

# ORGANIC AGRICULTURE: A WAY FORWARD TO ACHIEVE GENDER EQUALITY IN INDIA

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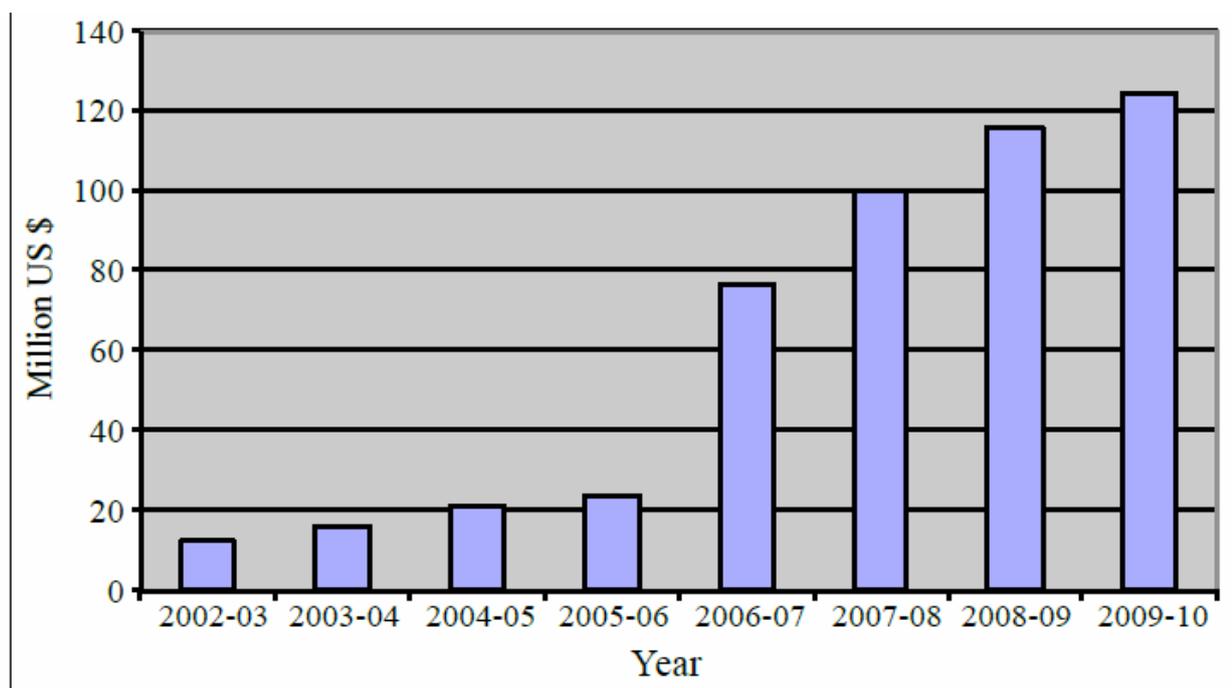
## Abstract

Among several benefits of organic agriculture, emphasis on gender equality is one important aspect which makes it unique as it is believed that it empowers women. This can be contrasted with conventional agriculture, which is said to marginalise women. To understand gender dynamics in organic farming, 111 men and 69 women registered organic farmers were studied using a semi-structured interview schedule and on-farm observations in the context of livestock production activities during 2006-07 in the North Indian state of Uttarakhand, which has embraced organic agriculture by declaring itself as first organic state in India. Land and livestock ownership was mostly with men, whereas income was jointly managed by both men and women followed by women members alone in most of the households. Animal husbandry activities were performed by both men and women, followed by women members of the family, whereas, decision making in animal husbandry activities though reflected plurality, the final decisions in most of the cases rested with men only. This study was not designed to compare the gender dimensions in conventional/traditional farms against organic farms, yet it was observed that women's formal involvement was being encouraged through appropriate policy interventions in the state of Uttarakhand. In particular, the gender sensitisation training imparted by the Uttarakhand Organic Commodity Board (UOCB) appeared to have played key role in making women's participation more proactive and visible. The authors recommend that studies should be made to compare the conventional and organic agricultural systems along gender dimensions so as to know to what extent organic agriculture is helping in achieving the millennium goal of gender equality and women's empowerment.

*Key words:* gender equality, livestock production, Millennium Development Goals, India.

