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Scope of Private Extension for the Corporate Sector Tea Plantations: Clientele Perspectives

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ABSTRACT

Private agriculture extension service refers to the services rendered in the area of agriculture and allied aspects by private agencies or organizations for which farmers are expected to pay a fee while public extension service is viewed as the extension service financed by the government and provided free of charge. The public extension service rendered by the Tea Research Institute of Sri Lanka (TRI) is the only extension service available for the tea plantation sector. With the privatization of state owned plantations in early nineties, need for high level of technological interventions has increased and, private extension (PE) services of various forms have cropped up since recent past, mostly agro-input sale oriented advisory services. Considering this scenario, it was viewed that private extension concept may be advantageously exploited in complementary to the government extension services in view to fulfill the extension needs of the Sector in a better manner.

The study was conducted; to assess some relevant profile characters of clients, their attitude towards private extension, willingness to pay for extension services, profitability of their tea estates and, finally to; explore scope of private extension for the corporate tea from client's perspectives. The study was conducted in the up country region and, data were collected through sample survey from 60 estate managers.

Profile characteristics such as innovativeness (68% medium to high), attitude (72% favorable to highly favorable) towards Good Agricultural Practices (GAPs), communication channel utilization (75% medium to high) and attitude (63% favourable to highly favourable) towards private extension of the respondents were conducive for private extension. They mostly had willingness (57% moderate to high) for user pay extension services and, showed high willingness to pay for training programs for executives, field staff and workers (75%, 63% and 75%) followed by tea factory/processing related advisory service

(62%) and field related advisory service (50%). The TRI was most preferred as extension service provider (2.9 mean score). Professional private agriculture consultants (2.25 mean score), Planters' Association (2.15 mean score), agro-chemical and machinery companies/firms were among other preferred potential service providers (2.01 mean score). The respondents strongly opined that private service providers should operate under the guidance of government organization. Demanding technical subjects for private extension were; value addition to end products (93%), mechanization of labour intensive operations (88%), improvement of labour productivity and their attitude towards work (87%), followed by plant nutrition and fertilizers (80%), energy conservation in tea processing (78%), replanting/infilling tea (75%), crop diversification (67%), high-tech planting material production (63%). Based on the findings Collaborative Private Extension Strategy between TRI and Private Extension Service Providers is suggested.

Key words: Attitude, demanding subjects, service providers, willingness to pay

INTRODUCTION

Private agriculture extension is used in the broad sense of introducing or increasing private sector participation, which does not necessarily imply a transfer of designated state-owned assets to the private sector. Various cost-recovery, commercialization, and other privatization alternatives have been adopted to improve agricultural extension.

Private agriculture extension service refers to the services rendered in the area of agriculture and allied aspects by private agencies or organizations for which farmers are expected to pay a fee while public extension service is viewed as the extension service financed by the government and provided free of charge (Saravanan and Gowda, 1999).

There has been a trend, perceptible throughout various extension systems undergoing changes, of greater flexibility and multiple partners in funding agriculture advisory services. Le Gouis (1991), observed three major policies adopted by government and farm organizations regarding privatization of extension such as, public financing by the tax payer only for the kinds of services that are of direct concern to the general public, direct charging for some individual services with direct return in the form of improved income, and mixed funding shared between public and private professional association contributions for some services where the benefits are shared.

The Advisory and Extension Services Division of Tea Research Institute of Sri Lanka (TRI) administers the agriculture extension function of the TRI which is the public extension service available for the corporate sector tea plantations. With the emergence of corporate tea plantation sector after the privatization of

state owned plantations in early nineties, demand for high level of technological interventions have increased than ever before. While the usual government extension services by the TRI in existence, private information delivery services have cropped up since recent past, mostly in the form of agro-input sale oriented advisory services by agro-input companies/firms and agric consultancy services by private professional. Considering this scenario, it was assumed that private extension concept may be advantageously exploited in complementary to the government extension services to bridge the gap between demand and supply for extension services in order to fulfill the extension needs of the sector.

The study was conducted; to assess the innovativeness, attitude towards improved agri practices, communication channel utilization of clients and their attitude towards private extension, willingness to pay for extension services, profitability of their tea estates and, finally to; explore the scope and suggest suitable strategies of private extension for the corporate sector tea plantations.

Limitations of the study

As the study was conducted in the Up country region only, the findings may be applicable only to such similar situations and, general conclusions made might be of more relevant to Up country tea estates.

