder is the knowledge of modern people (Ritzer and Goodman, 2004). To Foucault (1972) in Ritzer and Goodman (2004), knowledge is the power to get people. The rejection of all kinds of government policies shows some indications of the truth from Foucault, so that such conditions are referred to as mismanaged capitalism, in which the emergence of dominant classes of capital.

The dominant one is not only in the state, but also controls civil society through the culture of consumerism. As Foucault (2012) said, history in each era has a vision, description, classification, and understanding of a certain world. The way of thinking is not determined by people, but is decided by the dominant discursive structure at that time. Discursive structure can be in the form of written text, spoken and non-verbal language, institutional practices, and more. These types of discursive structures belong to the dominant media parties to exploit the interests of organic and inorganic farmers. Foucault placed domination that is not usually owned by the state; moreover some groups have a certain kind of power. With discourse, they control the views, beliefs and actions of each individual. This discourse is a keyword that is discussed and offered by Foucault as a reason for his thinking that is used by each dominant to win others in achieving goals. From his point of view, society is transformed into a subject created by an unconscious system and a network of domination at all. Here, several types of roles from NGOs, Certified Institutions, and many others have their own strengths. Non-governmental organizations and Certified Institutions create systems that farmers are not aware of.

From the illustration above, it can be concluded that the way of organic farming, the development of knowledge about organic farming and also the dominance of any party, such as the government, has a close relationship as a set of regulatory systems. According to Foucault (2012), Long (2001), and Salman (2012), under conditions of applied

knowledge (knowledge of organic and non-organic agriculture) of social reality, there must be a 'knowledge interface', or commonly known as knowledge contestation. Thus, the knowledge contestation that is happening in the development of organic agriculture, in all aspects, such as the supply of seeds and fertilizers and land management, involves the response of each local sub-system such as households, government, local communities, and marketing varies. Based on their needs.

In addition, Foucault also stated that discourse creates and constructs a particular event and the combination of event units then forms a known narrative. One community usually has many types of discourse that are different from each other, but when domination chooses and supports certain discourses, certain discourses are made famous and dominant, very contrary to other discourses that will be marginalized and sunk. Foucault also added that society was the subject created by the power system and network which were generally not realized by the subject. Power or domination creates knowledge, knowledge, and power directly influences each other.

In more specific terms, Foucault states that power or domination and knowledge influence each other directly. There will be no power without the help of knowledge; on the contrary, every form of knowledge is a sign of the tendency for power. Furthermore, for Foucault (1972), the basis of capitalism tends to control the country smoothly.

This is done by controlling knowledge, discourse, and making good definitions of whatever is considered a good way. This new model of conquest makes people the object of knowledge and the object of discourse. The main founder is the knowledge of modern people (Ritzer and Goodman, 2004). Suharsaputra (2004) said that the development of knowledge, especially technology, also known as technology development, is the application of knowledge that has rapid change. These changes have an impact on people's views of the essence of knowledge, process, and significance for society, therefore knowledge tends to be regarded as the only truth as a basis in life and an important basis that influences human behavior. There must be old habits and practices that apply and provide benefits, such as: the use of pesticides is an old habit. The results of the pesticide were immediately visible. Farmers in Waihatu village focused on the beneficial aspects in a short time, but they ignored the long-term significance. The model of developing agricultural knowledge in Indonesia is dominated by the scientific work of agricultural scientists. Nearly various products and technologies tend to refer to the latest agricultural knowledge and modern technology that has been expanded in developed countries. The results of the research are then tried to be adapted into farmers, projects, government programs or even private methods in the form of agricultural media technology products, which farmers can get by buying.

Furthermore Ardhian (2009) states that the development of agricultural knowledge through the transfer of knowledge and technology (more modern ways) to farmers (considered a traditional way) and still in process. Farmers are seen as 'recipients' of knowledge through passive adaptation to the knowledge and technology produced by scientists from the Research Institute. During the development of modern agricultural knowledge and technology, there is a development model that uses two different methods, namely a sustainable agriculture system that respects aspects of locality, including opening opportunities for farmer participation in developing agricultural knowledge. The main principles of ongoing agriculture emphasize a clean environment, social justice, economic value based on the measurement of local formats and respect for living things in agriculture.

This gives room to expand local agricultural knowledge. Farmers are considered as passive adapters but as subjects in the development of agricultural knowledge. In the context of sustainable agriculture, farmers' knowledge is a prominent axis. Local knowledge in agricultural terms is not prior knowledge that leads to prior practice.

However, knowledge arises and develops along with direct experience of practice. Knowledge is actually a product of perceptions, learning processes and farmers' rationality based on daily experience. The technology offered is equivalent to the knowledge of farmers is appropriate technology, needs needed, inexpensive, and can be easily applied to farmers' cultivation work.

The regeneration process can be hereditary or shared with other farmers. Local knowledge is the result of the learning process based on the perception of farmers as the main actors to manage local resources. The dynamics of knowledge as a process that influences the pattern of mineral resources especially in the local agricultural system. Sometimes, local farming system practices can give up potential ideas to use and manage available resources forever (Sunaryo and Joshi, 2003).

Therefore, local extermination efforts are needed to increase mineral resources in terms of utilization, management and development. In making decisions, some

farmers need time to explore all kinds of possibilities and integrate them with other studies from other sources accurately, in addition to innovative adaptations accurately and innovative adaptations from the outside, many reports show that farmers often innovatively carry out small experiments about ideas new ideas routinely and observe.

The proof, farmers have a lot of experience gained by monitoring, observing, and carrying out agricultural activities long ago from the previous generation. As a result, these activities then made them learn to prevent environmental problems, known as "ecological wisdom" or even "local wisdom" (Soemarwoto, 1992).

Behind it all, local wisdom can be utilized as well as a source of inspiration to create new technological innovations in helping to advance agricultural development for the nation. Supporting the ideas above, modern knowledge must be the same as local wisdom because local knowledge and the ability of the community in the main use of rural resources are not sufficient against outside interference (Rositah, 2005).

Therefore, the best effort for that is to do a contestation between local and modern knowledge in the dynamics of agricultural development. Each cannot surpass the other, nor is it passive only to accept the condition of mineral resources which tend to be degraded.

To provide a context of the interests of any contestation in agricultural development, a clear picture of the relevance between local and modern knowledge in the agricultural sector seems to be needed with other contexts. It starts from history, production, figures of speech, distribution, and utilization that make up the way of thinking and acting. Every action by each individual basically generates new knowledge for other actors (de Certeau, 1984 and Foucault, 1980). Furthermore, these things continued to occur until he built social structures such as norms, conventions, rules, and principles, but then they did not last forever. It needs to be updated and changed as knowledge develops. Contestation occurs in situations of defiance or controversy. Every problem has three things, like the potential side, the contestation side, and the acceptance side.

V. CONCLUSIONS

The results of this study indicate that the contestation between organic and non-organic farming knowledge, both in the aspects of seed supply, fertilization, and land management, involves all types of responses from each local sub-system, namely households, government, local communities, and marketing. For the people of Waihatu Village, especially West Seram District, organic farming knowledge is non-organic agricultural knowledge that has been deconstructive as a consequence of fieldwork and also from outside information or counseling that reconstructs from practice. Meanwhile, some parts that go into the main changes are fundamental, namely cultivation (plant pesticides) and fertilization (organic fertilizer).

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