

Study on attitudes and perceptions of organic and non-organic coconut growers towards organic coconut farming

Estudio sobre la actitud y percepción hacia el cultivo orgánico en los productores de coco orgánico y no orgánico

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SUMMARY

Organic farming is gaining popularity all over the world, as it can diversify agricultural production systems towards attaining improved productivity, farm income and food, as well as environmental safety. Despite the global awareness of environmental degradation and climatic change that could result from the continuous practice of inorganic farming, many coconut growers in Sri Lanka are still producing coconut inorganically. Coconut growers' attitudes and perceptions are the major factors that lead to the adoption of organic farming. Therefore, the aim of this study was to determine the important influencing factors for adoption of organic coconut farming. The theoretical framework for the study was developed based on the Theory of Planned Behavior. The data were collected from 102 organic growers and 76 non-organic growers. The results showed that non-organic growers did not have strong motivation to practice organic farming as they were of the view that yields are low, even though organic coconuts have a slightly higher price. Furthermore, they were reluctant to shift from chemical fertilizers and pesticides as they have been using them for a long period of time. Conversely, organic growers practice organic farming mainly because of the marketing assistance and inputs such as organic fertilizer and technical knowledge provided by the Serandipol Company, and also their favorable attitudes towards the environment. Knowledge about organic farming and extension worker contacts greatly influence motivation towards adopting organic farming. Therefore, participatory extension programs and better extension approaches such as farmer field schools could be used to change the attitude, knowledge and skills of growers towards organic farming. Further involvement of a third party such as the government, an NGO or a private company to assist organic growers would also increase the adoptability rate of organic farming.

Key words: organic farming, perception, attitude.

RESUMEN

La agricultura orgánica está ganando popularidad en todo el mundo, pues posibilita la diversificación de los sistemas agrícolas productivos, una mayor rentabilidad, la seguridad alimentaria y el cuidado del medioambiente. Pese a la mayor preocupación por la sustentabilidad ambiental y el cambio climático, algunos productores de Sri Lanka continúan cultivando coco con métodos tradicionales que afectan el medioambiente. No obstante, algunos productores perciben la importancia de la sustentabilidad que resulta en una actitud favorable para la adopción de técnicas vinculadas a la agricultura orgánica. El objetivo de este estudio fue determinar los factores que influyen en la adopción de sistemas para la producción de coco orgánico. El estudio fue desarrollado en base a la Teoría de la Conducta Planificada. Los datos fueron recogidos a partir de 102 agricultores orgánicos y 76 productores no orgánicos. Los resultados sugieren que los productores no orgánicos no están motivados para practicar la agricultura ecológica, debido a los bajos rendimientos, a pesar de que el coco orgánico tiene un precio ligeramente superior. Además, no están dispuestos a cambiar los fertilizantes químicos y pesticidas con los que cultivan tradicionalmente. Los productores con una actitud favorable al cuidado del medioambiente desarrollan la agricultura con el apoyo técnico de la Compañía Serandipol que facilita la compra de insumos orgánicos y presta asesoría para la comercialización de sus productos. La transferencia de conocimiento para la agricultura sustentable mediante programas de extensión agrícola influye positivamente en la adopción de sistemas de producción ecológicos. Los programas de extensión participativos y las escuelas agrícolas focalizadas en el cuidado del medioambiente que entreguen mayores conocimientos para el manejo de la agricultura orgánica mejora la actitud del productor hacia los sistemas sustentables. La participación activa de programas gubernamentales, una ONG o una empresa privada para apoyar a los productores orgánicos genera un aumento en la tasa de adopción de la agricultura ecológica.

Palabras clave: agricultura ecológica, extensión agrícola, sostenibilidad.

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Introduction

Organic agriculture is developing rapidly and at least countries produce organic food commercially (Reddy, 2010). As a result, there is enormous potential in practicing organic farming in coconut growing lands, because organic agriculture is productive and sustainable (Reganold *et al.*, 1993; Letourneau and Goldstein, 2001; Mader *et al.*, 2002). About 20.6% of the total arable lands of Sri Lanka are utilized for coconut cultivation, covering an extent of about 394,837 ha. The main coconut growing areas are concentrated in the Puttalam, Kurunegala and Gampaha districts, which form the coconut triangle. These areas contribute 61% of the total coconut plantations; additionally 34% are in Kurunegala, 12% in Puttalam and 11% in Gampaha districts (Department of Census and Statistics, 2002).

