Beans Marketing Channels in Sudan: a case Study of the River Nile State.

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المستخلص

هدفت الورقة الى دراسة قنوات تسويق الفاصوليا، دراسة العلاقة بين كمية الفاصوليا المنتجة وطول سلسلة القناة التسويقية ، متابعة العلاقة بين نوع المزارع وقنوات التسويق ، ودراسة الروابط بين إنتاجية المحصول والنوع في ولاية نهر النيل. بنيت تحليل الورقة علي مسح إستبياني مهيكل. إستخدم فقط الإحصاء الوصفي للحصول علي النتائج. أظهرت النتائج أن الرجال هم المزارعين الرئسين لمحصول الفاصوليا في السودان. المزارعين بالمنطقة ذوي مستوي تعليمي جيد وخبرات ممتازة في فلاحة المحصول. عند مقارنة الإنتاجية إعتماداً علي النوع نجد أن الذكور حققوا 9.5 طن\ للهكتار في المتوسط بينما الإناث حققن 2.1 طن\ للهكتار من المحصول. أفضل قناة تسويق هي الأقصر سلسلة ـ من باب المزرعة إلي المستهلك النهائي. الأناث يفضلن بنسبة خمسين إلي خمسين كل من القناة القصيرة المباشرة ثم الأخرى التي تبدأ من باب المزرعة مروراً بتجار الجملة ثم الوسطاء ومنهم إلي المصانع. ختمت الورقة بأن الممثل الأساسي في هذا المجال في السودان هم الذكور(94%). والقناة التسويقية المفضلة هي الأقصر. القنوات ذات كفاءة تسويقية لحد ما. أوصت الورقة المجتمع السوداني بمساعدة الإناث حتي يتساوين مع الذكور في إدارة وزراعة حقول الفاصوليا.

Abstract

This paper aims to study the effective beans marketing; to study the relations between beans quantity produced and the length of the marketing channels, to trace the relations between the gender and the marketing channels, and to study the relations between beans yield and gender in the River Nile State (RNS). The analysis was based on a structured survey questionnaire. A descriptive statistics was only used to obtain the results. The results showed that men were the main beans growers in Sudan. Farmers in this area were well educated with excellent experience in farming beans. In comparing the gender productivities; men realized about 9.5 MT/ha while women realized only 2.1 MT/ha. The best marketing channel was the shortest one from the farm gate to the final consumers. Women preferred fifty to fifty the direct channel and that which begins from the farm gate to whole sailor then via middlemen to factories. The study does conclude that the main actors in this field in Sudan were men (94%). And the best marketing channel was the shortest one. The beans marketing channels were efficient to some extent. The study recommended that women in Sudan should be assisted by the community to equalize the men in the field of beans cultivation.

1. Introduction:

Agricultural is the leading sector in Sudan's economy. The cultivation of legumes is concentrated in the north part of Sudan. However, the north part of Sudan includes Khartoum, River Nile and Northern states. This part of Sudan has two main seasons: winter "Damera" season that begins in the first October and ends in the last of March. The second is the summer "Sayfi" season that starts in first of July and ends in the ends of September. In general legumes, beans (common bean) are included, are cultivated in the winter season that represents the main agricultural season in north Sudan that characterized by being short and warm in Sudan. Many varieties of beans are grown in Sudan include dry beans, snap beans, etc. The marketing issue is very important for both commodity producers and final consumers. One very essential item in the marketing field is the marketing channels .i.e. the way that the commodity traces from the farm gate till reaches to the final consumers. The shorter channel it's the more effective one could be. Marketing channel concept remains fragmented into economic and behavioral approaches, has long neglected the maintenance, adoption, and evolution of marketing channels, and has offered little empirical evidence that authorizes the proposed theories (Stern and Reve, 1980, cited in Jason R.V. Franken and Joost M.E. Pennings. (2005). However, marketing channels are sets of interdependence organizations that make product or service for use or consumption (Stern, El-Ansary, and Coughlan, 1996, cited in Jason R.V. Franken and Joost M.E. Pennings. (2005 cited in Jason R.V. Franken and Joost M.E. Pennings (2005) the interdependence of channel members has been emphasized in marketing literature (Geyskens, et. al, 1996, cited in Jason R.V. Franken and Joost M.E. Pennings. (2005). Nevertheless, both of transaction cost and interdependence theories have been conventionally focus on transactions. The theory of the interdependence has been drawn on transaction cost theory. There are three theories which are built to understand the marketing channels. These include: First, transaction cost theory that has been defined as the costs incurred when the organizing economic exchange. Second, interdependence theory occurs whenever one actor does not completely control all conditions necessary for the achievement of an action or for obtaining the outcome desired for the action (Pfeffer and Salancik, 1978, cited in Jason R.V. Franken and Joost M.E. Pennings. (2005). Third is risk behavior theory; Williamson (1975, cited in Jason R.V. Franken and Joost M.E. Pennings. (2005) stated that the uncertainties coupled with sales volumes, supply of inputs, demand for outputs, and with cash flows are an