## Introduction

Organic agriculture is rapidly growing all across the world, with India too experiencing significant growth. To promote organic farming, a number of initiatives were taken by the Government of India since 10th plan (2002-07) and such activities are being pursued further with more intensity now, mainly looking at increasing prospects for exports of organic agricultural products to western developed countries. The organic land in India is 1.2 million hectares (ranks 7th in the world) constituting 0.6% of total agricultural land and with 677,257 number of producers (Willer & Kilcher 2011). India exported 86 organic products worth US\$ 100.40 Million during 2007-08 with 30% growth over previous years (APEDA, 2009). The export figures further rose to US\$122 Million in 2009-10 (Figure 1, Rundgren 2011). India's National Standards of Organic Production (NSOP) and accreditation have been recognised by European Commission, Switzerland and also these are considered by the United State Department of Agriculture (USDA) as having equivalence for its National Organic Programme (NOP), indicating significant progress India has made regarding organic farming (Wai, 2007, Willer & Kilcher 2009).



**Figure 1. Growing export of certified organic agricultural products from India.**

### Women and organic agriculture

Women are generally invisible workers as far as agricultural activities in developing countries like India are concerned. Thus, one of the Millennium Development Goals (MDGs) of the member states of the United Nations adopted in 2000 is to promote gender equality and empower women. The ancient African proverb “without women we all go hungry reveal the importance of women in agriculture. They supply much of the labour for agricultural production and perform many activities key to the household economy. In fact, women produce more than half of the food in Latin America and south Asia and 80% in Africa. Although women work as long as men do, there is a real and apparent gender bias with only a few policies oriented to correct the situation (IFOAM, 2007). Organic agriculture has the potential to create situation of more gender balanced agriculture development, since principles of fairness and enforcement of social justice laws minimise the discrimination in agricultural production under organic systems. Organic and sustainable farming has the potential to create new structures that actively work towards achieving women’s empowerment and protecting the use of indigenous knowledge.

The different roles and responsibilities of women and men are closely linked to environmental change through their economic and household activities and in-turn the resulting environmental changes affect people’s well-being. Moreover, organic agriculture may have positive effects on the income of women, who make up a large sharing of smallholding farmers, particularly in sub-Saharan Africa and Asia (ESCAP 2003). Organic agriculture supports gender equality because it makes the women’s contribution more visible, offer economic opportunities, supports health, encourages biodiversity and traditional knowledge, and ensures equitable work standards (IFOAM 2007). A number of analysts have suggested that alternative farming has the potential to create more equitable gender distributions of farm labour and power by challenging productivist agriculture and its associated ideologies. But, there is lack of strong research support for this kind of arguments provided mostly by the proponents of organic farming. The empirical evidences to understand gender differences in access to productive resources remain scarce and the capacity of many developing countries to integrate gender issues in development programmes is also weak. Even where progress has been made, the capacity to implement policies and evaluate impact is often inadequate (FAO 2009). Padel (2001) also pointed out that the empirical evidence on gender issues was scarce, and the role of women in the decision-making in particular has not been studied in detail. Farnworth and Hutchings (2009) has recommended that studies be conducted in the South about how farm women are challenging and contesting gendered spaces in farming, and in so doing working to redefine not only their gender identities, but also the meaning of sustainable farming itself.

Many women around the world are taking a leading role in the development of organic agriculture (IFOAM, 2006), which has an impact on their empowerment. At the production scale, practicing organic agriculture results in more diversified crops grown and different livestock species raised in a farm. The diversity calls for women to play a more diverse role in the household economy and to perform tasks of more responsibility (for

example taking care of nursing fields, seed beds or marketing of agric products etc). The added responsibility enhances their self esteem and decision making power, promoting their empowerment within their family and community. Moreover, because organic agriculture requires specific knowledge and specialised skills, women are exposed to more educational and skills development opportunities like on-farm and off-farm trainings.

Organic agriculture's ability to empower women has further beneficial impacts on food security. It has been shown that when women have responsibility over resources, such as land and other productive resources including livestock, they have greater capacity to optimise their use, increasing food production and enhancing the nutritional health of their families (Madeley, 2002).

Duram (2006), in her study on organic farmers in the US, reported that organic farmers are more likely to be female when compared to conventional farmers. Hall and Mogyorody (2007) analysed a large sample of Ontario organic farmers using both survey and case study data, to explain variations in gender participation in farm production and decision making. They found that female farmers on vegetable farms and mixed livestock/cash crop farms were more likely to be involved in farm production than women on field crop farms, where, mechanisation and capital intensive production is much higher. They also examined ideological orientations and motivations, suggesting that farmers with more conventional orientations to organic farming are also less likely to support gender equality. Thus, understanding gender dimensions is an essential part of promoting organic agriculture, which aims at sustainability of farm resources with better environmental outcomes, quality products, and better farm family health.

