EXTENSION PREPAREDNESS IN RICE EXPORT: A SELECT ANALYSIS

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ABSTRACT

Vietnam has become second rice exporter in the world after Thailand. However, the rice export has been facing more competition. Therefore, we need to improve production, export capacity and allied activities. Extension organization in general and extension personnel in particular deal with important role in educating/training/mobilizing farmers in rice production for export. To improve this role of extension personnel, it is imperative to assess situation of extension preparedness in rice export. The study was conducted in two provinces: An Giang and Vinh Long, which belong to Mekong Delta, Vietnam. In this context, the paper is a select analysis from the study and focused in evaluating current situation on awareness on quality standards of rice export and its marketing among extension personnel of this region. From which we can suggest suitable steps in the recruitment, planning or organizing suitable training courses to improve the competence of extension personnel at village and district levels. Through the study, it can be said that the situation of awareness of extension personnel about rice export quality/standards at village level were found to be very low. In addition, nearly 50 per cent of extension personnel at district level got "Medium" level of awareness as a matter of concern. Statistically significant level of awareness was observed among extension personnel at district level than those of village and the two independent variables namely Education and Training received had the significant contribution to the awareness of extension personnel.

INTRODUCTION

Since 1989, Vietnam has been exporting rice to the international market. Export of rice has increased from 1.42 million mt of milled rice in 1989 to 4.50 million mt in 1999. But it downed to 3.81 million mt in 2003 (FAO 2005), and it will hopefully increase 4.5 mt in 2005. Vietnam has been exporting rice mainly to Asia and Africa. It has marketed 70-80 per cent of its exported rice to these countries (Duong 2002).

Rice export in Vietnam has met the demand to food security. The Food and Agriculture Organization (FAO) of the United Nation has calculated that in 1988 to 1990, 786 million people faced chronic under-nutrition in developing regions, or 20 per cent of their populations. Most of these people (528 million) are in Asia. The next largest group (168 million) is in Africa (Pierre 1993).

Rice production in Mekong Delta obtained 16.2 million tons contributing more than 50% of total rice production in Vietnam (Bui, 2000). It is estimated to gain 19.1 MT in 2005. With the high production, Mekong Delta has contributed about 90 per cent in the total rice export quantity of the country in recent years (Le 2003).

However, in the context of globalization in general and in agriculture in particular, Vietnam is getting ready to join WTO. Rice export in the international market nowadays is becoming more and more competitive. Therefore, we need to improve rice quality to meet demand of the multiple standards of rice quality in different preferences of countries/markets.

Extension organization in the Mekong Delta addresses an important role in training, educating, encouraging and mobilizing farmers in rice production for export by application of new varieties, technologies, post-harvest procedures etc. to improve rice productivity, quality and to reduce production cost. With this meaning, we need to emphasize the issue of what is the level of awareness of farmers, traders, exporters, and extension personnel among quality standards of exporting rice. In addition, other issues related to rice production and export, the study was conducted in two provinces (An Giang and Vinh Long) belonging to Mekong Delta in 2004. In the context of this paper, effort is to study the awareness of extension personnel in the Mekong delta, Vietnam about quality standards of rice export.

RESEARCH METHODOLOGY

The study was carried out in two purposively identified provinces viz., An Giang and Vinh Long belonging to Mekong Delta, Vietnam. These provinces were selected due to their large areas of rice production for export. A sample of 45 extension personnel at district level was randomly selected from six districts of An Giang province (Chau Phu, Phu Tan, Thoai Son, An Phu, Cho Moi and Tri Ton) and two districts as Tra On and Vung Liem of Vinh Long Province. In the case of extension personnel at village level, a sample of 40 respondents was randomly selected from 10 villages. Those are Hoa Binh, Vinh Xuan, Nhon Binh, Luc Sv. Phu Thanh, Tich Thien, Tan My, Hau Thanh, Xuan Hiep and Thoi Hoa belong to the above districts of two provinces.

To assess the level of awareness about exporting rice quality and awareness about rice export marketing of extension personnel, we formatted a questionnaire including 20 questions related to rice quality and 10 questions related to market preferences and quality standards. These questions were developed based on the handbook for understanding rice export quality written by some prominent scientists and in consultation with them.

