

# THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

## Participatory Guarantee Systems (PGS) as Alternative to Third Party Organic Certification for Smallholder Farmers in Nepal

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### **Abstract:**

*An organic farming is technically a modern form of conventional farming on the basis of certain standards which ensure the process of growing products based on an agricultural ecosystem management approach utilizing scientific knowledge. The main objective of this study is to identify better alternative of organic certification system by third-party which is widely known as 'Internal Control System (ICS). The study was based on the quantitative and qualitative data collected by using the structured questionnaires survey and semi-structured interview. 35 organic farmers were selected for the study. The study found that majority of organic farmers were satisfied from their business, but on the other hand, they were facing various problems of third party organic certification system. The third party certification is not easy accessible, understandable and affordable to most of the smallholder farmers. The study of primary and secondary data found that Participatory Guarantee Systems (PGS) is one of the best alternatives for organic certification in local /domestic market. PGS aims to provide a credible organic guarantee to consumers seeking organic produce through direct participation of farmers, consumers and other stakeholders in the organic guarantee process. It is cost effective and accessible to all small holder farmers. It can increase the organic market and takes the organic products into main stream market rather than limiting the organic products into specialized niche market. The study recommends formulating the separate PGS authority in Nepal. Furthermore, it is necessary to develop a sustainability model of organic farming, which is easy to understand, economic and practical for all the smallholder farmers in Nepal.*

**Keywords:** Organic agriculture, Nepal, Participatory Guarantee Systems (PGS)

### **1. Introduction**

Organic Agriculture (OA) is a production system based on an agro-ecosystem management approach that utilizes both traditional and scientific knowledge.

The organic agriculture is defined as:

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved". (European Commission, Jun 2012, p. 2)

Organic products are good for health and environments so its demand is increasing in the market. People become the health and environment conscious so they want to produce the environment friendly product also. But organic farming needs hardworking and become costly also which has made the organic product limited in Niche market only. In the Nepalese context, most of the organic farmers have felt the major problem of certification of their product. They have to take the certification from the international agencies which become the process oriented and costly. To increase the international market by ensuring its quality to the potential consumers, the certification of organic product is must. The previous study findings revealed that group organic certification plays a positive role in smallholders' livelihoods. Certification is also seen as a catalyst to enter international markets coupled with environmental and social benefits (Kattel & Paudyal, 2011).

Organic producers around the world have been developing methods to guarantee the organic integrity of their products for 50 years. Today, what are generally referred to as Third-Party Certification systems have become the dominant means of Organic Guarantee for world trade and Indian producers have 20 respected and accredited Third-Party Organic Certification agencies to choose from. While Third Party Certification is an essential component to world trade, there are downsides to the system. The inherent expense and paperwork required in a multi-level system discourages most small organic producers from being certified at all. This limits local and domestic trade as well as access to organic products. Worse yet, it limits the growth of the Organic Movement as a whole (National Project on Organic Farming, Govt. Of India, 2015). Because of the limited access on third party certification systems, a number of alternative methods to guarantee the Organic integrity of products have been explored for small domestic producers. One of the

alternative programs is known as Participatory Guarantee Systems' (PGS). Participatory Guarantee Systems (PGS) aim to provide a credible organic guarantee to consumers seeking organic produce through direct participation of farmers and consumers in the organic guarantee process. PGS are shaped by the very farmers and consumers that they serve and while the details of methodology and process vary, there is a consistency of core principles which can be adapted and specific to local conditions (communities, geographies, politics and markets). PGS have transparent, systemized decision-making processes and aim to share the responsibility for the organic guarantee and to verify that farmers are consistently maintaining the standards. Trust is created through open information and peer reviews. PGS involve less administration and lower costs than export focused third party certification (Secretariat of the Pacific Community Land Resources Division, 2011). Participatory Guarantee Systems (PGS) are locally focused quality assurance systems. They certify producers based on the active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange. PGS initiatives are serving thousands of small organic farmers and their consumers all over the world, and the numbers are increasing every year. IFOAM supports the development of PGS as an alternative and complementary tool to third-party certification within the organic sector and advocates for the recognition of PGS by governments (IFOAM, 2015). Many farmers' organizations all around the world and in India contribute to the establishment and promotion of Participatory Guarantee Systems (PGS). The development of PGS in India started in 2006, when the FAO and the National Centre of Organic Farming – NCOF, a body under the Department of Agriculture and Cooperation of the Ministry of Agriculture, facilitated a workshop in Goa, where fourteen NGOs participated. After the workshop, the organizations formed an informal and voluntary coalition. This coalition launched PGS pilot programs in various parts of the country and worked to develop standards, pledges and certification procedures appropriate to the local context (Castro & Kirchner, 2015).

