Perception of Attributes of Organic and Conventional Farming by Farmers in Andhra Pradesh

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Abstract

This study was conducted in three districts of Andhra Pradesh namely Warangal, Chittoor and East Godavari in the year 2009, to study the perception of attributes of organic and conventional farming by the respondent farmers. The findings of the study indicate that majority of the organic farmers perceived the initial cost, net profitability and consistency of profits of organic farming as high, it is a time taking process but derives multiple benefits. When compatibility of organic farming was studied it was found that, it is situationally, culturally and relationally compatible and is having cognitive, application and resource complexity. Further, it was also observed that majority of the organic farmers felt it as practicable, sustainable, results of organic farming as certain but not observable and as having low perceived risk. The conventional farmers perceived their farming as costly, net profitability and consistency of profits as irregular, a time taking process and deriving single benefit. In case of compatibility it was found that, conventional farmers felt it as situationally, culturally compatible and relationally independent and not having cognitive application and resource complexity. Further, it was also observed that majority of the conventional farmers perceived it as practicable, unsustainable, with uncertain results and high perceived risk.

India being the second most populous country in the world, agriculture and food security is the main concern. Agricultural production, especially food grain has increased to 241.57 MT in 2011(DAC, 2011) over the last few decades in

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India. This achievement is a contribution of the 'Green Revolution' which led to food self sufficiency in India. However, the spill over effects of the 'Green Revolution' resulted in challenges to sustainability of the soil and environment. Sustainable production at higher levels becomes possible only when the factors leading to the continued maintenance of soil health are adequately taken care of. The modern farming systems aim at maximizing production through the use of increased quantities of external inputs such as fertilizers and plant protection chemicals without due consideration to their ill effects. Consequently, the traditional agronomic practices such as green manuring, use of farm waste either as such or after composting and other soil ameliorative measures have vanished from the existing farming systems. This has resulted in a slow but steady decline in the productive and recuperative capacity of the soil.

In the era of globalization, WTO opened the opportunities for earning foreign exchange even in agricultural exports and emerging areas. Indian agriculture must become efficient, competitive, low cost and sustainable and the possible alternatives available to the farming community are organic farming and integrated use of organic and inorganic farming methods. Agricultural exports are mainly concentrating on the pesticide-free or chemical residue-free food, because of the increased health consciousness among the consumers. In this direction, agriculture nowadays is shifting from modern to organic farming. Organic agriculture system is based on ecological principles and applying ecological practices to maintain soil fertility to manage crop and animal health and to keep soil and water in good condition without the use of chemical inputs (Siddaraju and Rajendran, 2006). Keeping this in view, the present study was undertaken with an objective to study the perception of attributes of organic and conventional farming by the respondent farmers of Andhra Pradesh.

Methodology

An exploratory research design was followed to conduct the present study. The districts having the highest area under organic farming viz., Warangal, East Godavari and Chittoor of Andhra Pradesh were selected. Six mandals i.e. two from each district were selected for the study and again from each selected mandal two villages were considered for the study. Five organic and five conventional farmers from each selected village were selected following the stratified random sampling method, making it a total of 120 respondents.

The interview schedule comprised of 5 groups of attributes of innovations viz., relative advantage, compatibility, complexity, practicability and predictability. Each of these variables were measured with the help of five dichotomous statements out of which one was positive and the other negative. Thus on the whole, these 25 sub heads of attributes were measured with the help of 50 statements out of which 25 were positive and 25 were negative. The farmers were asked to express their response on specified dichotomous response categories about each item in terms of their influence on adoption of organic farming practices. A score of two and one were given to the positive and negative statements, respectively. The results were expressed in the form of frequencies and percentages for each response category for the purpose of discussion.

Findings and Discussion

Relative advantage

It is clear from Table-1 that, the organic farmers perceived the relative advantage of organic farming in terms of initial cost as expensive (75%), net profits as exorbitant (65%), and consistency of profits as regular (65%). Adoption of organic farming was perceived as a time taking process (60%) and deriving multiple benefits (100%). The conventional farmers perceived the relative advantage of their farming in terms of initial cost as expensive (83.33%), net profits as exorbitant (51.67%), and consistency of profits as irregular (71.67%) and adoption of conventional farming as time taking (66.67%) and deriving single benefit (83.33%) only.