This study has not investigated regarding costing of different extension services. Data collection was not extended to private extension service providers for tea sector.

RESEARCH METHODOLOGY

Study area and sampling procedure

The Up country tea growing region that had the majority number of corporate sector tea estates and major proportion of the tea extent among the four regions (Up country, Mid country, Uva and Low country) was purposively selected for the study. Out of the total number of 129 corporate sector tea estates in the study area, a sample of 60 estates was randomly selected and estate managers were selected as respondents. The survey was conducted in the year 2009.

Selection and measurement of variables

Based on the objectives of the study the following variables were selected and their measuring procedures are explained below.

Innovativeness

Rogers and Shoemaker (1971) defined innovativeness as the degree to which an individual is relatively earlier in adopting new ideas than other members of his society. Innovativeness of the respondents was assessed according to the answer given for the question "When would you prefer to adopt an improved practice?" (Table 1).

Table 1. Scale to measure innovativeness of the respondents

Sl. No.	Responses	Score
1.	As soon as it is brought to your knowledge	3
2.	After you have seen it adopted by other members successfully	2
3.	You prefer to wait and take your own time	1

Based on the score obtained by the respondents their innovativeness were classified as low, medium and high using cumulative frequency method based on the mean and standard error.

Attitude towards Good Agricultural Practices (GAPs)

Attitude towards improved practices was operationalized as the degree of positive or negative mental disposition of the respondent towards the improved practices related to tea cultivation. The scoring procedure developed by Balasubramaniam (1988) was followed for this study with some modifications. The scale (Table 2)) consisted of 10 statements of which five were negative and five were positive. Responses were obtained on five point continuum *viz.*, strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2 and 1 for positive statements and reverse scoring system for negative statements.

Based on the total score of individuals, respondents were finally classified as low, medium and high in their attitude towards GAPs using cumulative frequency based on the mean and standard error.

Utilization of communication channels

A communication channel is the means by which a message gets reached from a source to a receiver (Rogers and Shoemaker, 1971). Individual, group and mass communication channels *viz.,* interpersonal contacts, telephone, seminars/ meetings, scientific journals, newspapers, books/ pamphlets *etc.*, television, radio, internet, compact disks (CD), exhibitions and campaigns were assessed. The list of the communication channels was administered to the respondents and their response on usage was recorded in three point continuum as frequently, occasionally and rarely assigning score of 3, 2 and 1 respectively (Table 3). Communication utilization of the respondents was categorized as high, medium and low using cumulative frequency based on the mean and standard error.

Table 2. Scale to measure attitude towards GAPs

No.	Attitude statements	SA	A	UD	DA	SDA
1.	It is good to adopt improved cultural practices as it gives higher yield compared to traditional tea cultivation practices					
2.	Improved tea cultural practices will improve the economic condition of tea estates					
3.	Improved tea cultural practices are suitable to estates already economically performing well					
4.	Improved tea cultural practices involve higher risk					
5.	Improved tea cultural practices are not difficult to practice					
6.	The best way to increase tea production is to adopt improved cultural practices					
7.	To control pest/disease/weeds, improved practices are mostly used					
8.	Fertilizer requirements of improved practices cannot be met by poorly performing estates					
9.	When my opinion is sought for, I will advise my neighbors to adopt improved practices					
10.	There is no guarantee that improved practices will give good returns every year					

(SA- Strongly agree, A-Agree, UD-Undecided, DA-Disagree, SDA-Strongly disagree)

Table 3. Scale to measure communication channel utilization

Sl. No.	Communication channels/ sources Used to seek information/ advice	Frequently	Occasionally	Rarely
1.	Interpersonal contact			
2.	Land Phone			
3.	Mobile Phone			
4.	Seminars / Meetings/ Group Discussion			
5.	Scientific journals/Research Publications			
6.	News papers			
7.	Books, monographs, pamphlets, leaflets, posters *etc.*			
8.	T.V			
9.	Radio			
10.	Internet			
11.	CD, DVD			
12.	Any other			

Attitude towards private extension for corporate sector tea plantations

Privatization of agricultural extension service refers to the services rendered in the area of agricultural and allied aspects by private agencies or organizations for which farmers are expected to pay a fee (or free) and it can be viewed as supplementary or alternative to public extension services (Saravanan and Shivalinge Gowda, 1999). According to Van den Ban and Hawkins (1996), farmers are expected to share the responsibility for this service and pay all or part of the cost.