The most popularly accepted definition of organic farming is; "Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity". This is accomplished by using wherever possible agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system (FAO, 1999). Organic cultivation is attracting farmers the world over due to its various advantages over modern agricultural practices. Essentially it is a farming system which supports and strengthens biological processes without recourse to inorganic remedies such as chemicals or genetically modified organisms (Reddy, 2010).

The major goal of organic farming is sustainable production of quality food with little or no effect on the environment. This goal has not been fully achieved by current agricultural practices, i.e. inorganic farming, hence the need to encourage organic farming which is capable of providing solutions to the current agricultural problems and help to achieve optimal production of quality food sustainably (IFOAM, 2005). Despite the global awareness of environmental degradation and climatic change that could result from the continuous practice of inorganic farming and the threats it poses to sustainable agricultural production, many coconut growers in Sri Lanka are producing coconut inorganically. Coconut growers' attitudes and perceptions are among the major factors that lead them to adopt organic coconut farming.

Therefore, the objective of this study is to determine the important influencing factors for adoption of organic coconut farming and compare the perceptions of growers who have and have not adopted organic coconut farming.

Materials and Methods

Behavior of an individual

According to Ajzen and Fishbein (1980), the behavior of an individual is basically determined by two factors; one is the individual's nature and the other reflects perceived social pressure. The individual factor is the individual's positive or negative evaluation of performing the behavior. Since it deals with personal feelings, this factor is termed the "attitude towards the behavior" (Ajzen and Fishbein 1980). The other factor is the individual's perception of social pressure put on him/her to perform or not perform the behavior. Since it deals with perceived prescription, this factor is termed the "subjective norm" (Ajzen and Fishbein, 1980). Generally, people will intend to perform a behavior when they both have a favorable evaluation of the behavior and they believe that a significant number of other people wish they would do it. Considering these arguments, Ajzen and Fishbein developed the Theory of Reasoned Action (TRA) in 1980. This theory assumes that people are normally quite rational, in that they make systematic use of available information, consider the implications of their actions, and thus behave in a sensible manner. TRA argues that behavior is best predicted by a person's intentions which are in turn affected by his/her attitude and perceived social pressure. Thus the TRA provided a theoretical framework for examining the influence of attitudes and goals on volitional behaviors (Willock *et al.* 1999).

Although the TRA has been successful in predicting and understanding many behaviors, it fails to predict behavior which is not entirely under individual volitional control. Thus the TRA restricts itself to volitional behaviors; skills, resources or opportunities not freely available are not considered to be within the domain of the TRA or are likely to be poorly predicted by the TRA (Fishbein, 1993). Hence the Theory of Planned Behavior (TBP) was developed to improve the TRA. The extension called the perceived behavioral control was added as an extra construct to the TRA to reflect any

constructing or encouraging factors that may affect an attempted behavior being carried out (Beedell and Rehman, 2000). The TPB states that a person's behavior results from his/her goals and intentions, attitudes, perceived behavioral control and social norms (Bergevoté *et al.* 2004).

Attitude is determined by the beliefs that are salient or important to a person. Attitudes are formed by what an individual perceives to be true about the attitude-object. This perception may or may not be based upon information and knowledge and an emotional reaction towards the object. Many beliefs and values may underpin an object (Willock *et al.*, 1999). Attitude simply refers to "a person's evaluation of any psychological object". These evaluation judgments are represented as items of knowledge, which are based on three general classes of information; cognitive information, emotional information and information about past behavior (Allen *et al.*, 2003). The beliefs underlying an individual's social pressure are termed normative beliefs and represent the perception of the preferences of 'a significant number of others' about whether one should perform the behavior (Chetsumon, 2005). The third factor added to the TRA is an individual's perceived control over performance of a behavior. This factor is termed "Perceived Behavioral Control"; it refers to the perception of the ease or difficulty of performing the behavior.

Theoretical framework

TPB was used to develop the theoretical framework of this study as shown in Figure 1.

According to the theoretical framework, a grower's behavior is guided by three kinds of considerations; attitude towards organic farming, social factor and control factor (constraining or encouraging factors).