To evaluate the level of awareness, the total maximum score was 100. Awareness level was arranged into four categories: Poor (below 50 scores), Medium (50 - 60 scores), Fair (61 - 70 scores) and Good (71 - 100 scores). To test awareness about rice export

marketing, the questionnaire comprised of an awareness index with ten questions related to the rice quality/standards required for different markets, the preference about the quality of cooked rice or tastes etc... in different countries/regions. The awareness level arranged into 3 categories: Low (< 50 scores); Medium (51 - 70 scores) and High (71 - 100 scores).

The statistical tools used for data analysis were frequencies; compare means / One - Way ANOVA; Chi-Square test; Pearson correlation and multiple regression analysis.

FINDING AND DISCUSSION

Profile of extension personnel

The profile of total 45 district extension personnel has been presented in the Table 1.

Age: Age of all the extension personnel at district level ranged from 25 to 55 years. In this majority of the extension personnel was in young age (25-35 years; 66.7 %) followed by middle age (36-49 years; 28.9 %) and the very aged group (\geq 50 years; 4.4 %). The average age was 33.4 years.

In case of village level, the age ranged from 25 to 52 years, with average one was 39.4. The major percentage belongs to middle age group (62.5 %) followed by young group (32.5 %) and old group (15.0 %).

Gender: Most of the extension personnel at district level were males (93.3 %). Whereas, the very less number of extension personnel were females. This disparity shows the need to empower women and encourage them to take part in agricultural extension activities.

Same situation was observed at village level, extension personnel in the village level mostly males (92.5 %). The female extension personnel were only 7.5 per cent (Table 1).

Education: As compared to other countries, like India for example, education level of extension personnel at districts in the target areas is still very low. In India, more than half of the extension personnel were graduated due to post-graduation system for them. Now the qualifications has been modified according to post graduation so that nearly one third of the extension personnel followed post-graduated

system. There are ten percent of the extension personnel who held Ph.D degree (Garg 2003). In this study, most of the extension personnel at district level were Assistant Agricultural Officers (73.3 %), the remainers were in B.Sc. degree occupied 26.7 per cent (Table 1).

Education situation was very low in the village level. There were no B.Sc. extension personnel at village level. Agricultural specialities were only Assistant Agricultural Officers (25 %). Most of them have just finished high school education (37.5 %), then people who are in secondary and elementary

education accounted for 32.5 % and 5.0 %, respectively.

Service experience: In table 1, it is clear that large number of the extension personnel (84.4 %) had low service experience i.e., less than ten years, followed by medium service (11-20 years; 8.9 %) and high service (≥ 20 years; 6.7 %)

In case of village level, most of extension personnel had low service experience (90 %). Only 10 per cent were belonging to medium group and no one got high service experience.

Table 1: Profile of the extension personnel

C No	Chamatanistics	Cotocomy / nonco	Dis	strict	Village	
S.No. Characteristics		Category / range	F	%	F	%
	Age (year)	Young (25-35years)	30	66.7	13	32.5
1.	(min 24 max 62,	Middle (36-49 years)	13	28.9	21	52.5
	mean 36 yrs)	Old (50 & above)	2	4.4	6	15.0
2.	Genders	Male	42	93.3	37	92.5
۷.	Genuers	Female	3	6.7	3	7.5
		Elementary	0	0	2	5.0
		Secondary	0	0	13	32.5
3.	3. Education	High School	0	0	15	37.5
		Assistant Agrl. Officer	33	73.3	10	25.0
		B.Sc.	12	26.7	0	0
	Service	Low (1-10 years)	38	84.4	36	90.0
4.	Experience	Medium (11-20 years)	4	8.9	4	10.0
	Experience	High (above 20 years)	3	6.7	0	0.0
		No-training	0	0	6	15.0
5.	Training	Low (1-4course)	3	6.7	28	70.0
5.	Received	Medium (5-6 courses)	3	6.7	2	5.0
		High (7-10 courses)	39	86.6	4	10.0
	Social	Member	1	2.2	11	27.5
6.		Office bearer	1	2.2	19	47.5
	participation	Non-members	43	95.6	10	25.0

DL= district level: N = 45: VL= village level: <math>N = 40

Training received: In this survey, at district level all extension personnel have undergone at least one training course. The number of training received for each extension personnel ranged from 1 to 10 training courses. The extension personnel in the low category (1-4 courses) and medium category (5-6 courses) were same 6.7 per cent. The high category (7-10 courses) was majority number with 86.6 per cent.