important components of the transaction cost theory. To facilitate marketing development it is essential to understand how the system presently operates and what changes are occurring. An efficient and adequate marketing system is a precondition for agricultural diversification, providing better prices to producers and the availability of competitively priced produce to consumers. Physical improvement is usually addressed in two ways: by providing improved market infrastructure and by improving rural access roads. In the case of markets, it is usual to place the main emphasis on the improvement of fresh produce marketing (fruit, vegetables, meat and milk), focusing primarily on rural assembly markets and urban wholesale or semi-wholesale markets (Shomo. F. 2008). In order to make any effective interventions in a marketing system it is necessary to define the types of marketing channels, their linkages and functions. A network of market intermediaries normally provides the linkage between rural and urban areas: Farmers selling directly in the market (more common in rural markets); petty traders and assemblers; wholesalers (and semi-wholesalers); commission agents, sometimes acting as auctioneers, and brokers; transporters and transport agents; and retailers. The overall objective is to study the effective beans marketing channels in Sudan. While the specific objectives are**: t**o study the relations between beans quantity produced and the length of the marketing channels; to trace the relations between the gender and the marketing channels; and study the relations between the production of the common bean and gender. Based on such background, thus, this paper aimed to study efficacy of the beans marketing channels, the relation between beans quantity produced and the length of these channels, the relations between the gender and the marketing channels, and the relations between the production of the common bean and gender.

2. Methodology:

2.1 Data collection source

The study used two types of data (Primary and secondary data). The primary data was collected through a questionnaire method. The respondents were interviewed after they had been informed about the purpose of the study in order to gain their confidence. In this questionnaire standard set of questions has been prepared according to the objectives of the study. The secondary data was conducted from relevant institutional sources.

2.2 Sample size:

The sample size is determined by the desired level of precision and is affected by the level of variability in the population. Scientifically, it is well known that the degree of precision increases as sample size increases. So due to limitations of funds and transportation cost, the researcher took 50 farmers as sample size that strikes a balance between survey costs and the level of precision; taking into consideration the substantial homogeneity of the farmers in the River Nile State in the north part of Sudan. Two sites in the study area were selected which were namely: Barbar and Ad-Damer governances. Thirty and twenty farmers were selected randomly from Barbar and Ad-Damer governances respectively to obtain a sample size of 50 respondents, and then the survey was conducted.

3. Analysis techniques

To achieve the targeted objectives of the study various techniques were used that included table, cross tabulations, figures, and histograms through using SPSS analysis software. The basic statistics (mean and percentage), and tables for the descriptive part of the study gave a general view of the social structure of sample of farmers in the River Nile State.

