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An Overview of Marketing of Ghana Natural Products

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Abstract

The study finds strong correlations between natural products business performance and the impeding factors. The impediments include access to finance and markets, lack of herbal market information especially relating to external markets. Additionally, there is lack of processing capacity, while at the same time most if not all the natural products business operators lack technical training relating to product handling. However, there is big potential for success, the top ten traded natural products, may be exploited initially, both domestically and for export market, given range of perceived use. The constraints identified require concerted efforts from all stakeholders to recognize the importance of this sub-sector in providing opportunities to successful development.

An Overview of Marketing of Ghana Natural Products

1. Introduction

For most of the African countries agriculture still remains the mainstay of the economies supplying both food and incomes via marketable surpluses. However, many odds against agriculture such as low productivity, poor prices, and drought among others make it unsustainable. Results thus far show that such dependence has contributed little to neither economic development nor growth. Still many of its people living on and from agriculture remain poor, and are susceptible to hunger and malnutrition. Additionally, over-reliance on a few traditional exports such coffee, tea, and cocoa etc., products whose world prices keep declining has not helped either. At most, this is a futile response to raising incomes of its people, if not spurs any meaningful development. Agricultural may still contribute to development, if the countries could diversify from traditional products to the untapped areas.

The continent's rich botanical heritage offers an excellent opportunity to diversify away from traditional exports. The natural products have a greater appeal to consumers especially in the rich west. Thus, development of natural products as alternative or complimentary to the current mix of tradable products will positively impact the social and economic lives of many people, especially those in the rural areas. Additionally, diversification of the production systems to include natural plants provides a superior route to creating viable agribusinesses in rural communities currently lacking. Natural products happen to have enormous advantages; First, indigenous African plants occur

naturally and so are relatively easy to cultivate commercially. Second, natural plant production is labor intensive rather than capital intensive; a production alternative that minimizes need for capital investment but at the same time maximizing job-creation potential. Third, African communities have extensive knowledge of indigenous plants, creating a natural competitive advantage.

ASNAPP (Agribusiness in Sustainable Natural African Plants Products) a non-profit organization formed in 1999 with funding from USAID (United States Agency for International Development) through Partnership in Food Industry Development in Natural Products (PFID/NP) program and Germplasm initiative in non-traditional crops (through International Institute for Tropical Agriculture (IITA) and Higher Education for Development (HED)) is helping create and develop successful African agribusinesses in the natural plant products sector. The organization focuses on the development of high-value natural plant products that will enable African agribusinesses to compete in local, regional and international markets. These products include herbal teas, culinary herbs and spices, essential and press oils, as well as medicinal plants. Currently, ASNAPP operates in five countries, namely South Africa, Ghana, Rwanda, Senegal and Zambia, working with about 25 agri-enterprises that represent more than 2000 small-scale natural plant suppliers.

The prospects for natural products market is very bright, for example the global nutraceutical market alone is estimated to be worth $60 billion annually in sales of dietary and meal supplements, as well as specialty products. Demand for organic and natural products such as herbal teas, essential oils, herbs and spices, phytomedicines and phytocosmetics is equally good. This growth has been supported by a global swing away

from synthetic products to those that are natural, healthy, sustainably produced and fairly traded. In the context of world trade in natural products, African country's natural forests supply more herbs, medicinal plants and natural food ingredients. The Americans and Europeans are the major consumers of natural products in the global market. Products such as the herbal teas, essential oils, cosmetic and spices have readily available markets. Natural product sales was estimated $34 billion in 2001, it is estimated that Global sales for organic and natural products will reach about $100 billion by 2008 at an annual growth rate of 20-30% (Organic Natural Health, 2001; Marty T. S., and Patrick R., 2004). The United States happens to be the largest user of essential oils and flavor and fragrance, with the aroma therapeutic market segment alone growing from a $316 million dollar business in 1996 to over $454 million in 2001(Alberta Essential Oils, 1996; Datamonitor, 2002).