Perception of organic farmers about the initial cost of organic farming was high because, adoption of organic farming involves certain initial investments. Moreover due to lack of skills in preparation of organic inputs locally, they must be purchasing all the organic inputs from the market, which definitely increases their initial cost. Another factor might be that, conversion from conventional to organic farming, requires high level of bulky organic manure to compensate chemical fertilizers, in the initial stages of organic farming to stabilize the soil nutrient requirements i.e., farmers need to apply / use large quantities of organic manure but this dependency on organic manure decreases year by year and the soil becomes more fertile and stabilized Save (1992), Suja and Nayar (2006).

Table1: Distribution of Respondent farmers according to their perception about Relative Advantage of their Farming

S.No.	Relative advantage		Organic farmers N=60		Conventional farmers N=60	
			f	%	f	%
1	Initial cost	Cheap	15	25.00	10	16.67
		Expensive	45	75.00	50	83.33
2	Net profitability	Exorbitant	39	65.00	31	51.67
		Meager	21	35.00	29	48.33
3	Consistency of profits	Regular	39	65.00	17	28.33
		Irregular	21	35.00	43	71.67
4	Saving of time	Time saving	24	40.00	20	33.33
		Time taking	36	60.00	40	66.67
5	Multiple use potential	Multiple benefits	60	100.00	10	16.67
		Single benefit	00	00	50	83.33

However, there are certain practices in organic farming for which inputs can be prepared at the farmer's level in order to decrease the dependence on off-farm sources, for example: neem oil or Neem Seed Kernel Extract (NSKE) and neem cake can easily be prepared from the neem seeds available in the village, instead of purchasing them from outside. Likewise, there are some inputs namely composts, panchagavya, ganajeevamruth, egg aminosis etc that can be prepared and used at farmer's level to reduce the cost of production. Farmers must be educated on these aspects through training programmes and well organized demonstrations. In Warangal, East Godavari and Chittoor districts, non Governmental organizations namely MARI, PSS, SYO, CROPS, CSA, DDS, Byrajju Foundation, WORD, RIPE and RICE actively involved in promotion of organic farming were also providing extensive training to the farmers on various aspects of organic farming like production, protection and certification aspects. Eighty three per cent of conventional farmers perceived initial cost of conventional farming as expensive. More investments on hybrid seeds,

fertilizers, pesticides and moreover, lack of skills in proper utilization and timely application of crop inputs, shortage or non availability and high prices of pesticides and fertilizers in recent days might have resulted in an expensive and risky affair, as most of the time, conventional farmers depend on off-farm sources for supply of nutrients and pest management. This increases the expenses exorbitantly.

Majority of the organic farmers perceived net profitability of organic farming as exorbitant (65%). This might be due to their access to natural resources, organic inputs, and their first hand experience and confidence in the profitability of organic farming over the conventional one. The high literacy rate, high to medium level of access to market, scientific orientation, innovativeness and higher rate of utilization of sources of information and interaction with other organic farmers might also be the reason, for this kind of perception. In Warangal and Chittoor districts, the benefits derived by the farmers from the established organic markets - they are able to receive price premiums on their organic produce and able to tap the demand existing in the present market-may be also one of the contributing factors for their perception of net profitability of organic farming as exorbitant. This finding was in line with that of Mendoza (2004), Thakur and Sharma (2005).