Attitude towards private extension was operationalized as the degree of positive or negative mental disposition of the respondent towards private extension for the corporate sector tea plantations. The attitude scale (Table 4) developed by Saravanan and Shivalinge Gowda (1999) was used in this study with suitable modifications. This scale as shown below consists of 17 statements of which 10 were positive and 7 were negative. Responses were obtained on five point continuum *viz.*, strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2 and 1 for positive statements and reverse scoring system for negative statements. The total attitude score for each respondent was calculated. The possible total score ranged from 17 to 85. Based on the scores obtained by the respondents they were categorized into three classes as least favourable, favourable and most favourable using cumulative frequency method based on the mean and standard error.

Clientele willingness to pay for private extension

Clientele willingness to pay refers to the clients' feeling worthy or not worthy to pay for user-pay extension system. Willingness to accept user-pay extension service based on nature of extension service was studied and willingness to pay for private extension was worked out by percentage analysis.

Inventory for assess willingness based on type of service was developed to measure clientele willingness pay for extension service. Responses were obtained from estate managers on a three point continuum *viz.*, willing, somewhat willing and least willing with scores of 3, 2 and 1. Based on the mean score values, type of service was ranked (Table 5).

Potential service providers for private extension

Potential service provides for private extension were identified listed and responses were obtained on a three point continuum as most preferred, preferred and least preferred with scores of 3, 2 and 1 respectively (Table 6). Based on the mean scores, the extension service providers were ranked and evaluated.

Demanding technical subject areas for private extension

Ten demanding subject areas were identified by discussing with the progressive clients. The list of those subjects was administered to the respondents for their ranking. Demand for different subjects for private extension was prioritized by percentage analysis.

Data collection and analysis

Mainly primary data were collected using pre-tested interview schedule through personal interviews with the respondents and supplemented with secondary data from official records. Coded/ scored data were analyzed using SPSS software package.

Based on confidence intervals, the cut off points for classifying the respondents into three categories as high, medium and low with respect to their attitude towards private extension were worked out based on mean(X) + or – 1.96. Standard Error (SE) as suggested by Fisher (1935) and categorized the respondents as follows;

Low group	=	Below X – 1.96.SE
Medium group	=	In between X – 1.96.SE and X + 1.96.SE
High group	=	Above X + 1.96.SE

Cumulative frequency distribution and percentage analysis were used to quantify low, medium and high groups. Demanding subject areas for private extension were analyzed using percentage analysis.

Table 4. Scale to measure attitude towards private extension

Sl. No.	Attitude statements	Response categories				
		SA	A	UD	DA	SDA
1	PE reduces the budget burden of the government					
2	PE enhances overall efficiency of agricultural production system					
3	PE hampers the free flow of information					
4	Commercial interest of PE could hinder achieving eco-friendly and sustainable agriculture					
5	PE ensures profit to the tea plantation					
6	PE is not desirable in the interest of poorly performing tea estates					
7	Achieving coordination between PE and other allied Govt. Department & Govt. Agricultural Research System is very difficult					
8	PE is more inclined to charge for services and more commercial oriented rather than public service interest					
9	Tea growers will be more inclined to follow advice of Private Extension Workers					
10	PE renders services based on seasonal and site specific needs					
11	PE is likely to increase the regional imbalance in offering their services					
12	PE provides solution to all technical problems of tea growers pertaining to agriculture and allied activities					
13	PE helps extension worker to gain more confidence among farmers					
14	PE worker continuously update their knowledge					
15	PE ensures appropriate advisory services					
16	Information transferred by PE needs constant monitoring by a government agency					
17	The status and recognition of extension workers in better in PE					

(SA: Strongly agree, A: Agree, UD: Undecided, DA: Disagree, SDA: Strongly disagree)

Table 5. Inventory to measure clientele willingness to pay based on type of extension service

Sl. No.	Type of extension service	Most willing	Somewhat willing	Least willing
1	Advisory service on field related subjects			
2	Advisory service on processing/ factory related subjects			
3	Training- executives			
4	Training- supervisors			
5	Training- workers			
6	Analytical service			
7	Providing extension materials			

Table 6. Potential service providers to involve in private extension

Sl. No.	Potential players to involve in private extension	Most preferred	Preferred	Least preferred
1	TRI			
2	Agrochemical and machinery companies			
3	Planters Association (P.A)			
4	Private consultants			
5	NGOs			

RESULTS AND DISCUSSION

Innovativeness

Table 7 shows, half (50%) of the respondents were highly innovative and 32% were less innovative. One fifth (18%) of the respondents showed medium level of innovativeness. Therefore, it can be considered that major proportion (68%) of the estate managers fall within the category of medium to high innovativeness.