Indeed there is an untapped natural product potential ranging from raw products to processed ones, to fetch better farmers' returns. However, only a few large enterprises are active in the sector at the expense of rural communities who had in fact been the first to discover the health and nutritional properties of indigenous plants. The ASNAPP Ghana program which commenced in 2000 is currently working on essential oils, lippia tea, grains of paradise, cryptolepis, kombo butter, shea butter and Artemisia, with the focus on the Eastern, Central, Ashanti, Volta, Greater Accra and Northern regions of Ghana.

The natural products industry in Ghana is characterized by low input- low output; mostly operated by small-scale farmers (suppliers) with low levels of levels of formal education and agricultural production knowledge. Thus the current situation on the

supply side may be summarized as lacking regular supplies, of good quality and timeliness. Organizationally, the scale of the operations may be a bottleneck on one hand, but also equally important is lack of information, capital; product quality and assurance mechanisms hindering successful commercialization.

The domestic markets are largely at the low levels of commercialization; the operators have limited technical knowledge about natural products, and limited capital to expand their businesses and exploit the readily available foreign markets. Thus, on the demand side, there may be lack of consumer information as to the range of products, where to find them and what remedies they offer.

Preliminary results from the Ghana business survey show that seven out of ten of the businesses are retailer operated, whose two-thirds supply is dependent on the small-scale farmers. The results also show that virtually all the traders have not received any technical, financial or trade assistance from any organization. At most only 1 out of ten businesses have ventured into external trade. The preliminary results show tremendous potential, however a lot need to be done to tap on this potential.

This paper has the objective of highlighting the marketing impediments facing the natural products market in the retail and wholesale portions of the chain in Ghana. Specifically, (i) profile the technical, financial, organizational, etc., constraints the traders face (domestically and externally), (ii) profile the natural product range and their functions (iii) suggest policy interventions.

2. Survey and Analytical Methods

Rutgers University and the collaborating partners in the five countries (South Africa, Ghana, Rwanda, Senegal and Zambia**)** initially under PFID/NP and HED/IITA project

prepared separate survey instruments (farmers and traders) jointly to elicit information on production and marketing. The survey instruments were pre-tested for country specific production and marketing conditions, in this study the focus is on traders. Data collected covered the market chain portions of production; wholesale and retail with additional information obtained on export trade as well. In addition, the survey collected information on traders' socio-economic data. Additionally an empirical model is developed to estimate the relationship between the wholesaler/retailers Natural Products business annual turnover and socio-economic attributes.

$$BUSTRNOVR = \beta_0 + \beta_1 BELOW17AGE + \beta_2 GENDER + \beta_3 AGE36-50 + \beta_4 SECSCHOOL + \beta_5 TECHSPRT + \beta_6 CMPRTY + \beta_7 SUPLYCONST + \varepsilon$$

Where the variables definitions are as in Table 6.

3. Survey design

A sample of 55 traders was randomly selected from Accra and Kumasi, the two major cities of Ghana. The cities were selected as the sampling frame based on their cosmopolitan nature, and the fact that they account for the bulk of natural plant Products trade (exports, wholesaling, distribution, and retailing in the country. Trained personnel personally administered the interviews from the collaborators at the country office. The respondents were assured of confidentiality, by letting them know that the respondents were to be identified by a survey number, as an input to the summary results. Of the 55 respondents chosen, 50(90%) agreed to be interviewed. The surveys were conducted between August and December 2005.

4. Results and discussion

This analysis is based on a sample of 50 wholesale-retail operators engaged in the natural plant (herbal) products trade.

4.1. Operators Characteristics

Table 1 presents results on the economic and demographic attributes of the business operators. The results show that out of the 50 respondents 37(74%) were categorized as retailers, 10(20%) were operating both as retailers and wholesaler, with the remaining 3(6%) being wholesalers.