Thirty five per cent of organic farmers of the total sample perceived net profitability of organic farming as meager. Hence, great efforts are required on the part of the institutions / agencies involved in promotion, to improve the knowledge and skills of farmers about organic farming, especially regarding soil fertility management, diagnosis and contamination control. A little more than half the conventional farmers perceived net profitability of their farming as exorbitant because of the fact that majority of them had high to medium level of access to market and might have also recorded higher yields. Forty eight per cent of conventional farmers perceived net profitability of conventional farming as meager. Indiscriminate use of chemical pesticides to control various insect pests and diseases over the years has destroyed many naturally occurring effective biological control agents and resistance of pests to chemical pesticides is also on the rise. The occurrence of multi nutrient deficiencies and overall decline in the productive capacity of the soil under intensive cultivation has been widely reported. Several such concerns and problems posed by

conventional farming have made farmers restless. On the other hand, lack of skills and knowledge about the proper and timely application of crop inputs, unfavourable weather conditions, poor soil management and pest out-breaks may be the reasons for such results. Hence, concerted efforts are required on the part of the extension agencies to improve the knowledge and skills of farmers, especially regarding soil fertility management, diagnosis and new technologies / innovations in agriculture.

Majority of organic farmers (65%) felt that, the consistency of profits due to adoption of organic farming was regular The reason might be that in organic farming emphasis was more on yield optimization rather than on yield maximization. It was observed that, initially there was reduction in yield of crops until the fertility was resumed to a rich status and organic yields were about one-third lower during the first three years of cultivation in comparison to conventional farming. Over time, the organic systems produced higher yields, especially under drought conditions. The reason is that wind and water erosion degrades the soil on conventional farms while the soil on the organic farms steadily improves in organic matter, moisture, microbial activity and other soil quality indicators (Nanavati and Geispur, 2008). When consistency of profits in conventional farming was considered, majority (71.67%) of the conventional farmers of all the three districts felt it as irregular. The reason might be that in conventional farming, emphasis was more on yield maximization with less emphasis on sustainability or certainty of results. 'Green Revolution' in the late sixties gave tremendous boost to agricultural production in India. During the era of the 'Green Revolution', introduction of high yielding varieties, extension of irrigated lands, use of high analysis NPK fertilizers and increase in cropping intensity propelled towards self-sufficiency in food production. However, this increase in production has slowed down and in some cases there are indications of decline in productivity. It was observed that initially there was hike in yield of crops; later consistency in yields declined drastically leading to increased cost of cultivation and reduction in output (Subba Rao 2005).

In a study conducted in Adilabad district of Andhra Pradesh, it was reported that in a permanent organic farming plot of one acre, there has been gradual increase of yield levels of soybean and desi cotton crops year to year and in the fourth year i.e. 2007-08, soy bean yield was recorded as 22.5 q/ha as against 25

q/ha in inorganic farming and desi cotton yield was also recorded as 10 q/ha against 12 q/ha of check plot (Laxman 2008). From the above research literature, it can be observed that the consistency of profits under organic farming was regular and this encouraged the farmers to go for organic farming. Shifting from conventional to organic can reduce 20 per cent cost of cultivation with enhanced yield levels matching the gross returns from conventional farming (Ravinder Raju *et al* 2008).

Regarding saving of time, sixty per cent of the organic farmers felt that organic farming was a time taking process. The probable reason might be that the organic system takes three years to convert the farm into organic and also to get optimized yields and majority of the organic inputs are locally prepared unlike ready to use chemical pesticides and fertilizers in conventional farming. Hence the organic farmers should be given rigorous training regarding the preparation and application of organic inputs in order to improve their skills. The same finding was reported by Ranganatha *et al.* (2001).

When multiple use potential of organic farming was considered, cent per cent of organic farmers perceived that, organic farming derived multiple benefits. These include improved soil fertility and water quality, prevention of soil erosion, preservation of natural and agro-biodiversity, generation of rural employment, corresponding lower urban migration, improved household nutrition and local food security, reduced dependence on external inputs and price premiums etc. The reasons could also be the literacy and awareness level of the farmers about the potential benefits of organic farming over the conventional one and their farming experience in conventional farming and exposure to information sources. It was also emphasized that, due to adoption of organic farming, the soil on the organic farms steadily improves in organic matter, moisture, microbial activity and other soil quality indicators and organic farming is the simplest method of farming in synergy with nature because it is free from complexities which may arise from dependence on external inputs.

Regarding saving of time, sixty seven per cent of the conventional farmers felt that conventional farming was time taking and derives single benefit. This might also be due to the lack of understanding and skills in following the recommended practices; hence all the farmers and also agricultural labourers

should be given rigorous training on recommended package of practices, proper utilization of crop inputs and new methodologies in crop management.