At village level extension personnel, 15 per cent had no-training. Most of them received low level (1-4 courses; 70 %); Remaining 5 per cent and 10 per cent belonging to medium and low categories of training received, respectively.

In general, extension personnel received training related to rice production, export and other extension activities. Disadvantage was due to the lack of emphasis and opportunities in the area of rice quality standards for export,

rice export marketing, value addition and the new economic regime/WTO etc.

Social participation: In this study, at district level, one prominent aspect that very little number of extension personnel was taking part in social participation. Most of them belonged to non-member (95.6%), only one extension personnel was office bearer and another was member.

In contrast to district level, extension personnel at village level had higher level of social participation. Most of them belonged to office bearer, members and non-members were 47.5%, 27.5%, and 25.0%, respectively (Table 1).

Facilities available with extension personnel

Survey on facilities available with extension personnel both at district and village levels were shown in Table 2.

 100 % of the extension personnel at district level have televisions, motorbikes and telephones, whereas these numbers of facilities for village extension personnel were 97.5%, 85.0% and 52.5 %, respectively.

- For mobile phone, 40 per cent of extension personnel at district level have possessed it, but only 17.5 per cent at village level. These numbers can signify that low income of extension personnel at village level and low requirement of mobile phone for them when doing their work at village level with emphasis on extension activities.
- Number of computers at district level accounted for 71.1 % to help extension personnel do their works, but 12.5 % at village level.
- Internet facility at district level met 66.7 % demand whereas 2.5% at village level. These numbers indicate that the facilities should be urgently equipped to villages.
- Another facility for transportation under the conditions of Mekong Delta as motorboat was available 42.5 % at village level for extension personnel.

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Table 2:	racilines	available with	extension	personnei

			t Level	Village Level		
No.	Facilities	F	%	F	%	
1.	Television	45	100.0	39	97.5	
2.	Motorbike	45	100.0	36	85.0	
3.	Telephone	45	100.0	21	52.5	
4.	Mobile phone	18	40.0	7	17.5	
5.	Computer	32	71.1	5	12.5	
6.	Computer + Internet	30	66.7	1	2.5	
7.	Motorboat	0	0.0	17	42.5	

F = frequency; district level: N = 45; village level: N = 40

Awareness of extension personnel about rice export quality

The result from Fig. 1 indicated that village level extension personnel exhibited low awareness on rice export with emphasis on quality/standards. Major number of them was classified in "Poor" level of awareness (80 %) and 20 % as "Medium". The very unhappy situation that there were no extension personnel at village level scores "Fair" and "Good" levels. In case of district level, the

result was much better than village level. They did not have "Poor" scores but number of extension personnel scored "Medium" level were comparatively high (53.3 %). In comparison to village level, another good thing was that they got "Fair" and "Good" level of awareness with 42.3% and 2.4%, respectively. However, the level of "Good" awareness was still very low.

The difference in awareness level between village and district levels about exporting rice

quality ($\chi^2 = 60.97^{**}$) (Fig. 1) was highly significant.

The very Low awareness level at village level and nearly 50 % "Medium" at district level among extension personnel were a matter of concern. Because they were expressionists

who directly contact farmers to educate, encourage and mobilize them in rice production and export. Therefore, it needs to be emphasized in training – especially on rice quality/standards for export – to improve awareness level of these extension personnel.

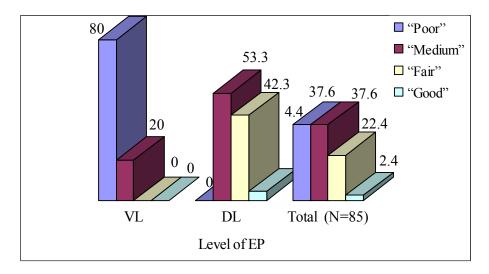


Fig. 1: Awareness level between village and district extension personnel

VL= village level (N=40), DL= district level (N=45) Pearson's Chi-Square Value = 60.917**, ** Significant at 1 per cent level

Awareness score in the Table 3 shows that most of extension personnel belong to three categories as Elementary, Secondary and High school education at village level, but they were mostly in "Poor" level of awareness on exporting rice quality.