From the table it can be seen that females were the dominant operators (82%). The majority age group were those in the (36-50 years) category (54%), followed by those in the 21-35 years age category (22%), respondents who were >65 years and <20 years were least represented.

The results show that most of the operators had primary school education (1-7th grade) representing 44% of the respondents. Almost 16% had no education at all, with only 14% of the respondents having college and university education.

Eight out of the ten operators were married, 60% of them having at least 3 children. Almost 68% of the households were of 6-person size. In terms of residence, 42% of the operators indicated that they lived in the same neighborhood for more than 20 years, with 32% and 28% having lived in the same neighborhood for <10years, and between10 and 19 years, respectively. In terms of off-business employment, only 5 percent of the operators indicated to have been employed elsewhere.

Table 1: Wholesale Retail Business operators Characteristics

Attribute	N=50	%
GENDER		
Female	41	82
Male	9	18
AGE		
Less than 20 Years	1	2
21-35 years	11	22
36-50 years	27	54
51-65 years	9	18
Over 65 years	2	4
EDUCATION		
None	8	16
Primary school (1-7 grade)	22	44
Secondary school (8-12 grade)	13	26
College/diploma certificate	6	12
University diploma degree	1	2
MARITAL STATUS		
Widower	5	10
Married	41	82
Separated	1	2
Divorced	3	6
Number of years in Neighborhood		
<10 years of Residence	15	30
10-19 years of Residence	14	28
20 or more years of Residence	21	42
Household Size		
Four or less members	6	12
Five members	10	20
Six or more members	34	68
Number of children in a household		
One Child	8	16
Two children 2	12	24
Three or More	30	60

4.2. Business Characteristics

Table 2 presents results on business characteristics. The majority of the herbal products businesses are at the retail end of the marketing chain. A- third of the operators reported to have been in the herbal products business for more twenty years, with about 20% of

the respondents reporting to have operated such a business for <8 years, 9-14 and 15-19 years, respectively.

Table 2: Business Characteristics

Attribute	N=50	%
Ownership		
Wholesaler	3	6
Retailer	37	74
Retailer/Wholesaler	10	20
Number of year in business		
8 or less years in business	13	26
9 to 14 years in business	11	22
15-19 years in business	11	22
20 or more years in herbal business	15	30
Business Location		
Urban	47	94
Sub-urban	3	6
Possible supply sources		
Farmers	46	94
Agents	2	4
People directly	1	2
Actual Supply sources for the herbal products		
Farmers	1	2
Forest	1	2
Agents	16	32
Middlemen	30	60
Messa Heraal Centre	1	2
Nigeria	1	2
Family Labor unpaid		
At most one member of the family works unpaid for the business	30	60
At least 2 members work for the business without pay	20	40
Paid Labor		
No labor	41	82
At most one paid labor	2	4
At least two paid employee	7	14
Annual TURNOVER		
Annual turnover <7450000 Cedis	12	24
Annual Turnover between 7450000 -11999999	12	24
Annual Turnover>12000000	26	52
In US $, 7450000=812.8; 11999999=1309 @. 000109$=1 Cedi		
Off business employment		
YES	5	10
NO	45	90

The respondents described their business location as largely urban (94%); the reaming 6% described their location as sub-urban, interestingly, there was no single business located in a rural area.

The predominant herbal product suppliers were middlemen and agents, supplying 60% and 32 % of the merchandise, respectively. Farmers and forest sources of merchandise virtually non-existed, however, some of the operators reported to have vendors from outside the country (e.g., Nigeria and Mecca). The herbal businesses were largely operated by a family member with little or no hired labor (about 14% of the respondents indicated that they hired paid labor). Importantly, the turnover for most operators ranged from as low as 1.2 to 2.3 million Cedis (U.S dollars $800 to about $1400).