Attitude towards GAPs

Table 7 reveals that major proportion (47%) of the respondents had highly favourable attitude followed by 28% and 25% had less favourable and favourable attitude respectively, towards GAPs. Hence, majority (72%) of the respondents fall within the category of favorable to highly favourable attitude towards GAPs.

Utilization of communication channels

Table 7 shows, higher proportion (47%) of the respondents were in the medium level communication channel utilization followed by 28% and 25% were low and high communication channel users for scientific information. It could be considered, major proportion (75%) of estate managers showed medium to high usage level of communication channels.

Attitude of clients towards PE for corporate tea plantation sector

Distribution of the respondents according to their attitude towards private extension based on their attitude score is presented in Table 8.

Table 8 reveals that 40% and 23% of the estate managers were most favourable and favorable towards private extension for corporate sector tea plantations, respectively. The balance 37% had least favourable attitude towards private extension. The findings reveal that 63% of the managers are favorable to highly favourable towards private extension.

Table 7. Distribution of estate managers according to their innovativeness, attitude towards GAPs, communication channel utilization and profitability of their tea estates (n = 60)

Sl. No.	Variable	Score	Category	Number	%
1	Innovativeness	<2.39	Low	19	32.00
		2.39 to 2.71	Medium	11	18.00
		>2.71	High	30	50.00
			Total	**60**	**100.00**
2	Attitude towards GAPs	<37.06	Less favourable	17	28.00
		37.06 to 40.28	Favourable	15	25.00
		>40.28	More favourable	28	47.00
			Total	**60**	**100.00**
3	Utilization of communication channels	<21.25	Low	17	28.00
		21.25 to 23.25	Medium	28	47.00
		>23.25	High	15	25.00
			Total	**60**	**100.00**

Table 8. Distribution of estate managers according to their overall attitude towards private extension for corporate sector tea plantations

Sl. No.	Category	Estate manager (n=60)	
		No.	Percent
1	Least favourable	22	37.00
2	Favourable	14	23.00
3	Most favourable	24	40.00
	Total	60	100.00
Mean attitude score		49.85	

Analysis of positive attitude statements on private extension based on responses

Attempt was made to analyze the degree of respondent's agreement level with the attitude statements related to private extension for corporate sector tea plantations. The responses related to positive statements and negative statements are presented in Table 9 and Table 10 respectively. The ten positive statements are ranked according to the respondents' degree of agreement. According to the scoring procedure followed, higher the score of positive statements indicates higher the degree of agreement. The positive statements along with their average mean scores were presented in Table 3 in the descending order of their scores.

Table 9. Distribution of the positive attitude statements related to attitude of respondents towards private extension for tea plantation sector according to their average means scores

Sl. No.	Positive attitude statements	Average mean score
1	PE reduces the budget burden of the government	3.75
2	PE extension worker continuously update their knowledge	3.68
3	PE enhances overall efficiency of agricultural production system	3.58
4	PE renders services based on seasonal and site specific needs	3.52
5	PE ensures profit to the tea plantation	3.40
6	PE ensures appropriate advisory services	3.34
7	PE helps extension worker to gain more confidence among farmers	3.33
8	The status and recognition of extension workers is better in PE	3.16
9	PE provides solution to most of the technical problems pertaining to agriculture and allied activities	2.63
10	Tea growers will be more inclined to follow advice of P E workers	2.60

The Table 9 indicates that the most of the respondents' agreed that PE could reduce the budget burden of government and it would keep extension personnel with updated knowledge continuously. The respondents' believed that PE could improve the overall efficiency of agricultural system and could address seasonal and site specific issues. Further, the respondents agreed that PE could ensure profit to the estates and could offer with appropriate advice.

Analysis of negative attitude statements on private extension based on responses

Similarly attempt was made to analyze the degree of respondent's agreement level with the negative attitude statements related to private extension for corporate sector tea plantations. The seven negative statements are ranked according to the respondents' degree of agreement to the statement. According to the reverse scoring procedure followed, lower the score of negative statements indicates higher the degree of agreement. The ranked negative statements along with their average mean scores were presented in Table 10 according to the ascending order of their scores.