4. Results

4.1 Socio-economic characteristics:

The results show that almost farmer's gender is men about 96% and only 4% are female (Table 1). Ninety four percent of them are married while the rest 6% are single (Table 2). Almost all sampled farmers (94%) in the River Nile state are educated except 6% are illiterate (Table 3). About 76% mentioned that their main occupation is farming while18% mentioned that their main occupation is other jobs (governmental). The rest 6% mentioned that they have other business besides farming (Figure 1).
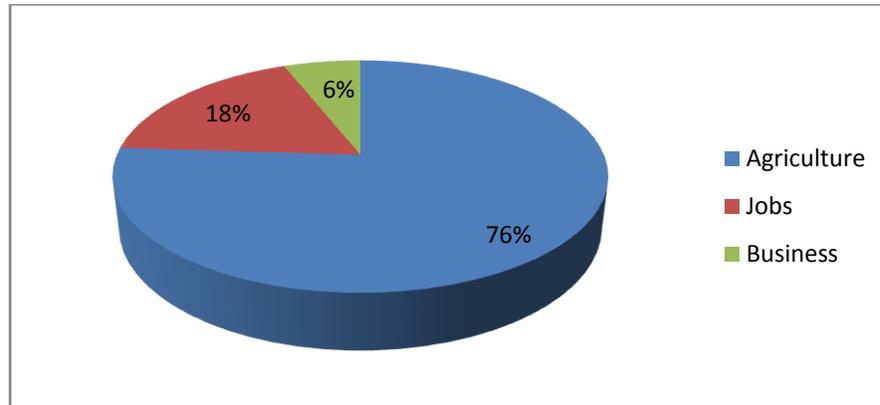
Figure 1: Sampled farmers' main occupations in the River Nile State, 2012 (Source: field survey, 2012).

Table 1: Sampled farmers by Gender (Source: field survey, 2012).

Item	Frequency	Percent%	Cumulative%
Male	48	96	96
Female	2	4	100
Total	50	100	

Table 2: sampled population marital status (Source: field survey, 2012).

Item	Frequency	Percent%	Cumulative%
Married	47	94	94
Single	3	6	100
Total	50	100	

Table 3: Sampled farmer's education levels (Source: field survey, 2012).

Education level	Frequency	Percent%	Cumulative%
Illiterate	3	6	6
Khalwa1	2	4	10
Primary school	14	28	38
Intermediate School	7	14	52
Secondary school	18	36	88
University	6	12	100
Total	50	100	

4.2 Marketing

4.2.1 Sampled farmers beans marketing channels in the River Nile State, 2012

About 38% of the farmers mentioned that the favorite beans marketing channel to them is that direct one that begins from the farm gate ended at the final consumers. However, 32% reported that their preferred marketing channel is: farm gate, village traders, whole sailors, retailers then final consumers. 18% of the sampled population said that their favorite channel is started from the farm gate via whole sailor to retailers then the final consumers. The rest 12% mentioned that they sold their beans from the farm gate to whole sailors then via middlemen to factories .

Table 4. Beans marketing channels in the River Nile State, 2012(Source: field survey, 2012).

Beans marketing channels	Frequency	Percent	Cumulative %
Farm gate to final consumers	19	38	38
Farm gate, whole sailors, to final consumers	9	18	56
Farm gate, village traders, whole sailors, retailers to final consumers	16	32	88
Farm gate, whole sailors, middlemen to factories	6	12	100
Total	50	100	

4.2.2 Beans marketing channels by gender in the River Nile State, 2012

According to their gender dissemination, about 18 men, that equivalent to about 36% of the sample, mentioned that their beans marketing channel is farm gate to final consumers. About 9 men that represented about 18% of the total population cited that they prefer the channel that begins from farm gate coming via whole sailor to end by final consumers. The rest 10% of the male their preference was to begin from the farm gate then to whole sailor then via middlemen to factories. Nevertheless, fifty percent of the women mention that their preferred channel was direct from the farm gate to final consumers while the other 50% of them cited that their beans marketing channel was to begin from the farm gate then to whole sailor then via middlemen to factories (table 6.5).