Attitude towards organic farming

Knowledge about organic farming, environmental aspects and personal characteristics are the factors which influence a grower's belief and contribute toward formation of behavioral beliefs for organic farming attitudes.

Social factor (Social pressure)

Influence of the Coconut Development Officer/ Extension worker forms the normative beliefs for the social factor.

Control factor

There are beliefs about the presence of factors that may further or hinder performance of a behavior. The framework assumes that behaviors are not within the grower's control. Marketing aspects and benefit and cost aspects contribute to the formation of control beliefs.

Study area and sampling method

The target population for the study consisted of organic coconut growers and non-organic coconut growers in the coconut triangle of Sri Lanka (Kurunegala, Gampaha and Puttalm districts).

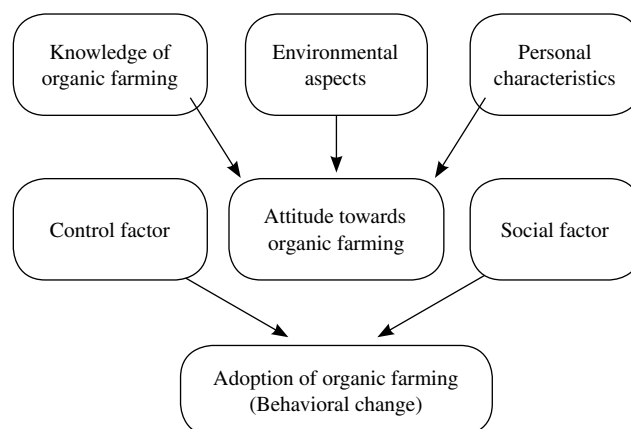


Figure 1. Theoretical framework of factors influencing coconut grower's organic farming attitudes and behavior.

The sample frame for organic coconut growers was obtained from the Serandipol Company, which engages in organic coconut cultivation in the coconut triangle. The Serandipol Company provides inputs such as organic fertilizer and technology to organic coconut growers and at the same time purchases organic coconuts from the growers at a relatively higher price.

The sample frame for the non-organic coconut growers was obtained from growers who have attended a training workshop conducted by Coconut Research Institute of Sri Lanka, which was composed of coconut growers from the coconut triangle.

Random selection was used to collect data from the two groups. Data were collected through face-to-face interviews. Finally, 76 and 102 questionnaires were properly answered by non-organic and organic coconut growers, respectively. Therefore, the total sample size was 178.

Data collection and analysis

The data were collected using a structured questionnaire consisting of five main aspects of organic coconut farming namely; attitudes, knowledge, environment, marketing and benefits and cost. Questions related to the above five aspects were assessed based on a five point Likert scale and the background variables were collected from the open-ended questions. The responses were recorded as Strongly Agreed, Agreed, Undecided, Disagreed, Strongly Disagreed, which were 5, 4, 3, 2, and 1, (Likert, 1932). The data was collected between June, 2012 and September, 2012. Data were analyzed with the SPSS software package. The socioeconomic data were analyzed using tabular analysis. The relationships among dependent variables and independent variables were analyzed by linear regression and binary logistic regression.

The perception differences between growers who have and have not adopted organic coconut farming were analyzed using the Mann-Whitney U test and Spearman Rank correlation test.

Results and Discussion

Demographic Characteristics

The comparison between demographic characters of non-organic and organic growers is shown in Table 1. The average age of growers who engaged in non-organic coconut farming was 40 years while for organic farming it was 54. Non-organic growers had higher education than organic growers. Most of the interviewees were male growers in both groups; 93% and 91.5% male growers in the non-organic and organic groups, respectively. In terms of time spent on farming, the majority of growers were part-time farmers among the both organic and non-organic growers. The average farm size of organic growers was 31.29 ac., greater than for non-organic growers (17.36 ac.).

Reliability analysis

Some concepts or constructs were not perfectly measured by a single item. Therefore, reliability analysis was conducted to ensure that the measured concept or construct was adequate and reliable. A commonly used measure of reliability is internal consistency. The most widely used internal consistency measure is Cronbach's alpha. The generally agreed lower limit for Cronbach's alpha is 0.7, although it may decrease to 0.6 in exploratory research (Hair *et al.*, 1988). As exploratory research, Cronbach's alpha with 0.6 lower limit was used as a criterion in this analysis. Table 2 presents Cronbach's alpha of the variables in the model calculated by

Table 1. Demographic characteristics of the participants.