These indicators can inform the reason that they are not belong to professional extensionists and lack of training in this issue. It needs to improve qualification for recruitment and offer proper training of extension personnel at village and district levels. Most of extension personnel in the category of Assistant Agricultural Officers got "Medium" and "Fair" level of awareness (55.8% & 37.2 %, respectively) and 7 % scored "Poor" level; but they didn't get scores of "Good" level. In case of B.Sc. people, half

of them were classified in "Medium", not in "Poor". This problem is posing the need in training programmes relate to the concerned issue. Below 50 per cent of B.Sc. extension personnel scored "Fair" and "Good" level of awareness (25.0% and 16.7%, respectively).

The awareness of extension personnel in general were scored the same 37.6 % at "Poor" and "Medium" levels, 22.4 % at "Fair", only 2.4 % at "Good".

The significant value of Chi-Square test was 1% level of probability (Pearson's Chi-Square Value = 80.869**). It means that relationship observed in the cross-tabulation was real and high education extension personnel offered high level of awareness on rice quality to export as compared to low level of education.

Education	Level of awareness					
Education	"Poor"	"Medium"	"Fair"	"Good"	(Overall)	
	(< 50 scores)	(51-60 scores)	(61 - 70 scores)	(71 - 100 scores)	N=85	
Elementery	2	0	0	0	2	
Elementary	(100)	(0.0)	(0.0)	(0.0)	(2.4)	
Cacandami	13	0	0	0	13	
Secondary	(100)	(0.0)	(0.0)	(0.0)	(15.3)	
High School	14	1	0	0	15	
Tilgii School	(93.3)	(6.7)	(0.0)	(0.0)	(17.6)	
Asst. Agrl.	3	24	16	0	43	
Officer	(7.0)	(55.8)	(37.2)	(0.0)	(50.6)	
B.Sc.	0	7	3	2	12	
	(0.0)	(58.3)	(25.0)	(16.7)	(14.1)	
Total	32	32	19	2	85	
(categories)	(37.6)	(37.6)	(22.4)	(2.4)	(100)	

Table 3: Association between education of extension personnel and awareness level

Figures in parentheses indicate percentages, Pearson's Chi-Square Value = 80.869**,

** Significant at 0.01 level

There were four categories of training received as shown in the Table 4. It indicates that training received by extension personnel ranged from 0 to 10 training courses. The extension personnel who received more training courses (from Medium to High levels i.e. 5 - 10 courses as compared to 0 - 4 ones) got high score of awareness levels and they did not get "Poor" level. No-training extension personnel got high poor level of awareness (83.3%) and only 16.7 per cent got Medium level of awareness in this issue.

The result of Chi-Square test with Pearson's Chi-Square Value = 77.147**. It can be

concluded that relationship observed in the cross-tabulation was real and not by chance. It means that high number of training received of extension personnel got high level of awareness about rice export quality as compared to low level of training received.

This result also indicates that the effectiveness in the training programme for rice production and export by which extension personnel had received and it needs to be further enhancement to help them improve awareness about rice export quality.

Table 4: The association between training received of extension personnel and awareness

Training	Level of awareness					
received	"Poor"	"Medium"	"Fair"	"Good"	(Overall)	
received	(below 50 scores)	(51-60 scores)	(15-28 scores)	(29 - 42 scores)	N=85	
No-training	5	1	0	0	6	
No-training	(83.3)	(16.7)	(0.0)	(0.0)	(7.1)	
Low	27	3	0	1	31	
(1-4 courses)	(87.1)	(9.7)	(0.0)	(3.2)	(36.4)	
Medium	0	2	2	1	5	
(5-6 courses)	(0.0)	(40.0)	(40.0)	(20.0)	(5.9)	
High	0	26	17	0	43	
(7-10 courses)	(0.0)	(60.5)	(39.5)	(0.0)	(50.6)	
Total	32	32	19	2	85	
(Categories)	(37.6)	(37.6)	(22.4)	(2.4)	(100)	

Figures in parentheses indicate percentages, Pearson's Chi-Square Value = 77.147**, ** = Significant at 0.01 level.