### **Organic agriculture in Uttarakhand**

A number of initiatives have been taken in India to empower women in all the sectors of economic activity including agriculture. Encouraged by the favourable policy environment at the level of Central government of India, the state governments, especially states with mountain regions are particularly active to devise policies to promote organic farming, as is evident from the fact that three states namely Uttarakhand, Sikkim and Mizoram have already declared themselves as organic states. These states have taken a number of initiatives to give a formal shape and a push to organic farming activities by gearing up the personnel and resources towards organic farming development. Nevertheless, the revolutionary potential of sustainable approaches to farming to reshape our food systems, and the way humans interact with those systems, will not be realised unless there is a concerted effort by committed sustainable farmers and consumers to work towards gender equality.

Indian agriculture is characterised by small scale (<2ha), subsistence farming operations under low input low output production systems, where, livestock are essentially integrated with crop farming. Thus, alongside organic crop production, the prospects for organic livestock production are bright, though yet to be explored (Chander & Mukherjee 2005). In India, Uttarakhand is the pioneering state in organic agriculture, since it is the first state declared as organic. Here, the state government has identified "organic farming" as a thrust area for agriculture development and promoting organic farming through establishment of an institutional mechanism named as Uttarakhand Organic Commodity Board (UOCB). The UOCB was created on 19 May 2003, to promote, co-ordinate, centralise and decentralise the dispersed organic activity in the state (<http://www.organicuttaranchal.org>). UOCB could facilitate sale of certified organic products US\$463,746 during 2003-06 (Subrahmanyeswari & Chander 2007). Though the activities at the moment mainly focus on organic crop production but the interest in organic livestock production is also increasing (Subrahmanyeswari, 2007). Gender relations with respect to farming activities are more or less same worldwide in terms of the way farm work is organised, the way assets such as land, livestock, labour, seeds and machinery are managed and farm decision-making is done. Therefore, in view of the women's significant role in livestock production, role of gender was studied among organic farmers, who were in the process of conversion to livestock farming in the North Indian state- Uttarakhand.

### **Research methodology**

Exploratory research design with multistage random sampling procedure was adopted to select the respondents for the study in Uttarakhand, one of the Northern states of India. At the time of the study in Uttarakhand state, a total of 4,459 organic farmers were registered with UOCB, out of which a sample of 180 farmers were selected randomly from a total of 18 villages, nine blocks from Dehradun, Nainital and Tehri Garhwal districts. Interestingly women farmers represented 38% (69) of the total sample studied. Care has been taken such that the sample represents diverse geographical areas of the state i.e. 110 farmers representing hill area and 70 representing plain area. An interview schedule was developed consisting questions seeking information on gender dimensions. The schedule was modified and validated by pre-

testing it on a similar population at different location. The selected farmers were personally visited by the researcher during 2006-07 to interview and observe their farm production activities, role and functions of both men and women in terms of attending the livestock activities, their participation in decision-making, the ownership and control over agricultural and livestock assets including income and training received in the matters related to organic agriculture. Statistical analysis was done and data was presented on frequency basis.

## Results

Over 75% of the respondents were having 3-6 years of experience in organic farming, followed by 15 per cent of farmers having 6-8 years of experience in organic farming (Table 1). Out of the total 180 households studied, land ownership was with male members (80.56%), while only 19.74 per cent of female respondents had land ownerships in their names (Table 2). Ownership of livestock in majority of cases was with both men and women (48.82%), as against with women in 33.33 per cent households. Management of income from agriculture as well as livestock was jointly by both men and women (47.22%) followed by 30.56 per cent of women members of respective households (Tables 3). Management decisions (Table 4) were taken jointly by both men and women (44.55%) together, followed by women (40.90%), whereas, marketing decisions were taken by men (41.67%), followed by women alone (27.78%). Livestock feeding and health care related decisions were taken mostly by women members of the household (62.22%), followed by joint decisions by both men and women (15.56%). In general, women take the decisions on health care mostly (48.89%), followed by men (22.78%). Women (35%) performed most of the management activities, followed by joint performance of both men and women (27.78 %). Animal breeding activities were attended mostly by men (57.22%) followed by whole family as mentioned by 15.56 per cent of the respondents. Observing the animals for signs of heat and pregnancy was attended by both men and women, whereas, taking the animals for service, selection of breeds was done by men only.

Marketing of livestock products was attended mostly by women (48%) in hill area, whereas, in case of plain area farmers, it's by men mostly (49%). In general, men look after the crop management (62%) and marketing of agriculture produce (65%), whereas, compost application and processing of crop produce were attended mostly by both (36%) men and women together, followed by men in 33 per cent of the households.