4.3. Respondent Views on Herbal Products Business Constraints

Table 3 presents results on factors impeding herbal products trade. Overall, 86-96% respondents reported that before the ASNAAP/PFID_NP/ALO/IITA project, prerequisites for exploiting the herbal trade lacked; these included absence of technical advise, financial assistance, herbal business related information, inadequate or total lack of processing capacity and market access, above all absence of any kind of herbal business training. On a positive note, the situation seems to be improving after the ASNAAP/PFID_NP/ALO/IITA project was launched, given that the projects' overriding objective is to address such problem, to facilitate capacity building for successful entrepreneurship.

Table3: Herbal cosmetic Industry Constraints (in percent)

Before the Project: Business Constraints	YES	NO	
Ever received trade-finance or technical training	14%	86%	
Technical advise	12%	88%	
Processing and marketing	2%	98%	
Information training	14%	86%	
Financial assistance	4%	96%	
Vocational training	4%	96%	
Supply Chain Issues			
Is local processing infrastructure adequate?	6%	94%	
Needs for improving distribution chain	92%	8%	
Do you share information with buyers/retailers/consumers?	84%	16%	
Government Regulation and Licensing Problems?	YES	NO	
	6%	94%	
What trade problems do you face?	YES	NO	
Stiff regulation, high risk of rejection	98%	2%	
Ranking Business Constraints	HIGH	AVERAGE	LOW
Human Resources	0%	16%	84%
Access to Finance	82%	10%	8%
Access to Information	40%	48%	12%
Access to markets	36%	32%	32%
Labor and Logistics	6%	28%	66%
Taxes	4%	28%	68%
Management	32%	14%	54%
Technical support	38%	18%	44%
After The project: Impact of the Project			
Does your business have current support?	100%	0%	
If yes to above then			
Technical advise	78%	22%	
Processing and marketing	96%	4%	
Short/seminar courses	100%	0%	
Financial assistance	94%	6%	
Agricultural certification	96%	4%	
Other project Assistance			
One-stop office for National Herbalist association	2%	98%	
Research	2%	98%	
To Sell under Sheds	2%	98%	

Respondents were asked to express and rank their views on factors impeding the herbal products business. On top of the range, 82% of the respondents identified access to finance as the most constraining factor, with access to information being ranked

second (40%). Other impeding factors included; technical support, access to markets and management, with about 30% of the respondents viewing them as a problem.

The Ghanaians herbal business operators did not view human resources, labor, and taxes as a high priority problem. Almost 84%, 66%, and 68 % of the respondents felt that human resources, labor and taxes were low priority problem, respectively.

Issues pertaining to supply chain i.e., sharing of information between suppliers and traders, development of long term partnering supplier relationships and development of quality standards, if absent, will ultimately impede successful launching of internal and export trade in herbal products. However, the Ghanaian operators reported to be sharing herbal trade information with their vendors, albeit at low levels compared to well coordinated supply chain systems in the west.

The results show that the herbal products business operators rarely ventured into the exported trade, only about 2% of them reported to have exported to some European countries and to the Far East, particularly to China. A similar proportion, had tried to export to US, however the results are encouraging, given the US market demands, in terms of quality, regularity of supplies and quantities. Contributing to the dismal performance of export trade were factors such as lack of business contacts in such countries, inexperience in export trade and limited operational capital.

4.4. Respondent Views on the Herbal Business Future prospects

Table 4 presents results on the respondent views about the future of the herbal industry. Although the ASNAPP the project has been on the ground for not long enough to carry out some meaningful evaluation, the respondent viewed its presence positively, and gives

Table 4: Future Prospects of the herbal cosmetic industry (in percent)