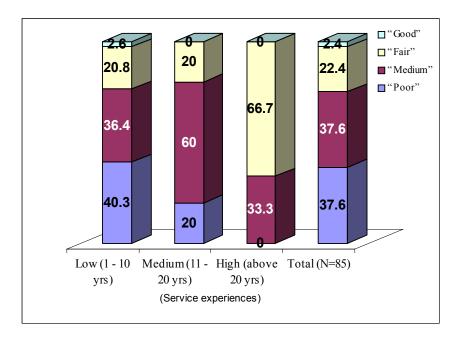


Fig. 2. The association between service experience and levels of rice quality awareness of extension personnel

Pearson's Chi-Square Value = 5.34 ns (ns = not significant)

Relationship between rice quality awareness personnel, in the Fig. 2, did not exhibit and level of service experience of extension significant correlation coefficients

Relationship and contribution of selected independent variables with awareness

Table 5: Correlation between personal characteristics and awareness of extension personnel on rice export quality (N = 85)

S. No.	Personal characteristics	Pearson correlation Coefficient (r)
1.	Age	- 0.372**
2.	Education	0.728^{**}
3.	Service experience	0.235^{*}
4	Training received	0.673**
5	Training organization	0.128ns
6.	Social participation	-0.582**

^{** =} Correlation is significant at the 0.01 level, * = Correlation is significant at the 0.05 level; ns = not significant

Six independent variables were selected for analysis to find their relation to awareness level of extension personnel. The result of Pearson correlation coefficient (r) from Table 5 indicates that these independent variables were significant and positive correlation (or direct correlation) with awareness level: Education $(r = 0.728^{**})$, Training received $(r = 0.728^{**})$

0.673**), Service experience (r = 0.235*). Two independent variables Age and Social participation had negative correlation (r = -0.372** and -0.528**, respectively) or inverse correlation. It means that young extension personnel (or low group of age) and low service experience of extension personnel could get high level of awareness and it might

due to the result in training that they had received.

In order to find out relative contribution of selected independent variables relating to personal characteristics of extension personnel on dependent variables (awareness on exporting rice quality/standards), the method of multiple regression analysis using linear mode (predictive equation) was applied. Predictive power of multiple regressions was estimated by working out the value of coefficient of determination (R²). The independent variables were then ranked on the basis of beta weights, in order to find out their relative importance in predicting the variation in dependent variable.

The data presented in Table 6 reveals that out of 6 selected independent variables, only two namely "Education" and "Training received"

were significant at 0.01 level of probability ("t" value = 3.499** and 3.910**, respectively) and significant in explaining variation in the awareness of extension personnel. This means that these two variables had significant contribution to awareness level. The R² value equal to 0.634 indicates that all the six selected independent variables put together contributed for about 63.4 % of variation for the awareness level of extension personnel. The F value was significant at 0.01 level (F=22.55**).

Probable reasons for such significance as good predictors of awareness level on exporting rice quality/standards are considered as education and training helped them have pre and post condition in awareness in exporting rice quality/standards.

Table 6: Multiple regression of independent variables with awareness of extension personnel on exporting rice quality/standards (N = 85)

No.	Independent variables	Unstandardized coefficients B	Std. Error	Standardized Coefficients	"T" value
1.	Age	188	.126	149	-1.492 ^{NS}
2.	Education	4.319	1.252	.382	3.449**
3.	Service experience	.231	.200	.095	1.160 ^{NS}
4.	Training received	1.483	.379	.410	3.910**
5.	Training organization	1.358	.822	.133	1.653 ^{NS}
6.	Social participation	.581	2.496	.025	.233 ^{NS}

R = 0.796, F value = 22.551^{**} , $R^2 = 0.634$, df = 84; ** = significant at the 0.01 level of probability; ns = not significant

CONCERN IN RICE EXPORT MARKETING

There were 37 out of 40 village level extension personnel (85 %) expressed that they have concerned about marketing of rice export. In case of district level, this number was 43 out of 45 extension personnel (95.6 %).