Table 5: Sampled farmers beans marketing channels by gender in the River Nile State, 2012 (Source: field survey, 2012).

| Beans marketing channels	Gender		Total
	Male	**Female**	
Farm gate to final consumers	18	1	19
Farm gate, whole sailors, to final consumers	9	0	9
Farm gate, village traders, whole sailors, retailers to final consumers	16	0	16
Farm gate, whole sailors, middlemen to factories	5	1	6
Total	50	2	50

4.2.3 Beans marketing channels by education level in the River Nile State, 2012

The results showed that the preferred channel to primary school level farmers was farm gate to final consumer. The university leveled people cited that their preference was farm gate, whole sailors to final consumers. While the farm gate, village traders, whole sailors, retailers to final consumers was preferred by the secondary school level. The last channel, Farm gate, whole sailors, middlemen to factories, was chosen by Intermediate school leveled farmers. On the other hand the farmers that their education level is "Khalwa[1]" (Khalwa is an informal education in North Sudan depends only on reading and writing Holey Quran), they reported that their best beans marketing channel was the Farm gate to final consumers (Table 6.6).

Table 6: Sampled farmers, beans marketing channels by education level in the River Nile State, 2012 (Source: field survey, 2012).

Beans marketing channels	Education level						Total
	Illiterate	Khalwa	Primary school	Intermediate school	Secondary school	University	
Farm gate to final consumers	2	2	9	1	4	1	19
Farm gate, whole sailors, to final consumers	0	0	0	2	2	5	9
Farm gate, village traders, whole sailors, retailers to final consumers	1	0	3	1	11	0	16
Farm gate, whole sailors, middlemen to factories	0	0	2	3	1	0	6
Total	3	2	14	7	18	6	50

Figure (2): beans farmers' marketing channels in the River Nile State, 2012 (Source: field survey, 2012).
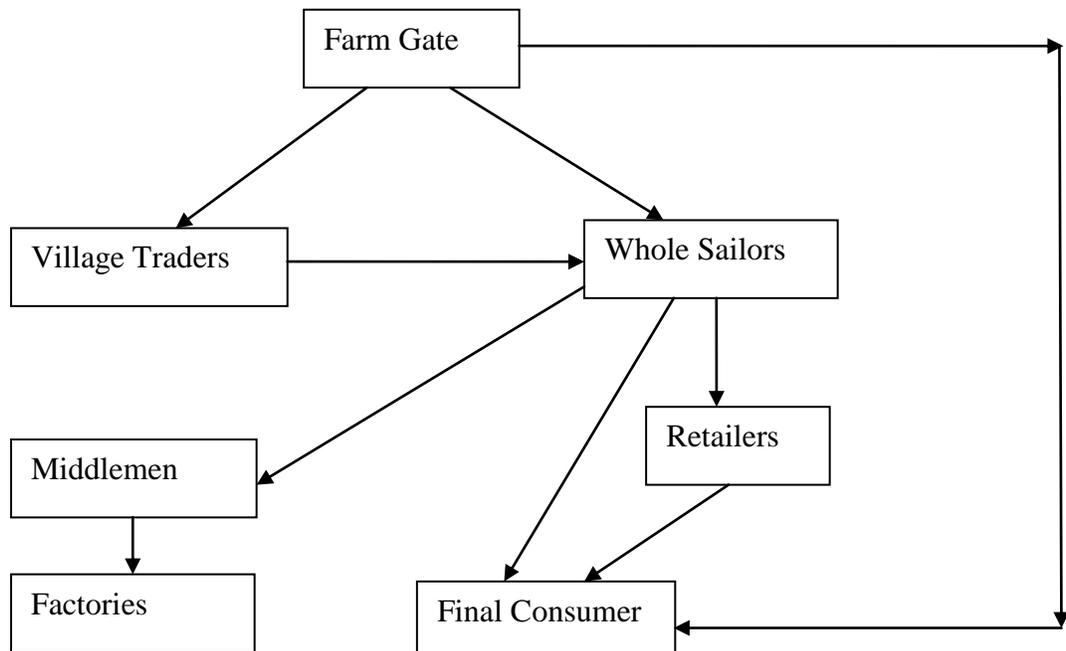
3.2 The total farm beans production (kg/hectare) by gender in the River Nile State, 2012

The total farm beans production in this area was varied from one beans farmer to another. Due to farmers' gender, the results showed that men had a big amount of average of production. They realized about 109.5 sacks (9857 Kg)/hectare in total average area, while the women achieved only 2.38 sack (214.3 kg)/ha in total average area (Table 6.7).