Characteristics	Non-organic (n = 76)	Organic (n = 102)
Mean Age (Years)	40.2	54.2
Mean Education (N° of years)	12.55	12.10
Sex% (M/F ratio)	93% (71/5)	91.5% (94/8)
Involvement in farming		
Full time	34.21% (n = 26)	45.60% (n = 47)
Part time	65.79% (n = 50)	53.40% (n = 55)
Farm size (ac.) (Mean)	17.36	31.29

Table 2. Cronbach's alphas of the variables in the model.

N°	Variable	Cronbach's alpha
1	Knowledge about organic farming	0.647
2	Environmental aspects	0.768
3	Marketing aspects	0.784
4	Benefit and Cost aspects	0.680
5	Control factors	0.822
6	Attitude towards organic farming	0.855

reliability analysis in SPSS. Cronbach's alpha of the variables ranged from 0.855 (very reliable) to 0.647 (acceptable). Most of the variables in the model showed high internal consistency.

Attitude towards organic coconut farming

The attitude of an individual towards organic farming is constituted by his or her evaluation of a behavior. Attitudes are thought to be influenced by "behavioral beliefs" about the consequences of the behavior and by positive or negative judgments about these consequences. According to the

theoretical framework, attitude towards organic farming was formed based on the knowledge of organic farming, environmental aspects and personal characteristics which include age, education, time spent on farming and farm size. The contribution of explanatory variables to attitude formation was analyzed by regression analysis. The results are shown in Figure 2.

All the explanatory variables had significant relationship with attitude except farm size. Knowledge about organic farming, environmental aspects, time spent on farming and age had positive significant relationships with attitude, while education showed significant negative relationship. Knowledge about organic farming was the greatest contributor to develop an attitude towards organic farming of the growers.

Good knowledge about organic farming, positive perception towards environmental conservation and ability to spend more time on farming contributed to develop a favorable attitude towards organic farming. In addition, older growers had a more favorable attitude towards organic farming. The education question showed that growers with less education (fewer years

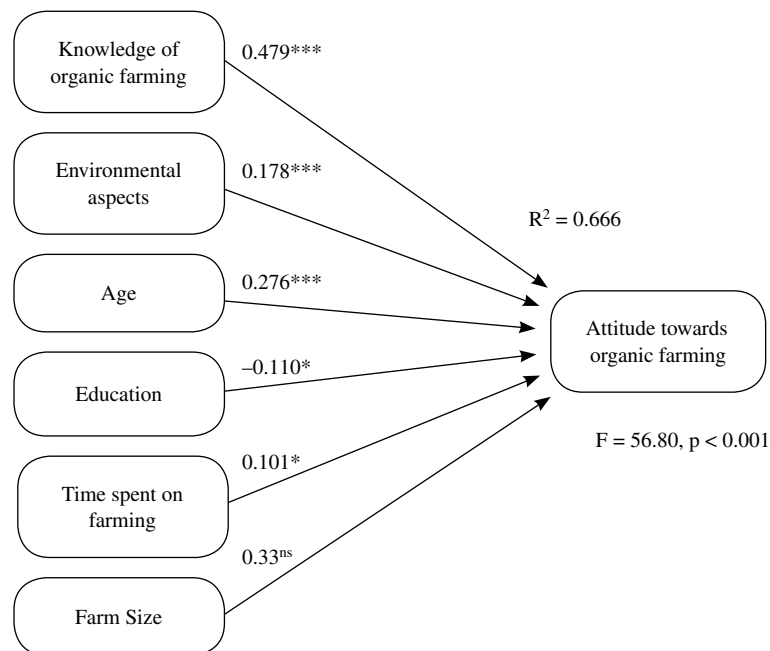


Figure 2. Beta values of the attitude formation towards organic farming.

- * Standardized coefficient (Beta) is significant at the 0.05 level
- ** Standardized coefficient (Beta) is significant at the 0.01 level
- *** Standardized coefficient (Beta) is significant at the 0.001 level
- ns. Not Significant.

of education) have developed a more favorable attitude towards organic farming. This is because formally well-educated people (growers) are mainly interested in their profession rather than in farming.