Table 10. Distribution of the negative attitude statements related to attitude of respondents towards private extension for tea plantation sector according to their average means scores

No.	Negative attitude statements	Average mean score
1	Information transferred by PE needs constant monitoring by a government agency	1.87
2	PE is more inclined to charge for services and more commercial oriented rather than public service interest	2.19
3	Commercial interest of PE could hinder achieving eco-friendly and sustainable agriculture	2.61
4	PE hampers the free flow of information	2.84
5	PE is likely to increase the regional imbalance	2.95
6	PE is not desirable in the interest of poorly performing tea estates.	2.98
7	Achieving coordination between PE and other allied Govt. Department & Govt. Agricultural research system is very difficult	3.08

Table 10 shows that most of the respondents opined that the PE service should be constantly guided and monitored by a government agency in order to ensure benefits to growers while maintaining the commercial interests of the PE service providers.

Opportunities for private extension in corporate tea sector

In order to analyze various opportunities of private extension for corporate sector tea plantations, willingness to pay for private extension, potential service providers of private extension, potential type of extension service for private extension and most demanding technical subject areas for private extension were explored.

Willingness of clientele to user pay extension system

Willingness of the clientele to pay for extension service (user pay extension) based on type of extension service was studied. The distribution of respondents (Estate Managers) according to their willingness to pay for private extension service is presented in Table 11.

Table 11. Distribution of respondents according to their overall willingness to pay for extension services (user pay extension service) (n = 60)

Sl. No.	Category	No.	Percent
1.	Less	20	33.00
2.	Moderate	11	19.00
3.	High	29	48.00
	Total	60	100.00

Mean = 31.20 SE = 1.21

Table 11 reveals that, major proportion (48%) of the managers were highly willing to pay for user pay extension services followed by 33% and 19% were less and moderately willing to pay, respectively.

Clientele willingness for user pay extension service based on the type of extension service

Clientele willingness to pay for different types of extension service was studied and analysed in order to identify and prioritize the type of services suitable for private extension and results are presented in Table 12.

Table 12. Distribution of respondents according to their willingness for user pay extension service based on type of extension service (n = 60)

Sl. No.	Type of extension service	Most willing		Somewhat willing		Least willing		Mean score & (rank)
		No	%	No	%	No	%	
1	Advisory service on field related subjects	30	50.00	22	37.00	8	13.00	2.35 (vi)
2	Advisory service on tea processing related subjects	37	62.00	18	30.00	5	8.00	2.58 (iii)
3	Training- executives	45	75.00	12	20.00	3	5.00	2.68 (i)
4	Training- supervisors	38	63.00	17	28.00	5	8.00	2.65 (ii)
5	Training- workers	35	58.00	16	27.00	9	15.00	2.50 (iv)
6	Analytical service	35	58.00	14	23.00	11	18.00	2.45 (v)
7	Providing extension materials	26	43.00	23	38.00	11	18.00	2.25(vii)

Maximum possible mean score = 3 (Multiple response)

The data in Table 12 shows, majority of the respondents were most willing to pay for five types of extension services *viz.*, training plantation executives (75.00%), training plantation supervisory staff (63.00%), training plantation workers (58.00%), analytical service (58.00%) and advisory service related to tea processing and factory (62.00%). In the case of advisory service on field aspects and providing extension materials (books, pamphlets, CDs *etc.*), 50.00% and 43.00% of the respondents were most willing to pay for such service.

The mean score of each type of extension service indicates the degree of willingness to pay for the service. It could be seen that high degree of willingness to pay for training programs for plantation executives (2.68) and supervisory staff (2.65) followed by advisory service in processing and factory related subjects (2.58) and training of plantation workers (2.50). Relatively less willingness to pay for analytical service (2.45), advisory service on field related subjects (2.35) and providing extension materials (2.25). Being 3.00 was the maximum possible mean score, it could be seen that all the means scores were above two third of the maximum possible score. Thus, it could be interpreted that all the seven extension service types had generally a high degree of willingness to pay.

Potential service providers for private extension for corporate sector tea plantations

Potential service providers for private extension were identified as preferred and suggested by the estate managers. The results are presented in Table 13.

Potential service providers according to the preference of estate managers

The percentage and mean scores of potential service providers from estate managers perspectives as presented in Table 13 show that TRI found to be the most preferred (2.90 mean score) as user pay extension service provider followed by private professional agriculture consultants (2.25). Planters' Association (2.15) and agro-chemical / machinery companies (2.01) were also preferred as service providers. NGOs were (1.65) relatively less preferred than other suggested service providers.