Organic product legislation, standardization, certification and infrastructure in such development are also major issues of policy concerns (Pokhrel & Pant, 2009). It is found that if producers can ensure the quality of their product then conscious consumers can be ready to pay a fixed price of goods. The study of Gopal Datt Bhatta, Werner Doppler, Krishna Bahadur KC found that all domestic organic products reach to consumers without labelling. Most of the organic consumers are willing to pay eight rupees more for labelled organic vegetables (Bhatta, Doppler, & KC, 2009).

Considering the importance of certifying the process of production, the study aims to identify a better alternative way of organic certification in Nepal specially designed for the smallholder farmers.

## 2. Method

The study was based on the data of a pilot survey of PhD thesis. The study was based on the descriptive design, used the both qualitative and quantitative tools to identify the problem of organic farming in Nepal. The total 35 respondents (organic farmers) were randomly selected from the Kathmandu valley (Kathmandu, Lalitpur and Bhaktapur districts). Structured survey and semi-structured interview was done to collect the data. Farmers were selected who were doing the organic farming. Simple frequency table and mean value was calculated to present the data.

## 3. Result and Discussion

The study had collected the demographic information of respondents to know the characteristics of participants. Similarly, the study also discussed on the issues of land used for organic farming, certified body of organic farming, level of farmers' satisfaction from the organic farming, problem faced by the farmers and process of certification of organic products.

### 3.1. Demographic Information of Respondents

The data of table no. 1 revealed that there was 77.1% male followed by 22.9% females participated in the study who was involved in the organic farming. The organic farmers were located in the Kathmandu valley. Age of respondents found 25 to 63 years. The mean age of organic farmers was 41.69 years, which showed that the involvement of young and productive age groups.

Sex of respondents					
		Frequency		Percent	
Valid	Male	27		77.1	
	Female	8		22.9	
	Total	35		100.0	
Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age of respondents	35	25	63	41.69	10.275
Valid N (listwise)	35				
Education					
		Frequency		Percent	
Valid	Primary	5		14.3	
	Lower Secondary	2		5.7	
	Secondary	11		31.4	
	Intermediate	9		25.7	
	Bachelor	6		17.1	
	Masters and Above	2		5.7	
	Total	35		100.0	

Table 1: Demographic information of respondents

Source: Field Survey, 2015

The data showed that the majority (31.4%) farmers had secondary level education followed by 25.7% had intermediate level, 17.1% had bachelor, 14.3% had primary level and 5.7% had lower secondary level and 5.7% had master and above level of education also. It is known that the involvement of highly educated persons are also increasing in organic farming. Basically, the abroad returned labour workers were found actively involved in agricultural sectors. They were using the skill obtained in foreign farmlands in Nepal.

### 3.2. Land Used for Organic Farming

The data showed that organic farming was doing in minimum 2 Ropani (0.1 ha)(local way of measurement of size of land where 1 ropani = 0.05 ha) to 108 Ropani (5.4 ha). It gave the ideas of coverage of land by organic farming also reported the economic status of organic farmers.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Land used for organic farming	35	2.00	108.00	19.4000	21.65532
Valid N (listwise)	35				