Factors affecting adoption of organic farming

Figure 3 shows the relationship between adoption of organic farming and explanatory variables (Control factor, Attitude and Social factor). The analysis was done by binary logistic regression. Each variable was entered separately in the analysis in order to investigate the effect of each individual variable. The model fit value is $-2 \log$ likelihood; it is a measure of how well the model fits the data, and has a chi-square distribution. The results showed that addition of Control factor reduced the $-2 \log$ likelihood Deviance by 11.714, ($df = 1$) ($p < 0.001$). Addition of the Control factor to the model was statistically significant; it accounted for 8.6% of the variance in the data (Nagelkerka R square = 0.086).

The variable Attitude alone reduced the $-2 \log$ likelihood by 115.872, ($df = 1$) ($p < 0.001$), which is statistically significant. The model with two parameters, Control factor and Attitude, collectively reduced $-2 \log$ likelihood by 127.586, ($df = 2$) ($p < 0.001$). It was observed that Attitude had more explanatory power than Control factor. The Control factor and Attitude collectively accounted for 68.7% of the variance in the data (Nagelkerka R square = 0.687). The Social factor alone reduced $-2 \log$ likelihood by 33.107, ($df = 1$) ($p < 0.001$). The addition of all three explanatory variables to the model jointly reduced $-2 \log$ likelihood by 160.672, ($df = 3$) ($p < 0.001$). The model accounted for 79.8% of the variance in adoption of organic farming (Nagelkerka R square = 0.798). The three variables, Control, Attitude and Social factors, had significant contribution to explain the behavioral change (i.e. adoption of organic farming) at different levels. Considering the variables separately, the main contributor to adoption of organic farming was the growers' attitude towards organic farming (72%) and followed by Social factor (20.7%) and Control factor (7.3%).

The perceptions of growers towards organic coconut farming

Growers' perception towards organic coconut farming was analyzed based on four criteria.

These were: organic coconut farming knowledge, environmental aspect, marketing aspect and cost and benefit aspect.

Organic farming knowledge aspect

There was a significant difference between organic growers and non-organic growers concerning ten statements (Table 3). Organic growers have relatively higher knowledge in all ten statements, because they have had more special training, activity and direct experience in organic farming. In this way these growers can acquire farming know-how to manage their organic coconut land better through their enhanced agricultural knowledge. Further, organic growers thought that organic farming had become easy and less complicated as they had gained knowledge on organic farming. Programs focusing on technological advances and environmentally friendly practices generally have greater acceptance (Baconguis and Cruz, 2005).

In contrast, non-organic growers believed that organic farming is really an intricate agricultural system with an economic risk. Further, they showed a lukewarm attitude and were not interested in organic farming because they think organic farming requires more organic manure and tedious procedures for soil treatments. In addition non-organic farming uses chemical fertilizer, pesticides and herbicides frequently and any change is likely to encounter resistance.

Ghanim and Panell (1999) reported that farmers who can access more technical information through their contact with extension workers have more accurate knowledge of the techniques of organic farming. Table 5 shows that extension worker contact was significantly correlated with the organic farming knowledge aspect. It was also positively related to age, i.e. older growers have more knowledge about organic farming. Formal education had a significant negative relationship with organic farming knowledge. This is because formally well-educated growers have relatively less interest in farming.

Figure 3 shows that the social factor, i.e. influence from the extension worker, has enhanced the adoption of organic farming significantly. This was mainly because growers received more organic farming information from agricultural extension worker to improve their farms. Another important result is that there was a difference between the perception

Table 3. Perceptions towards organic coconut farming (OF = Organic farming; NOF = Non-organic farming).