	Good	Neither good nor Bad	Not sure	
Future prospects of the herbal cosmetic industry?	96%	2%	2%	
	Decrease	No Change	Increase	
What do you expect happen to turnover in 1-2 years	8%	4%	88%	
What do you expect happen to Staff employed in 1-2 years	0%	52%	48%	
What do you expect happen to profit in 1-2 years	4%	4%	92%	
Do you export your produce?	YES	NO		
	0.02%	0.98%		
Exports to other countries	German	China	Switzerland	Spain
% of business exporting	4%	2%	2%	2%
Ever exported to USA?	YES	NO		
	0.02%	0.98%		
What was your US contact?	Trade shows	None		
	0.02%	0.98%		
Number of organizations exported to in the U.S	Yes exported	NO		
Number of organizations exported to in the U.S	Yes exported	NO		
	6%	94%		
Do you now have ANY business representative in the U.S?	YES	NO		
	0%	100%		
Did you meet their Import requirements	Yes	Did not apply		
	2%	98%		
Reasons for not meeting US IMPORT Standards				
Don't Know	94%			
Financial Constraints, no direct representative	2%			
No direct representative	2%			
Not Export Ready	2%			
Compared to US How will you rate your business?				
In terms of ….	Better	Same	Worse	Don't Know
Quality	84%	8%	8%	0%
Price	94%	4%	2%	0%
Package	4%	94%	2%	0%
Variety	68%	12%	18%	2%
Availability	64%	12%	24%	0%
Labeling	0%	0%	96%	4%
Supply consistency	42%	32%	22%	0%

them a high sense of optimism. Almost nine out of ten respondents view the future of the industry to be bright. Almost 88% of the respondents see their turnover increasing, with 92% hoping that that their profits will increase.

When the Ghanaian operators compare themselves with US, they view their products to be of better quality and better priced. Further, the results show that, they have better varieties, which are readily available compared to the US. The results indicate that Ghanaian herbal products traders admit the US labeling of such products is better.

5. Commonly Traded Natural Products and Perceived Uses

Table 5 presents results on the types of natural products commonly traded and the perceived uses. The results show that multi-uses for the most of the natural products and largely the uses are medicinal. Across all the business, Khaya senegalensis was the top ranked natural product; with a diversity of perceived uses ranging from being used to treat stomach ulcers to being used as an appetizer. Lower category products included among others: terminalia ivorensis (perceived to treat diarrhea, menstruation pains and ulcers); Akata (perceived uses included treating malaria and other fevers). However, there also a number of natural products, though not heavily traded, were providing some special remedies.

Table 5: Distribution of Top Ten Natural/Herbal Products by Ghanaian Wholesalers/ Retailers

Rank	Product Name	Uses	Average Quantity Distributed /Sold by Wholesaler/Retailer (Metric Tons)	Average Price Per Metric Ton(Cedi/ton)
1	Khaya senegalensis	Appetizer, Blood tonic, Fever, Malaria, Stomachache, Stomach Ulcers, Waist Pains, Fresh Delivery, Menstrual Pains, Headache, Ulcers	1.08	2290.16
2	Alstonia boonei	Convulsion, Ulcer, Fresh Delivery, Measles, Measles, Stomach Ulcer	0.34	2633.33
3	Paullinia pinnata	Bone Diseases, Fertility Enhancer, Fracture, Rheumatism, Joint Diseases, Waist and Joint Pains, Stomach Ulcer	0.26	1873.44
4	Enantia polycarpa.	Fever, Malaria Fever, Stomach Ulcer	0.13	4650.00
5	Kokrodoso	Fresh Delivery, Ulcer, Stomach Ulcer, Menstrual Pains, Post partum, Fresh Delivery	0.32	2725.93
6	Pycnanthus angolensis	Blood Tonic, Constipation, Menstrual Pains, Unstable Pregnancy, Stomach Ulcer	0.28	1414.81
7	Terminalia ivorensis	Diarrhea, Menstruation Pains, Ulcer	0.28	1889.63
8	Rauwolfia vomitoria	Phrodisiac, Piles, Blood Cleansing, Stroke & Kooko	0.16	1539.05
9	Ricinodendron heudelotii	Elasticity of the Womb, Increased Fertility, Menstrual Disorder & Pains	0.05	2431.11
10	Akata	Fever, Malaria Fever	0.05	2000.00