Table 2: Land used for organic farming

Source: Field Survey, 2015

The mean (average) land used for organic farming was found 19.4 ropani in the study areas. It is unavoidable that consumers are conscious on their health and environment so that the demand of organic farming is increasing day by day in national and international market so it is necessary to search the sustainability model of organic farming. The various previous studies have showed the importance of organic farming in modern society. Agriculture production worldwide has been intensified with a simultaneous expansion in pesticides, fertilizers and other agro-chemicals use to meet growing peoples' demands for food. Indiscriminate use of agrochemicals has however resulted in several problems such as pests' resistance to pesticides and resurgence due to elimination of natural enemies, toxic residues in food, water, air and soil, degrading soil environment and ecosystem, animal and human health hazards and ultimate economic losses. Realizing the facts, organic farming is becoming popular recently, and there have been growing concerns on its importance and promotion in number of countries irrespective of their stage of development. Consequently, farming system paradigms have now shifted from mere increased production and productivity to resource sustainability and eco-friendly production techniques in their emphasis (Pokhrel & Pant, 2009).

### 3.3. Organic Farming Certified By

The study also asked farmers about the certification of their organic farming, it is general understanding that the product of any company should be formally certified to ensure the quality, quantity and market value to customers.

The data showed that 97.14% organic farmers are practicing organic farming under the recognition of Nepal government, 'District Agriculture Development Office' followed by only 2.86% had taken from the third party European Union (EU) and The National Organic Program (NOP) run by the United States Department of Agriculture. From the field interview with farmers, in spite of all other problem, the certification of product is one of the major problem because there is virtually no information about the certifying body.

Certified by:		
	Frequency	Percent
European Union (EU) and The National Organic Program (NOP) run by the United States Department of Agriculture )	1	2.86
'District Agriculture Development Office' KTM	34	97.14
Total	35	100.0

Table 3: Organic farming certified by

Source: Field Survey, 2015

Organic certification is necessary for the growth of organic—but small farmers are often left out. Third party certification is an important tool, but it is not suitable for all organic operators and stakeholders. Only a diversification in organic guarantee systems can provide satisfying opportunities for a wide range of farmers and consumers, in different contexts around the world. For a large country as India, recognizing local specificities and needs is especially relevant. By creating an enabling environment for PGS initiatives to develop and prosper, India plays a key role in the development of the organic sector as a whole and sets an example to be followed (Castro & Kirchner, 2015).

## 4. Level of Farmers' Satisfaction from Organic Farming

Without motivation, people cannot involve and contribute in any sectors, so people should be satisfied from their own work. In this connection, the organic farmers were asked about their level of satisfaction from the organic products, its income and its marketing.

The data presented in the table no. 4 showed that in total 37.1% reported that they were highly satisfied, followed by 45.7% satisfied whereas 17.1% also reported dissatisfied from the organic farming.

Satisfaction from organic farming			
		Frequency	Percent
Valid	Highly satisfied	13	37.1
	Satisfied	16	45.7
	Dissatisfied	6	17.1
	Total	35	100.0

Table 4: Level of farmers' satisfaction from organic farming

Source: Field Survey, 2015

As the reasons of dissatisfaction, the study found that in the initial phase of 3-4 years of starting of organic farming, the farmers have to bear the loss in comparison of their investment also. After 4 years also some farmers have to bear continue loss because of the lack of marketing, low productivity, high investment, problem of transportation and storing ...etc. from the in-depth interview with farmers, such problem of organic farming can demotivate the farmers' involvement in the long run.

### 5. Problem of Organic Farming

Following the investigation of level of satisfaction of farmers, the study also thoroughly identified the types of problem faced by the organic farmers. The data presented in the table no. 5 showed that in total 51.4% said that high cost of organic production was reported as a problem to continue the organic farming followed by 48.6% reported lack of adequate market for selling of products, 74.3% said that low production of farming, 31.4% also reported, the less selling of production and finally in total 51.4% also reported that there was lack of trained human resources to work in the field of organic farming. One of the organic farmers said, "Only family members are not adequate to do the commercial organic farming. It needs a lot of care and time in the land to protect plant and production from the insects and other natural disaster. But there is no easy availability of labour for farm and trained human resource that can identify the technical problem of organic farming."