Compatibility

The results in Table 2 reveal that, 50 per cent of organic farmers perceived their farming as feasible to adopt, acceptable (55.00%), necessary (65.00%), gives social recognition (88.33%), with relational compatibility as dependent (63.33%). In case of conventional farmers, the results reveal that, 53.33 per cent of conventional farmers perceived their farming as feasible to adopt, acceptable (65.00%), necessary (75.00%), gives no social recognition on adoption (71.67%), and independent (81.67%) respectively.

Table 2: Distribution of respondent farmers according to their Perception about Compatibility of their Farming

S.No.	Compatibility		Organic farmers N = 60		Conventional farmers N = 60	
			f	%	f	%
1	Situational compatibility	Feasible	30	50.00	32	53.33
		Not feasible	30	50.00	28	46.67
2	Cultural compatibility	Acceptable	33	55.00	39	65.00
		Non acceptable	27	45.00	21	35.00
3	Physical compatibility	Necessary	39	65.00	49	75.00
		Unnecessary	21	35.00	15	25.00
4	Social compatibility	Recognition	53	88.33	17	28.33
		No recognition	07	11.67	43	71.67
5	Relational compatibility	Dependent	38	63.33	11	18.33
		Independent	22	36.67	49	81.67

The results reveal that, majority of Warangal and Chittoor farmers perceived that, organic farming was situationally feasible, whereas East Godavari farmers felt that, organic farming was situationally not feasible. The reason for the difference in the perception of situational compatibility among the farmers might be that, the availability of labour and inputs was not a constraint for Warangal

and Chittoor farmers, but for the rest of farmers these turned out to be a constraint, as a result of which they might have felt that organic farming was not feasible. In case of Warangal and Chittoor, majority of farmers were marginal and small and the family itself took care of the majority of the farm activities. On the contrary, most of the farmers in East Godavari were medium to large, whose dependence on labour was high for carrying out the farm activities. Compatibility of conventional farming was perceived as situationally feasible to adopt, by fifty three per cent of the conventional farmers, which might be due to the ease of availability of crop inputs like fertilizers, pesticides and labour, easy method of application and ready to use nature of the crop inputs. East Godavari farmers felt that, conventional farming was situationally not feasible. The reason for difference in the perception of situational compatibility among the farmers could be the availability of labour and continuous failure of crops due to pest outbreaks and weather problems.

Fifty five per cent of the organic farmers, except in Warangal district, perceived that organic farming was culturally non-acceptable?? i.e. not compatible with the previously introduced ideas. It was quite logical to get such a result in the present situation in the selected districts, because the farmers, since several years, were habituated to use synthetic fertilizers and pesticides in order to reap maximized yields. Since it becomes difficult for the farmers to shift suddenly from conventional to organic which costs much for them, they perceived organic farming as culturally non-acceptable. However, some NGOs and Departmental agencies are educating the farmers on these aspects and motivating them to shift to organic farming which is a simple and sustainable means of conservation of nature. In case of Warangal however, district organic farmers felt that organic farming was culturally acceptable. This might be due to the fact that the sample selected for the study hails from the tribal community, which was less or not at all exposed to synthetic fertilizers and pesticides. Hence they might have felt it as acceptable keeping in view their conditions. Sixty five per cent of the conventional farmers perceived that, conventional farming was culturally acceptable i.e. they are compatible with the previously introduced ideas.

With reference to physical compatibility, sixty five per cent of the organic farmers perceived organic farming as necessary. The reason could be that since

organic farmers due to their higher education had better awareness and knowledge about the ill effects of conventional farming and the possibility of achieving sustainable yields in organic farming in the long run this might have made them perceive organic farming as necessary and the need of the hour. The findings were in line with that of Vasantha (2002).