6. Regression analysis

Table 6 and 7 present the regression results that related natural products business turnover to the operators' socioeconomic and other value attributes. The results show that the socio-economic variables associated with presence of young people in a

household (children below 17 years of age) and the operator's age to be positively impact business turnover. The results may imply while contributing to keeping business expenses minimal the <17 years family members (children) provide the necessary in kind labor for running the business; presence of such young people compared to those business families without children will therefore contribute positively to the business turnover. The age of business operators ranging from 30 to 50 years compared to those outside this age range was found to impact business turnover positively. Results that may reflect mature operators who are likely to make optimal business decisions ultimately affecting business turnover. The results also show that male operators compared to females negatively impact business turnover. Compared to need of other education levels (primary and college), Ghanaian natural product business operators may only need secondary school education to run a successful natural product business.

Table 6: Descriptive Statistics of Explanatory Variables Used in the Regression Analysis

Variable	Description	Mean	St-dev
BELOW17AGE	Number of persons Below 17 Age group	2.78	1.607
GENDER	=1 if operator is Female;0 =otherwise	0.82	0.388
AGE 36-50	=1 if operator Age was between 36and –50;0 =otherwise	0.54	0.503
SECSCHOOL	=1 if operator education was at the Secondary School (8-12 Grades) level; 0 =otherwise	0.86	0.351
TECHSUPRT	=1 if operator received technical support;0=otherwise	0.38	0.490
CMPVARTY	=1 if respondent viewed domestic product variety better thanImported;0=otherwise	0.68	0.471
SUPLYCONST	=1 if respondent viewed his supply to be consistency viewed to imported sources; 0=otherwise	0.42	0.498

Table 7: Regression Model Results

Variable	Coefficient	t-value	Pr > |t|
Intercept	-281	-0.20	
Number of persons Below 17 Age group	389	1.72	10%
Male vs. female)	-5,024	-3.77	1%
Age 36-50 vs. other age groups	2,182	3.06	1%
Secondary School (8-12 Grades) vs. other education levels	2,592	1.84	10%
Technical support viewed important vs. not	2,012	2.56	1%
Local variety better compared to imports	-1,245	-1.62	
Consistency of local product supply compared imported	1,785	2.40	5%
R^2= 0.53; Adj- R^2 = 0.45 Note: Parameter Estimates figures are in Millions of Ghanaian Cedi's			

The regression model also tested for the influence of various operators' views on a number of natural products concerns such as business financing; marketing, quality and product supply and variety consistency on business turnover. The results demonstrate that technical support contributes positively to business turnover. Thus establishment of product standardization, quality control and assurance are seen as measures that will contribute to the business well being. The results also show that consistency of product supply will positively contribute to business turnover. The results may imply that confidence about the regularity of the product suppliers a supply chain factor that may be critical for business success. The results show that variety is a source of business concern, when Ghanaian business operators compare their product varieties to the imports; local variety compared to imports impacting the business turnover negatively.

The implications is that a lot need to be done in this area of quality control to attain competitive edge to match other producers of natural products.

7. Conclusions

The study analyzed Ghanaian natural (herbal) products market with focus on the wholesale-retail end of the marketing chain. The results show evidence of real factors impeding the natural products (herbal) business in Ghana. The impediments include access to finance and markets, lack of herbal market information especially relating to external markets. There is lack of processing capacity, above all the operators lack technical training relating to herbal products handling. There are a number of commonly traded natural products that have potential for future developments once the constraints are addressed.

The regression results collaborate these results in that technical support, supply consistency and quality standards influence business turnover. Similarly, the age of the operator, education and labor have a bearing also on the turnover. Strengthening technical support and efforts to establish continuity and regularity of the supplies as well as quality standard will contribute positively to the success of the Ghanaian natural products business.

The constraints identified calls for concentrated efforts from all stakeholders for successful exploitation developmental opportunities offered by natural products market. On the part of the operators, they are upbeat about the future given the presence of **ASNAPP** that has started addressing some of the issues.

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