Problems		Valid		
		Yes	No	Total
High cost	N	18	17	35
	%	51.4	48.6 <sup>a</sup>	100.0
Lack of adequate market	N	17	18	35
	%	48.6	51.4	100.0
Low production	N	26	9	35
	%	74.3	25.7	100.0
Less selling	N	11	24	35
	%	31.4	68.6	100.0
Lack of trained human resources	N	18	17	35
	%	51.4	48.6	100.0

Table 5: Problem of organic farming

Source: Field Survey, 2015

The previous study also showed that higher cost due to agro-chemicals and resulting environmental losses incurred in conventional agriculture on one side and higher advantages of ecological diversities available in the country on the other have proved that Nepal has high potentialities and comparative advantages of producing quality organic products (Pokhrel & Pant, 2009).

### 6. SWOT Analysis of Organic Farming

The study had conducted the intensive, in-depth discussion with the organic farmers and persons who are involved in the import and export of organic product to explore the strength, weakness, opportunity and threat (SWOT) of organic farming. The study also reviewed the findings of previous studies and policies and programs of governmental and non-governmental agencies. The study revealed the following findings from the data analysis:

The elements of SWOT analysis comprise internal (strengths and weaknesses) and external (opportunities and threats)

<p><u>Strengths</u></p> <ol style="list-style-type: none"> <li>1. A scientific form of farmers existing experience of conventional agricultural farming</li> <li>2. Better Return to the producers</li> <li>3. Feasible in most of the arable land in Nepal</li> <li>4. Gradually increasing customer demand</li> <li>5. Increasing emphasis to Organic farming policy from government</li> <li>6. Reputation/self-esteem for socially rewarding profession</li> <li>7. Strong Social Network</li> </ol>	<p><u>Weakness</u></p> <ol style="list-style-type: none"> <li>1. Inappropriate perspectives towards long term benefits of organic produce</li> <li>2. Lack of capitals to pursue organic farming and certification as the cost of certification is too high for small farmers</li> <li>3. Limited availability of bio-pesticides</li> <li>4. Lack of information on crop protection and productivity</li> <li>5. Small scale production and fragmented land</li> <li>6. Dearth of technology and marketing support from government line agencies</li> </ol>
<p><u>Opportunities</u></p> <ol style="list-style-type: none"> <li>1. Specialized market and virtually no competition among producers</li> <li>2. Well maintained organic farm could turn into an attractive tourist spot</li> <li>3. Protection of ecosystem and biodiversity benefitting all human and global society</li> <li>4. High demand of organic produce</li> <li>5. Support from other stake holders (peers, consumers, I/NGOS)</li> <li>6. Cheaper certification alternatives (PGS) in respect to third party certification (ICS)</li> </ol>	<p><u>Threats</u></p> <ol style="list-style-type: none"> <li>1. Influence of similar quality organic produce from India in cheaper price as the govt. of India provides subsidy to the farmers and the Indian producers are producing in larger areas</li> <li>2. Lack of monitoring from the government may result the fake produce in the market which ultimately leads to lose the consumers' trust</li> <li>3. No crop insurance, collective storage</li> <li>4. Strong influence of pesticides suppliers and inorganic neighbours</li> <li>5. Limited awareness on domestic consumers concerning food safety</li> </ol>

Source: Field Survey, 2015

## 7. Process of certification

Finally, the farmers were asked about the process of certification. As the response of farmers tabulated in the table no. 6 showed that only 8.6% said that it was easy whereas 54.3% said certification was difficult and 37.1% had no idea. The field observation proved that farmers felt very difficult to certify their organic produce from the third party. It was very costly, no easy accessible and many farmers were found unknown about the process of certification. The farmers recommended better alternative of third party certification. They requested the concerned authority to develop easy way or need to establish national level organic certification body that can understand the local context, and associated problems.

Regarding the motivation of organic farming, many of the farmers reported that they started organic farming by observing the neighbours and getting message from friends and advertisement. So they were in-need of professional skill based organic training and other issues related to the organic farming.