Table 7: The total farm beans production (kg/hectare) by gender in the River Nile State, 2012 (Source: field survey, 2012).

Beans total average production (kg)/hectare	Gender		Total
	Male	**Female**	
214.3	0	2	2
9857	48	0	48
Total	48	2	50

3.3.1 Beans Yield by gender in the River Nile State 2012

According to their sex discrepancies, male achieved high yield (952.4- 1190.4) kg/hectare while women realized low productivity (0- 238.1) kg/hectare (Table 8). This may attribute to fact that men have an experience, energetic; manage their farms under their supervision especially in this area where agricultural activities are generally managed by men. Although they received lower amount of credit, their productivity is high to some extend in common bean crop. This may be due to the efficiency in management and good allocation of the resources.

Table 8: Beans Yield by gender in the River Nile State, 2012 (Source: field survey, 2012).

Sex	Beans Yield 2012/2013				
	0 – 238.1	238.1- 476.2	476.2- 714.3	714.3- 952.4	952.4- 1190.4
Male	23	9	11	4	1
Female	1	0	1	0	0
Total	24	9	12	4	1

3.3.2 Beans Yield according to farmers' marketing channels

In this area the beans yield is varied according to the marketing channels. (Table 9) showed that about 2% of the respondents realized the highest yield (952.4- 1190.4kg/hectare). Nonetheless, this yield was realized under the channel which characterized by being very short; from the farm

gate to final consumers. About 16% of the farmers who belong to the longest channel (Farm gate, village traders, whole sailors, retailers to final consumers) achieved the lowest output (0-238.1) kg/hectare. This situation demonstrates that the shortest channel is the most efficient one.

Table 9: Beans Yield according to farmers' marketing channels in the River Nile State, 2012 (Source: field survey, 2012).

Marketing Channels	Beans Yield 2012/2013 (kg/hectare)				
	0-238.1	238.1-476.2	476.2-714.3	714.3-952.4	952.4-1190.4
Farm gate to final consumers	8	3	6	1	1
Farm gate, whole sailors, to final consumers	3	3	2	1	0
Farm gate, village traders, whole sailors, retailers to final consumers	8	3	3	2	0
Farm gate, whole sailors, middlemen to factories	5	0	1	0	0
Total	24	9	12	4	1

2. Findings and Discussions

The research finds that men are the main beans producers in the study area. They realized about 9.5 metric tons of beans/ ha cited that, Beans farmers are well educated with good experience in beans farming. Also, the results show that the best beans marketing channel was to be directly from the farm to the final consumers. Fifty percent of the women mention that their preferred channel was direct from the farm gate to final consumers while the other 50% of them cited that their beans marketing channel was to begin from the farm gate then to whole sailor then via middlemen ended to factories.

3. Conclusions:

The results concluded that almost beans farmers in study area were men. However, in the study only 4% of women are presented. These women were only owned the farm and they managed them by agent farmers. Nonetheless, the best beans marketing channel in the area is the shortest one i.e. from the farm gate to final consumers.

4. Recommendations:

Based on findings the study does recommend that women in Sudan should be assisted by the community to equalize the men in the field of beans cultivation. The beans marketing channels are efficient to some extent.

References:

Jason R.V. Franken and Joost M.E. Pennings. (2005). "Changing Agricultural Marketing Channel Structures: Interdependences & Risk Preferences". Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, and July 24-27, 2005.

Shomo. F. (2008). "Understanding the Marketing System. "Joint Training Courses on Livelihood Analysis and Adoption & Impact Assessment, 16-27 November 2008, ICARDA, Aleppo, Syria