**Table 1. Training attended in general (organic and conventional)**

Number (%) of organic farmers						
Area	Hill area (110)		Plain area (70)		Total (180)	
	M (71)	W (39)	M (40)	W (30)	M (111)	W (69)
Importance of organic farming	71 (100)	39 (100)	40 (100)	30 (100)	111 (100)	69 (100)
Compost making	71 (100)	39 (100)	40 (100)	30 (100)	111 (100)	69 (100)
Crop rotation	71 (100)	39 (100)	40 (100)	30 (100)	111 (100)	69 (100)
Integrated Pest Management	45 (63.4)	20 (51.3)	35 (87.5)	25 (83.3)	80 (72.1)	45 (65.2)
Livestock rearing and health management	31 (43.7)*	08 (20.5)	21 (52.5)	11 (36.7)	52 (46.9)**	19 (27.5)
Feeding practices of cattle	11 (15.5)	08 (20.5)	31 (77.5)*	16 (53.3)	44 (39.6)	24 (34.8)
Clean milk production practices	17 (23.9)	10 (25.6)	38 (95.0)	26 (86.7)	55 (49.6)	36 (52.2)

M=men; W=women, \*=significant at 5 % ; \*\*=significant at 1 %

**Table 2. Ownership pattern among the farmers**

Number (%) of organic farmers									
Area	Hill area (110)			Plain area (70)			Total (180)		
	M	W	Both	M	W	Both	M	W	Both
Land	90 (81.8)	20 (18.2)	--	54 (77.1)	16 (22.9)	--	145 (80.6)	35 (19.4)	--
Livestock	23 (20.9)	35 (31.8)	52 (47.3)	09 (12.9)	25 (35.7)	36 (51.4)	32 (17.8)	60 (33.3)	88 (48.9)
Control over income...									
... from crops	33 (30.0)	36 (32.7)	41 (37.3)	21 (30.0)	18 (25.7)	31 (44.3)	54 (30.0)	54 (30.0)	72 (40.0)
... from livestock	11	38	61	29	17	24	40	55	85

(10.0) (34.6) (55.5) (41.4) (24.3) (34.3) (22.2) (30.6) (47.2)

M=men; W=women

**Table 3. Division of labour among organic farmers in livestock farming activities.**

Area	Number (%) of organic farmers					Number (%) of organic farmers			
	Hill area (n=110)					Plain area (n=70)			
Activity	M	W	MW	WF	L	M	W	MW	WF
Management	31 (28.2)	40 (36.4)	34 (30.9)	05 (04.6)	0	17 (24.3)	23 (32.9)	16 (22.9)	14** (20.0)
Feeding	05 (04.6)	77** (70.0)	17 (15.5)	11 (10.0)	0	11* (15.7)	34 (48.6)	08 (11.4)	17** (24.3)
Breeding	61 (55.5)	05 (04.6)	13 (11.8)	18 (16.4)	09 (08.18)	42 (60.0)	10* (14.3)	04 (05.7)	10 (14.3)
Health care	19 (17.3)	67** (60.9)	24 (21.8)	00	00	22* (31.4)	21 (30.0)	16 (22.9)	03* (04.3)
Marketing	23 (20.9)	53** (48.2)	25* (22.7)	09 (08.2)	00	34** (48.6)	19 (27.1)	07 (10.0)	10 (14.3)
Grazing	11 (10.0)	09 (08.2)	11 (10.0)	17 (15.5)	62 (56.36)	07 (10.0)	06 (08.6)	11 (15.7)	12 (17.1)
Compost making	40* (36.4)	23 (20.9)	35 (31.8)	12 (10.9)	--	16 (22.9)	11 (15.7)	39** (55.7)	06 (08.6)
Crop management	69 (62.7)	11 (10.0)	30 (27.3)	--	--	43 (61.4)	11 (15.7)	16 (22.9)	--
Manure/compost application	31 (28.2)	24 (21.8)	45** (40.9)	10 (9.1)	--	29 (41.4)	09 (12.9)	11 (15.7)	21** (30.0)
Crop produce processing	20 (18.2)	35* (31.8)	46 (41.8)	09* (8.2)		40** (57.1)	11 (15.7)	19 (27.1)	--
Marketing of produce	68 (61.8)	11 (10.0)	16 (14.6)	15 (13.6)	--	49 (70.0)	05 (07.1)	11 (15.7)	05 (07.1)

\*=significant at 0.01 level of probability; \*\*=significant at 0.05 level of probability, M=men, W=women, MW=men & women, WF=whole family, L=Labour