Process of certification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Easy	3	8.6	8.6	8.6
	Difficulty	19	54.3	54.3	62.9
	Don't know	13	37.1	37.1	100.0
	Total	35	100.0	100.0	

Table 6: Process of certification

Source: Field Survey, 2015

As the majority of organic farmers were found feeling the difficulties of certification and one-third were unknown of its process then there must be any alternative ways to certify the Nepalese organic products. The National Standard for organic agriculture has also been established and endorsed by the government of Nepal, and working guidelines for two certification systems (Internal Control System and Participatory Guarantee System) are being developed, both of which will serve as an important instrument for taking advantage of the international and domestic markets. The latter is a certification scheme particularly for small farmers whose products are of high demand in the local market, but who cannot meet the high cost of certification (Adhikari, 2015).

Participatory Guarantee Systems is a way to assure the quality of the products that is substantially different from third-party certification systems, while equally reliable. PGS is based on the participation of various stakeholders in the certification process (Castro & Kirchner, 2015).

The previous study also showed that the organic market in urban areas is growing but lacks the authentication found in the local organic markets of other South Asian countries. Thus, formal certification should be considered to verify authenticity and thereby

increase consumers' willingness to pay. In peri-urban areas, even though organic farming is practiced as a group, the organic market is non-existent. Therefore, the market should be developed at strategic places through low-cost certification (SINGH & MAHARJAN, 2015).

### 8. Conclusion

The main objective of this study was to identify the better, and the alternative way of existing third party certification process of organic products in Nepal. The study found that more than 50% reported the problem of existing certification system. On the basis of whole analysis of quantitative and qualitative data, the study explored the alternative way of third party certification in Nepal by reviewing the international practices. The study found that 'Participatory Guarantee Systems (PGS)' may be the one appropriate alternative way for third-party certification of organic farming in Nepal. As the process of PGS, Nepal Government can formulate PGS council under ministry of Agriculture or as a separate entity as the formal authority in central, regional and district level. The council can be responsible to formulate and implement the standards norms, principles and values of organic farming in a local level. The council can develop the collective PGS trademark for Nepali organic products so that consumers clearly understand where and how their food has been grown. It is observed that Nepal government has some plans and programs to promote OA and the certification system but this information is virtually unknown to the smallholders' farmers. The third party organic certification system (ICS) seems better for export oriented, high value crops and especially for big farmlands, but the complex paper works, being accountable to the distant certifying body, non-understandable terminologies and a different approach of farming makes smallholders go away from the process. In this context the PGS system may be the best alternative at the present situation of Nepal for the smallholders. Direct participation of all the stakeholders and based on the ground reality adopting the core values and principles of organic cultivation and the most economic certification system makes PGS the most suitable way of certifying produce as organic. In the Nepalese context, PGS is a better alternative for third party organic certification system based on the following reasons:

PGS (Participatory Guarantee System)	ICS (3 <sup>rd</sup> Party Certification System)
1. Low certification cost, locally based system, small farmers and local market focused.	1. High certification cost, international agency based system, big investors and high value cash crops focused.
2. Basic paper works	2. Complex paper works
3. New concept, started in 2004	3. Old system, almost 50 years
4. Ability to provide organic food at a lower price because of the direct linkage between grower & consumer and economic certification cost	4. The price of product is higher because the farm rely on the export market and huge investment on certification cost
5. Poor farmers and consumers are more benefitted	5. Rich & educated farmers and consumers are more benefitted
6. Sustainable solution bringing organic farmers/organic products into main stream market	6. May be limited to niche market.

Particularly appropriate for small-scale farming, PGS have proven to be a practical alternative to third-party certification for smallholders and an effective way to develop local markets for organically produced goods. Besides that, the study found the gap of effective sustainability model of organic farming in Nepal which can support to sustain the organic farming and can uplift the socioeconomic life of organic farmers.

### 9. Acknowledgement

I am grateful to Dr. Meena Poudel for her close supervision and constructive suggestion during my research work. I am also thankful to the Mewar University, Rajasthan, India and South-western Centre for Ph.D. Studies for their moral support to conduct this study.

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