These respondents had informed that they got information about marketing and awareness related to export rice quality/standards requirement for different markets from different sources as follows:

Televisions, Newspapers, Radio/broadcasting were the most favourable sources by extension personnel at both district and village

levels. Among the respondents, 75 to 95 % of them selected these sources for getting information regarding rice export marketing. 30 per cent of extension personnel at district and 22.2 per cent at village levels expressed that they got information from Magazines of extension/agricultural organizations. For the Books, only those at village level were favourable with 15 per cent.

Ten per cent of extension personnel at village and 26.7 per cent at district levels considered upper level extension organizations had helped them in getting this information. Export companies were not selected by district level extension personnel, whereas 5 per cent of those at village level were of favourable. Research institutions, universities

in the region were also contributing 22.2 per cent at district level. information for extension personnel, but only

Table 7: Sources of information of rice export marketing

Sources	Village level (N=40)		District level (N=45)	
	F	%	F	%
Television	38	95.0	41	91.1
Newspapers	33	82.5	41	91.1
Radio/broadcasting	30	75.0	40	88.9
Magazines (Ext, Ag)	12	30.0	10	22.2
Books	6	15.0	0	0.0
Extension organizations	4	10.0	12	26.7
Export companies	2	5.0	0	0.0
Research Inst./University	0	0.0	10	22.2
Internet	0	0.0	30	66.7

One interesting thing was that source of rice export marketing has been got from internet. This source nowadays useful but only most available at district level as 66.7 per cent of extension personnel expressed that they got information related to rice export marketing from internet. From this finding, it can be said that to improve competency and awareness of extension personnel, we need to improve facilities (computer/internet etc...), especially at village level.

Today, rice export of Vietnam is reaching many regions and countries in the world. According to Vietnam Food Association (2005), rice customers of Vietnam are many countries in Asia, Africa, Middle East, Latin America and some countries in Europe. In the international rice markets, specific rice quality/standards for each market have been notified (Bui & Nguyen, 2000), that help extension personnel understand the issues and promote rice export.

Table 8: Awareness of extension personnel about marketing of rice export

Awareness	Village Level (N=40)		District L	Total (%)	
level	F	%	F	%	(N=85)
Low (< 50 scores)	35	87.5	1	2.2	36 (42.3)
Medium (51 – 70 scores)	5	12.5	43	95.6	48 (56.5)
High (71 – 100 scores)	0	0	1	2.2	1 (1.20
Total	40	100	45	100	85 (100)

Table 8 indicates that only 1 out of 45 extension personnel (2.2 %) at district level received high level of awareness. Most of extension personnel at village level received Low level and district received Medium level of awareness (87.5% and 95.6 %, respectively). Remaining 12.5 per cent at village and 2.2 per cent of extension personnel

at district levels scored Medium and Low in terms of marketing awareness, respectively.

One-Way ANOVA analysis has shown that the level of marketing awareness of extension personnel at district level were higher than from those at village level. This difference was statistically significant (Table 9) with F value equal to 146.133 (significant at 0.01 level).

Level of extension personnel	N	Mean	Std. Deviation
Village level	40	21.00	23.80
District level	45	64.18	2.69
Total	85	43.86	27.15

Table 9. The difference between awareness of extension personnel about marketing of rice export

 $F = 146.139^{**}, df = 84$

The finding has been emphasized that parallel with training extension personnel to improve their awareness level about rice export quality/standards. We also consider in training them about rice export marketing, enhancing their competencies which can be useful in promoting rice export potential of the country.

CONCLUSION

A select analysis from the study has focused in evaluating the current situation about the awareness on quality/standards of rice export and its marketing of extension personnel at village and district level in Mekong Delta region, Vietnam. Through the study, we concluded that situation of awareness level of extension personnel on exporting rice quality/standards at village level was found very low (80 % "Poor", 20 % "Medium" levels). In addition, nearly 50 per cent of extension personnel at district level received "Medium" level of awareness. However, this level of extension personnel at district level was higher than those of village level. The independent variables namely "Education" and "Training received" had significant contribution to awareness level of extension personnel.

The finding on the awareness of extension personnel about rice export markets revealed that only 2.2 per cent at district level received high level of awareness. Most of extension personnel at village level received Low level of awareness (87.5 %) and district level received Medium level of awareness (95.6 %). The difference on awareness about rice marketing between district and village level was statistically different at 0.01 level of probability.