Majority of the organic farmers of the three districts felt that organic farming gave them social recognition, and indicated that adoption of organic farming not only gave them recognition in their villages, but also helped to protect their lands, free them from debts, conserve nature, helped to access international markets, helped to realize price premiums, helped them in optimum utilization of the locally available resources. They also felt that organic farming affects the whole community and creates a significantly healthier working and living environment for the farmers, their families and livestock, as well as the local wild life. These results might be due to the fact that, in Warangal and Chittoor districts, organic farmers were realizing the premium prices through established organic markets. In East Godavari also, farmers' association was actively involved in marketing their organic paddy directly to the consumers under the trade name of "SOFT".

In case of relational compatibility, 63.33 per cent of the organic farmers perceived organic farming as dependent. The result was of no surprise because organic farming practices largely depend among themselves and on outside practices, for example: if adjacent or other farmers in the village spray / use pesticides indiscriminately, the biological control agents would perish. This will in turn affect organic farming standards. Through organic agriculture, farmers learn healthy, sustainable farming practices and are regaining the wisdom of their agricultural heritage. Organic farming enriches the soil, season by season thereby increasing the long term yield, nutrient value and potency of the crops. However, proper understanding and application of organic farming practices require training and supervision for sustainable production methods. Majority of the conventional farmers perceived that conventional farming was culturally acceptable i.e. they are compatible with the previously introduced ideas and farmers over several years, were habituated to using synthetic fertilizers and pesticides in order to reap maximum yields. With reference to physical compatibility, majority of the conventional farmers perceived conventional

farming as necessary, gave no social recognition and conventional farming was independent. This might be because conventional farming practices do not depend among themselves and on outside practices.

Complexity

It can be observed from Table 3 that, majority (58.33%) of organic farmers perceived organic farming as cognitive complex, application complex (63.33%), resource complex (51.67%), reversible (71.67%) and as labour intensive (56.67%). On the other hand, conventional farmers perceived their farming as simple (58.33%), adaptable (91.67%), abundant (78.33%), reversible (78.33%) and labour intensive (71.67%). These results directly reflect the input accessibility and access to market of conventional farmers which in turn depends on their economic status.

Table 3: Distribution of respondent farmers according to their Perception about Complexity of their Farming

S.No.	Complexity		Organic farmers N=60		Conventional farmers N=60	
			f	%	f	%
1	Cognitive complexity	Simple	25	41.67	35	58.33
		Complex	35	58.33	25	41.67
2	Application complexity	Adaptable	22	36.67	55	91.67
		Non adaptable	38	63.33	05	08.33
3	Resource complexity	Abundant	29	48.33	47	78.33
		Scarce	31	51.67	13	21.67
4	Reversibility	Reversible	43	71.67	47	78.33
		Irreversible	17	28.33	13	21.67
5	Labour efficiency	Saves labour	26	43.33	17	28.33
		Labour intensive	34	56.67	43	71.67

Slightly more than half of the organic farmers perceived organic farming as cognitive complex and application complex. Their lack of knowledge on crop production standards and skills in application of the organic production practices and low accessibility to natural resources and inputs might be the reason for this trend. Organic farming has twin objectives of the system being sustainable and environmentally sensitive. In order to achieve these two goals, it has developed some rules and standards, which must be strictly adhered to; there is very little

scope for change and flexibility. Organic farming thus does not require best use of options available, but the best use of options that have been approved. These options are usually more complex and less effective than the conventional ones. For example crop rotation and varieties selected should suit to local conditions and should be having potential to sufficiently balance the crop nitrogen demand and requirements for other nutrients like phosphorus, sulphur and micronutrients can be met with local, preferably renewable resources. Organic agriculture was therefore often termed as "knowledge based rather than input based agriculture". Furthermore, organic farms aim to optimize the crop productivity under a given set of farm conditions. This was in contrast with the concept of yield maximization through the intensive use of agro-chemicals, irrigation water and other off farm inputs (Subba Rao *et al.*, 2005).