Subject areas in demand for user pay extension service in the corporate tea sector

Attempt was made to identify the most demanding subject areas in the present context of corporate sector tea plantations assuming that those could be the potential subject areas for private extension. Table 14 shows the ten demanding subject areas as perceived by the estate managers and those are presented in descending order of their percentages as rated by these clients.

Table 13. Potential service providers to involve in private extension for corporate sector tea plantations as preferred by the estate managers (n=60)

Sl. No.	Potential players to involve in private extension	Most preferred	Preferred	Least preferred	Mean score
1	TRI	52 (86.00 %)	8 (14.00 %)	0 (0.00 %)	2.90
2	Agrochemical and machinery companies	9 (15.00 %)	48 (80.00 %)	3 (5.00 %)	2.01
3	Planters Association (P.A)	16 (27.00 %)	37 (62.00 %)	7 (11.00 %)	2.15
4	Private consultants	22 (37.00 %)	30 (50.00 %)	8 (13.00 %)	2.25
5	NGOs	6 (10.00 %)	27 (45.00 %)	27 (45.00 %)	1.65

Maximum possible mean score = 3 (Multiple response)

Table 14. Distribution of demanding subjects areas for private extension in the corporate sector tea plantations (n = 60)

Sl.No.	Demanding subject areas	Number	Percent
1.	Value addition to end products	56	93
2.	Mechanization of labour intensive operations	53	88
3.	Improvement of worker productivity and their attitude	52	87
4.	Plant nutrition and fertilizers	48	80
5.	Energy conservation	47	78
6.	Replanting and infilling	45	75
7.	Crop diversification	40	67
8.	High technology oriented planting material production	38	63
9.	Crop protection	30	50
10.	Organic agriculture	27	45

(Multiple responses)

Table 14 reveals that value addition to end products, mechanization of labour intensive operations and improvement of labour productivity and their attitude were identified as most demanding subject areas by more than 80.00% of the respondents. Plant nutrition/fertilizers and energy conservation were expressed as demanding subjects by 80.00% and 78.00% of the clients respectively, followed by replanting and infilling by 75.00%.

Crop diversification, planting material production using high - technology and, crop protection were considered as subjects in demand by 67.00%, 63.00% and 50.00% of the respondents respectively. Organic agriculture was considered as a demanding subject only by 40.00% of the respondents.

CONCLUSIONS AND IMPLICATIONS

This empirical study explored many factors considered important for successful operation of a private extension/user pay extension system from the perspectives of clients in the corporate tea sector. The findings revealed that majority of the clients (Estate Managers) are; medium to highly innovative, favourable to highly favourable towards GAPs, in medium to high usage of communication channels and favourable to highly favourable towards private extension. Further, findings suggest that more than half of the corporate sector estates under study made medium to high profit levels and majority are moderately to highly willing to pay for private extension. Hence, these factors suggest a fairly conducive environment for private extension in complementary to the government extension system in the corporate tea sector.

With respect to type of extension suitable for private extension, it could be concluded that services such as training programmes particularly for plantation executives, field supervisory staff and plantation workers and advisory service on tea processing and factory related areas have very high potential for private extension while analytical service, advisory service on field related subjects and providing extension materials are other type of extension services are suitable to provide under user pay extension system.

With respect potential service providers under user pay extension system, the TRI was identified as high potential organization for providing private extension service. Professional private agriculture consultants, Planters' Association and agro-chemical/machinery companies were among the other potential service providers to offer private extension services. Further, the results on attitude towards private extension suggest that private extension service should be constantly guided and monitored by a government agency in order to ensure benefits to growers while maintaining the commercial interests of the PE service providers.

With respect to potential technical subjects for private extension, value addition to end products, mechanization of labour intensive operations/improving worker productivity and their attitude towards work, plant nutrition and fertilizers, energy conservation and replanting and infilling as the most demanding subject areas for private extension. Crop diversification, high tech planting material production methods and crop protection were also seemed to be in demand.

The above conclusions drawn provide an important basis for policy guidelines and to make recommendations on private extension for the sector. This study explored the possibilities for private extension, only from the client's/estate manager's perspectives. Hence, further investigation would be necessary from the perspectives of potential private extension service providers identified in this study, policy making organizations (relevant ministries and plantation management companies and, the TRI - the only government extension service provider) in order to make firm recommendations on degree of private extension interventions to the sector.

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