The findings has been emphasized the immediate need of available facilities to extension personnel. Planning to recruit the extension personnel who have comparatively

good level of education is needed to train them not only to improve their awareness on rice quality/standards for export, but also consider in training them marketing, enhancing their competencies which can be useful in promoting rice export potential of the country.

REFERENCES

Bui Ba Bong. 2000. Genetic Improvement of Rice Varieties for the Mekong Delta of Vietnam: Current Status and future Approaches. Proceedings of the Conference on Rice Research and Development in Vietnam for the 21th Century – Aspects of Vietnam – India Cooperation. CLRRI, 2000: 123.

Bui Chi Buu and Nguyen Thi Lang. 2000. Some Crucial Issues Need to Understand on Rice Export. (*in Vietnamese*). Publisher of Agriculture. Ho Chi Minh City, Vietnam: 9-10.

Duong Hoa Xo. 200). Country Paper - Vietnam. Operation of Agricultural Wholesale Markets. Asian Productivity Organization, Tokyo:190-192.

FAO. 2005. www.fao.org/database/agriculture.

Lavleesh Garg. 2003. A Study of the Awareness and Efforts of Extension Personnel and Farmers of Ludhiana District to Cope with Provisions of World Trade Organisation in Agriculture. Ph.D. Thesis. Department of Extension Education, College of Agriculture. Punjab Agricultural University, Ludhiana-141004: 79-80.

Le cao Thanh. 2003. The solutions in promotion of Transfer of Technology for Rice Production in the Cuulong River Delta, Period of 2003 – 2010. Ph.D.

thesis of Economics. University of Economics of Ho Chi Minh City, Ministry of Education and Training. (in Vietnamese): 1-2.

Pierre Landell- Mills. 1993. Overcoming Global Hunger: An issues Paper -Environmentally Sustainable Development Proceedings Series No. 3. The World Bank, Washington, D.C: 129-129

Vietnam Food Association. 2005. Paper presented in the workshop on "Vietnam's Rice – The issues in quality, marketing and trademark". Organized in Ho Chi Minh City, Vietnam on May 30th, 2005.

Phân tích trình độ khuyến nông trong lĩnh vực xuất khẩu gao ở ĐBSCL

Việt Nam đã và đang xuất khẩu nhiều lúa gao vào thị trường thế giới và được xếp hang nhì sau Thái Land về số lương gao xuất khẩu. Tuy nhiên, việc xuất khẩu ngày một khó khăn vì canh tranh và nhu cầu của thị trường quốc tế về phẩm chất gao rất đa dạng. Việt Nam ngày càng phải cải thiện năng suất, phẩm chất lúa gạo để đáp ứng yêu cầu mới. Trong xuất khẩu gạo, cán bộ khuyến nông đã góp phần tích cực trong huấn luyện và khuyến khích nông dân sản xuất nhiều về số lượng và tăng nhanh về chất lượng gạo. Do đó, việc rất cần thiết là đánh giá năng lực và khả năng của cán bộ khuyến nông cấp xã và huyên - là những người trực tiếp với nông dân – xem xét nhân thức của họ về chất lượng lúa gao và tiêu chuẩn, thi hiếu của từng thi trường khác nhau. Báo cáo chon lọc từ kết quả nghiên cứu về sản xuất và xuất khẩu lúa gao ở các huyên thuộc hai tỉnh An Giang và Vinh Long. Tình trạng nhận thức về chất lượng lúa gạo của cán bộ khuyến nông cấp xã thuộc vào loại kém và cấp huyện thuộc vào loại trung bình. Đề nghị lập kế hoạch tuyển chọn cán bộ khuyến nông có trình độ tương đối về học vấn và đẩy mạnh công tác đào tao, tập huấn nhất là cán bộ khuyến nông cấp xã. Báo cáo cũng đề nghị tăng cường cơ sở vật chất (computer, internet, telephone...) cho cán bộ khuyến nông cấp xã đang ở mức rất thấp hiện nay, tao điều kiến cho cán bộ khuyển nông nâng cao nhân thức và năng lực chuyển môn trong qua trình Việt Nam hội nhập WTO và thế giới.