With reference to resource complexity, majority of organic farmers felt that, organic farming resources are scarce. These results directly reflected the input accessibility and level of access to natural resources of organic farmers which in turn depends on their economic status. It was emphasized that organic farming was often understood as a form of agriculture with use of only organic inputs for the supply of nutrients and management of pest and diseases. In fact it was a specialized form of diversified agriculture wherein problems of farming are managed using local resources alone. The term organic does not explicitly mean the type of inputs used; rather it refers to the concept of farm as an organism. Often organic agriculture has been criticized on the grounds that with organic inputs alone farm productivity and profitability might not be improved because the availability of organic sources was highly restricted (Chhonkar, 2003). True organic resource availability was limited but under conditions of soil constraints and climate vagaries, use of organic inputs has proved more profitable as compared to agro-chemicals.

A glance at the results on reversibility indicates that majority of the organic farmers felt that, effects of organic farming are reversible. This was might be due to the fact that in organic farming, continuous supervision and monitoring of nutritional disorders, pest and diseases is necessary, in order to keep them below the economic threshold levels, because in due course of time, organic inputs used lose their effectiveness. For example when neem oil is applied to the field it controls the pest but in due course of time, effectiveness decreases and if the

next spraying is not taken up as per recommendations, the pest level increases. Regarding reversibility, seventy eight per cent of conventional farmers perceived the effects of conventional farming as reversible. This might be due to the fact that in conventional farming continuous supervision and monitoring of nutritional disorders, pest and diseases was necessary in order to keep them below the threshold levels.

Regarding labour efficiency, fifty six per cent of the organic farmers except in Warangal felt that, organic farming consumes more labour. Most of the organic farming practices like composting, preparation of bio-repellants, hand weeding, harvesting and processing separately for organic products, labeling, especially certification and record keeping are labour intensive but farmers need to be educated about cost-benefit analysis of organic farming by extension agencies. In case of Warangal, however, it might be due to the fact that most of the farmers depend on family labour and their lands, conditions were less exposed to the chemicals, hence pest and diseases problems are also less but other practices like labeling, record keeping, certification etc were laborious works for them. NGOs and Government agencies or service providers in these areas should employ field assistants to maintain the farm records of organic farmers, which may reduce the burden to some extent and also help farmers to get timely and needy information. The findings were in tune with that of Jain and Bhattacharya (2000), Buck *et al.* (2001) and Soam (2001). With reference to labour efficiency in case of conventional farming, it was perceived as labour intensive by seventy one per cent of conventional farmers.

Practicability

It is observed from Table 4 that, majority of organic farmers perceived practicability of organic farming as diffusible (81.67%), invisible (63.33%), demonstrable (83.33%), trialable (86.67%) with reliable point of origin (76.67%) and conventional farmers felt their farming as diffusible (83.33%), visible (90.00%), demonstrable (88.33%), and trialable (91.67%) with reliable point of origin (85.00%).

Table 4: Distribution of respondent farmers according to their Perception about Practicability of their Farming

S.No.	Practicability		Organic farmers N=60		Conventional farmers N=60	
			f	%	f	%
1	Diffusibility	Diffusible	49	81.67	50	83.33
		Non diffusible	11	18.33	10	16.67
2	Visibility	Visible	22	36.67	54	90.00
		Invisible	38	63.33	06	10.00
3	Demonstrability	Demonstrable	50	83.33	53	88.33
		Not demonstrable	10	16.67	07	11.67
4	Trialability	Trialable	52	86.67	55	91.67
		Non trialable	08	13.33	05	08.33
5	Point of origin	Reliable	46	76.67	51	85.00
		Un reliable	14	23.33	09	15.00

It was quite logical that such a result appeared in the study because organic farming practices and their results are quite diffusible, communicable, from one farmer to another by means of conducting demonstration / study tours/ field vists/ field days. Since the point of origin of organic farming was considered, the importance of organic manures in agriculture has been known since ancient times and finds mention in ancient Hindu religious scriptures (Rig Veda 1, 161, 10, 2500-1500 BC; Atharva Veda II 8.3). Even the Holy Quran mentions that at least one-third of what you take out from soil must be returned to it, implying recycling of post-harvest residue (Chhonkar 2003). Organic farming concept is not new and our ancestors were practicing natural farming since time immemorial. Hence farmers might have felt the the source of origin as reliable.