Statement	Median score		Sig. ^a (M-W)
	OF n = 102	NOF n = 76	
Organic farming knowledge			
1 OF is simpler and easier than NOF	4	3	.000
2 OF requires prior soil rehabilitation	4	4	.013
3 OF needs clean / non-polluted water for irrigation	2	3	.001
4 OF requires only organic fertilizer	4	3	.000
5 OF does not use pesticides / herbicides	4	3	.000
6 Dolomite can be used in organic farming	5	4	.000
7 Non-organic coconut cultivation can easily be converted to organic cultivation	4	3	.011
8 OF is successful in both small and large estates	4	3.5	.000
9 OF is not a costly investment	4	4	.004
10 Supplying large quantities of organic manure for OF is not a difficult task	4	3	.000
Environmental aspect			
11 OF enhances soil fertility	5	4	.133 ^{ns}
12 OF will not pollute water resources	5	4	.002
13 OF will not pollute environment and natural resources	5	4	.047
14 OF is good for health	5	4	.007
15 OF does not generate poisonous fumes in the air	4	4	.000
16 OF does not harm soil or other organisms	5	4	.027
17 Inorganic fertilizer, insecticides and other chemicals used in non-organic farming cause long term harmful effects to the environment.	4	4	.005
Marketing aspect			
18 There is a high demand for organic coconuts	4	3	.000
19 Organic coconuts fetch higher process	4	3	.000
20 There are subsidies for organic farming	4	4	.025
21 Organic coconuts can be sold easily	4	3	.000
22 The yield is low in OF	4	3	.022
23 There are adequate buyers for organic coconuts	4	3	.011
24 Even small amounts of organic coconuts can be easily sold	4	4	.001
Benefit and cost aspect			
25 Cost of production of organic coconuts is lower than the non-organic coconuts	4	3	.954 ^{ns}
26 Profit is higher in organic coconuts than non-organic coconuts	4	4	.024
27 Cost of production can be reduced in OF, because crop residuals can be applied as fertilizer	4	4	.236 ^{ns}
28 Cost of production can be reduced because family labor can be utilized in OF	4	4	.902 ^{ns}
29 Cost of labor in OF is less	3	2	.190 ^{ns}
30 Transport cost is higher in OF because large quantities of organic fertilizer have to be transported	2	2	.629 ^{ns}
31 Willing to give up a part of my profit for environmental conservation	4	4	.337 ^{ns}

^a Sig. (M-W) = Mann-Whitney U test.

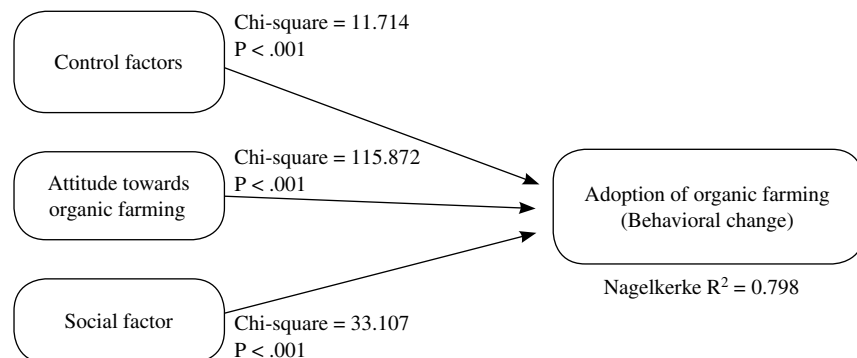


Figure 3. Model fit values of explanatory variables for adoption of organic farming.

of organic and non-organic growers in organic farming knowledge at the 0.001 significance level (Table 4). Therefore, the two groups of growers had different opinions about organic farming knowledge and they would therefore also have differences in organic farming awareness and level of organic farming knowledge.

Environmental aspect

Both organic growers and non-organic growers had a positive perception towards the environment. However organic growers have more favorable attitudes than the non-organic growers (Table 3). There was also a significant difference between the perception of the organic growers and non-organic growers on environmental aspects (Table 4). Most non-organic growers did not understand the real effects and indirect results of chemical fertilizer. The non-organic growers were not concerned about the conservation of natural resources, as most of them focused more on high yields and increasing productivity for short term benefits. This could be interpreted that the two groups of growers have different perceptions and point of views about environmental aspects, in which case they would

also have differences in environmental awareness and concern for organic farming. McCann *et al.*, (1997) also reported that organic growers have a better awareness of, and concern for, effects of pesticide residue on food, air pollution and pesticide drift.