**Table 4. Participation in decision-making.**

Area	Number (%) of organic farmers					Number (%) of organic farmers				
	Hill area (110)					Plain area (70)				
Activity	M	W	MW	WF	Ao	M	W	MW	WF	Ao
Management	16 (14.6)	45 (40.9)	49 (44.6)	00	0	19 (27.1)*	20 (28.6)	31 (44.3)	0	0
Feeding	12 (10.9)	78 (70.9)**	20 (18.2)	00	0	11 (15.7)	34 (48.6)	08 (11.4)	17 (24.3)	0
Breeding	61 (55.5)	23 (20.9)	13 (11.8)	13 (11.8)	0	42 (60.0)	10 (14.3)	14 (20.0)	04 (05.7)	0
Health care	19 (17.3)	67 (60.9)**	24 (21.8)	00	0	22 (31.4)*	21 (30.0)	16 (22.9)	11 (15.7)**	0
Marketing	41 (37.3)	31 (28.2)	29 (26.4)*	09 (08.2)	0	34 (30.9)	19 (27.1)	7 (10.0)	10 (14.3)	0
Crop rotation	55 (50.0)	31 (28.2)	24 (21.8)	00	0	27 (38.6)	19 (27.1)	24 (34.3)	0	0
Preparation & use of compost	69 (62.7)	11 (10.0)	30 (27.3)	--	--	43 (61.4)	11 (15.7)	16 (22.9)	--	--
Marketing of produce	45 (40.9)	24 (21.8)	31 (28.2)	10 (09.1)	--	29 (41.4)	09 (12.9)	21 (30.0)	11 (15.7)	--

\*=significant at 0.05 level of probability; \*\*=significant at 0.01 level of probability, M=men, W=women, MW=men & women, WF= whole family, Ao= any other

## Discussion

Gender has been defined by IFAD as “the socio-economic and evolving roles and functions of men and women as they relate to and complement each other within a specific socio-cultural and economic context”. Gender sensitisation has been an important component of the training imparted by UOCB to the organic farmers, which appeared to have some positive impacts in matters related to women’s involvement in activities out of their traditional, often invisible domains like cleaning of cattle sheds, processing of farm

produce and post harvest activities. The exposure visits organised by the UOCB for the organic farmers including ensuring good participation of female farmers in training programmes and visits might have resulted in self dignity and an enhanced self esteem among women farmers, who do most of the agricultural operations in India in general and mountainous regions in particular.

Indigenous women over the world have traditionally played a key role in biodiversity management and sustainable agriculture (Jiggins 1994; Shiva and Dankelman, 1992). Some indigenous women hold important roles in the preservation of biodiversity and specific forms of knowledge pertaining to biodiversity and sustainable agricultural practices. The present study revealed that most of the feeding and health care activities of livestock were attended by women members of the family in majority with the knowledge transferred to them since generations together. Although all household members are involved in livestock production, gender discrimination denies women access to resources, rights and services. Nevertheless, the potential benefits of gender equality have made the livestock sector a privileged entry point for gender mainstreaming. Moreover, Organic and sustainable farming has the potential to create new structures that actively work towards achieving women's empowerment and protecting the use of indigenous knowledge. The further analysis of gender relations in the division of labour, access to resources, production of crops and income from their sale is essential for sustainable investment programmes. To protect natural resources, rural women and men must be empowered to participate in decisions that affect their needs and vulnerabilities. Addressing the gender dimensions of natural resources management will help policy makers formulate more effective interventions for their conservation and sustainable use. The principles of organic agriculture especially the principles of care and fairness offers hope for gender equality, if implemented in true spirits.

## Conclusions

This study was not designed to compare the gender dimensions in conventional/traditional farms against organic farms, yet it was appreciable that women's formal involvement was being encouraged through appropriate policy interventions in the state of Uttarakhand. Men and women, both were involved in organic agriculture activities, but the final decisions in most of the cases rested with men only. This scenario commonly exists in case of conventional farms as well. An alternative orientation to organic farming has the potential to alter gender relations in agriculture, both by creating a labour process context in which women can more readily participate in farm production and management (Clement and Myles 1994) and by introducing and promoting alternative ways of thinking that are more consistent with gender equality. FAO (2009) has placed gender equality in access to resources, goods, services and decision-making among its key strategic objectives in agriculture and rural development. By creating social relations, gender equity aims at improving gender relations and gender roles and achieving gender equity. Development must encompass rural women's long-term needs and aspirations, their decision-making power, access to and control of critical resources such as land and their own labour. With this background, the authors conclude that organic farming has potential to promote gender equality and empowerment of women, which is very much required for socio-economic upliftment of women in developing countries in particular.

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