Conventional farming and their results are quite visible to others, can be demonstrated easily and can be tried on a small piece of land. The importance and concept of conventional farming is not new and with the Green Revolution and developments during the last century due to advancement of science, there is a general acceptance that chemical based farming can be the best option for enhancing food production. Hence farmers might have felt that the source of origin was reliable.

Predictability

It is evident from Table 5 that regarding predictability, organic farmers felt that organic farming was sustainable (91.67%), results were observable (51.67%), certain in nature (91.67%), perceived risk was low (56.67%) and it was a time taking process (76.67%). Predictability of conventional farming was perceived by the majority of the conventional farmers as unsustainable (83.33%), results were observable (50.00%), uncertain in nature (80.00%), perceived risk was high (58.33%) and it was a time taking process (76.67%).

Table 5: Distribution of respondent farmers according to their Perception about Predictability of their Farming

S.No.	Predictability		Organic farmers N = 60		Conventional farmers N = 60	
			f	%	f	%
1	Sustainability	Sustainable	55	91.67	10	16.67
		Unsustainable	05	08.33	50	83.33
2	Observability of results	Observable	29	48.33	30	50.00
		Not observable	31	51.67	30	50.00
3	Certainty of results	Certain	55	91.67	12	20.00
		Uncertain	05	08.33	48	80.00
4	Perceived risk	High	26	43.33	35	58.33
		Low	34	56.67	25	41.67
5	Immediacy of the result	Immediate	14	23.33	14	23.33
		Time taking	46	76.67	46	76.67

Majority perceived organic farming as sustainable. This might be due to the fact that organic farming systems adopt management options with the primary aim of developing the whole farm like a living organism with balanced growth in both crops and livestock holdings. Thus the nutrient cycle was closed as far as possible. Only the nutrients in the form of food were exported out of the farm. It was therefore, considered as more environmental friendly and sustainable than the conventional system. Farm conversion from high input chemical based system to organic system was designed after undertaking a constraint analysis for the farm with the primary aim to take advantage of local conditions and their

interaction with farm activities, climate, soil and environment so as to achieve as far as possible, closed nutrient cycles with less dependence on off-farm inputs. As far as possible implies that the only nutrients leaving the farm unit are those for human consumption.

In case of observability of results of organic farming, majority of organic farmers of Warangal and Chittoor felt as observable while East Godavari organic farmers felt as not observable and they also perceived that organic farming results are certain and involve low risk but it was a time taking process i.e. it takes minimum of three years to get the soil fertility stabilized and to reap the fruits of organic farming. Hence the organic farmers felt that in organic farming, immediacy of results was a time taking process. This perception might be due to the fact that, the results in organic farming were not clearly visible and tangible as organic farming was a time taking process though long lasting. The findings were in consonance with that of Walz (2004) and Navadkar *et al.* (2004).

The perception of conventional farmers may be due to the fact that, conventional farming systems adopt management options with the primary aim to maximize yields, rather than conservation of resources and thus it was therefore, considered as more farmer friendly but unsustainable than organic system. Farm management in conventional system was not designed / planned properly and it ignored the constraints prevailing on and off the farm and their interaction with farm activities, climate, soil, inputs available and the environment and they are only concentrating on the primary aim of taking advantage by maximizing yields at any cost. Thus it was resulting in unsustainable and uncertain results and it also involved greater risk. There is ample evidence which show that agro-chemical based high input agriculture is not sustainable in the long run due to gradual decline in factor productivity with adverse impact on soil health and quality (Stockdale, 2000).

From the above discussion, it can be concluded that, farmers are realizing the importance of organic farming but having difficulty in getting quality organic inputs as well as in marketing of organic produce with premium prices in some parts of the country. Labour intensive nature is another factor, which slows down adoption of organic farming. The linkage between the produce and the market was not very strong in all areas mainly because of mandatory requirement of certification, which was a very costly as well as a cumbersome

process. Location specific and holistic research is the need of the hour to enhance productivity of organic farming. Major work is required in the area of promotional policies for organic farming. Most of the policies and programmes still support chemical farming, mainly the subsidies, that need to be balanced (Sharma 2005).

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