Marketing aspect

According to the survey, it was thought that organic coconuts could get a higher price. Dobb 1998, Bertramsen and Dobb 2002, reported that the marketplace price for organic corn and soybeans frequently ranged from 20% to 140% higher than for conventional corn and soybeans. Pimentel *et al* (2005) confirmed that organic foods fetch higher prices in the marketplace. Since the Serandipol Company buys organic coconuts for export, organic growers do not face marketing problems. A study conducted by Roitner-Schobesberger *et al.* (2008) explained that organic products in Bangkok are still marketed by targeting both the upper classes and foreigners. However, a large number of non-organic coconut growers still thought that there was not a large gap in farm-gate price between organic and non-organic coconuts. Further, non-organic coconut growers felt that nut yield was low in organic farming. Therefore, they did not have a strong motivation or preference to practice organic farming. However, organic coconut growers have a favorable attitude towards marketing because the Serandipol Company purchases organic coconuts from the organic coconut growers for a relatively higher price. Therefore there was a significant difference between organic coconut growers and non-organic coconut growers' perception in marketing (Table 4).

Table 5 showed that the older growers who have more contacts with extension workers and growers who can spend more time on farming have a more favorable perception towards marketing.

Table 4. Overall comparison of perceptions between organic and non-organic growers.

Aspect	Mean score		Sig. ^a (M-W)
	OF n = 102	NOF n = 76	
1 Organic farming knowledge aspect	3.8	3.1	.000
2 Environmental aspect	4.4	4.1	.001
3 Marketing aspect	3.9	3.1	.000
4 Benefit and cost aspect	3.6	3.3	.154 ^{ns}

^a Sig. (M-W) = Mann-Whitney U test.

Table 5. Relationship of growers' personal traits and their perception.

Variables	Age	Education	Time spent on farming	Farm size	Extension worker contacts
OF knowledge	.626 **	-.177 *	.026	.065	.419 **
Environment	.296 **	-.131	.002	.179	.069
Marketing	.534 **	-.190	.160 *	.078	.359 **
Benefit & cost	.334	-.226	.031	.110	.085

* Correlation is significant at the 0.05 level (2 tailed).

** Correlation is significant at the 0.01 level (2 tailed).

(Based on Spearman Rank correlation test).

Benefit and cost aspect

The results of the cost and benefit aspect were different from other three aspects. Seven statements were analyzed and only one statement (Profit is higher in organic coconuts than non-organic coconuts) was significant between organic growers and non-organic growers (Table 3). The results showed that there was no difference between the perception of organic and non-organic growers in the cost and benefit aspect of coconut cultivation. However, the mean score of non-organic growers was lower than organic growers (Table 4). This was the one of the major reasons for the reluctance of non-organic growers to adopt organic farming.

Conclusions

The study found that control, attitude and social factors contributed significantly to the adoption of organic farming. Moreover, attitude contributes greatly to adopt organic farming, followed by social and control factors. Knowledge of organic farming, environmental aspects, age, education and time spent on farming contributed significantly to attitude formation. However, knowledge was the most important factor. The perception of organic growers and non-organic growers towards organic farming was statistically different in the knowledge, environmental and marketing aspects. However, there was no difference in the benefit and cost aspect between two groups. Further, extension worker contacts significantly contributed to enhance organic farming knowledge.

Finally, these findings lead to the conclusion that non-organic growers are generally lacking essential awareness concerning the multiple benefits of organic farming. Moreover, they do not realize the cost and benefit aspect as positive. As a result, non-organic growers do not have strong motivation

to practice organic farming since their opinion was that yield in organic farming is low, even though the organic grower gets a slightly higher price. In addition, non-organic growers are reluctant to shift from frequent utilization of chemical fertilizer and pesticides as they believe that it leads to decrease nut yield and most of them focused more on high nut yields and increasing productivity for short term benefits. The reluctance to give up chemical fertilizer and pesticides was further enhanced because they have been in the habit of using them for a considerable period of time.

Organic growers practice organic farming mainly because of the marketing assistance and the inputs such as organic fertilizer and technical know-how provided by the Serandipol Company to the farmers. Further, the favorable attitudes of the organic growers towards the environment also enhance the organic cultivation.

Knowledge and extension worker contacts had a greater impact on motivation towards adopting organic farming. Therefore, these factors could be utilized to increase the adoptability of organic coconut farming. Participatory extension programs and better extension approaches such as farmer field schools could be recommended to change growers' attitude, knowledge and skills towards organic farming. Further involvement of a third party like the government, an NGO or a private company to assist organic growers will also increase the adoptability of organic farming.

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