Comparative profitability analysis of cowpea and soybean enterprises in Niger State of Nigeria

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ABSTRACT

This study determined and compared the profitability of cowpea and soybean enterprises in Gurara area of Niger State, Nigeria. A multistage random sampling procedure was used to draw one hundred and twenty (120) samples for the study. Data used for the study were elicited through structured questionnaire. Descriptive statistics, farm budgeting techniques and the T-test were used for the analyses. Results show that cowpea and soybean farmers in the study area are operating at a small scale, where the mean farm sizes for cowpea and soybean farmers were found to be 1.82 and 2.85 hectares respectively. The profitability analysis revealed both cowpea and soybean enterprises to be profitable. However, cowpea production was discovered to be more profitable than that of soybean. The cowpea enterprise had a gross margin of $698.82 and a net farm income of $659.99 per hectare. The return on Dollar invested was found to be 1.43 (143%) for cowpea. The Gross Margin for soybean enterprise was estimated at $186.80 per ha, and a Net Farm Income of $153.59 per hectare was calculated. The return on Dollar invested for soybean was estimated at 0.38 (38%). The T-test analysis showed that the difference in the profitability of cowpea and soybean enterprises is significant at the 5% level of significance (t-tabulated value = 1.980, t-calculated =1.926). Both cowpea and soybean farmers experienced challenges in their farm operations. The challenges identified include poor credit facility, high cost of labour, lack of capital, and inadequate extension contact. Others include lack of market price information, and poor access to market centers due to bad roads. The study therefore recommends that credit facilities should be made available especially for cowpea farmers. Also, extension service coverage by concerned government agencies should be intensified.

Introduction

The choice of crop enterprise to embark upon is premised on the potential benefit envisage by the farmer. The cultivation of legumes in Nigeria has been known to be lucrative based on the financial returns made by farmers who participate (Aboki and Yuguda, 2013: Auko, 2006). Cowpea and soybean are important leguminous crops cultivated in Nigeria (Dashiell, 1998: Henry, 2014), this is because apart from the good price the crops attract on the market; they are viable sources of cheaper alternative protein (Ya'aishe, *et al.*, 2010). Furthermore, the importance of the crops to Nigeria's economy is that they are export commodities that provide the needed foreign exchange for the country. In recent times, farmers in Nigeria have had good return for crops cultivated, this was as a result of increased agricultural commodity prices (Okojie, 2016). The rural consumer price index shows a sharp increase in the last four years for agricultural produce (Fig. 1), implying an improved price regime for farmers. It is on record that as farmers are smiling home from the market because of a good sale: Consumers are dissipated by high agricultural produce prices (FEWSNET, 2017).

For farmers to leverage on the higher income opportunity provided by a crop enterprise, considering the prevailing price regime; the viability of portfolio choices available to them must be carefully assessed in order to have a good return at the end of the season (Fan *et al.,* 2013). Hence, the identification of the crop that will enhance the overall returns for the farmer is a task that must be carried out, and the decision must be supported scientifically.

The profitability of a crop enterprise plays an important role in the allocation of resources by the farmer during planning (Kahan, 2013). However, when faced with seemingly good alternatives, the farmer may be in a dilemma of choice. The choice of which crop to cultivate should not be on the apparent likelihood of its profitability over another; it should rather be on a realistic basis as elucidated by scientific methods (Fan *et al*., 2013). It is therefore important that an informed decision is made by the farmer on the choice of crop to cultivate with a view to earning higher income. Farmers in the study area cultivate both cowpea and soybean crops as food and cash crops.

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Soybean has enjoyed attention by farmers due to the lesser rigor involved in its cultivation as compared to cowpea. Also there is the perception that soybean is more lucrative in terms of returns than cowpea, hence the interest by farmers. How can the lucrativeness of a crop over another be determined devoid of prejudice? The distinction must be carried out through a statistical process; hence the need for this study. Comparative profitability studies on cowpea and soybean showed Nigeria to be the world's largest producer of cowpea and the second largest producer of soybean in Africa (Sahel, 2017; FAO, 2004; Buhari, 2017). Available studies show comparative analysis between farming systems, agronomic endowments of crops and technical coefficients.
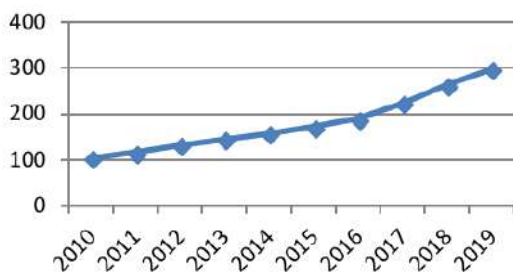

Fig. 1. Rural Consumer Price Index (Source: Central Bank of Nigeria)

Nemes (2009) carried out a comparative profitability analysis of organic and non-organic farming across countries. She asserted that, it is generally hard to conclude the profitability of one system over the other. This is because there are other location specific factors that may be responsible. She proposed a multi-disciplinary approach involving the whole farm. However, the conclusion was that organic farming is economically profitable than conventional agriculture. Kizito (2012) compared the performance of agriculture under military and civilian rule in Nigeria. The comparison has to do with the proportion of public expenditures in the two regimes in Nigeria. He reported that the performance of agriculture during the military regime is better than that found under the civilian rule; even though the allocation to agriculture was higher in the civilian regime. Sangari (1992) compared the relative productivity and profitability of traditional and modern irrigation systems with a view to assess the impact of modernization of indigenous irrigation technologies on the agricultural economy of the peasants in the Donga River Basin of the old Gongola State of Nigeria. The results indicated that while the cost of production and farm income seem to vary significantly between the three irrigation management practices, they do not vary significantly for low-lying and raised lowland sites under each irrigation type. Also, Ogunniyi (2012) compared technical, allocative and economic efficiencies between improved and traditional rice farmers in Oriade local government area of Osun state. He reported that farm size and agrochemicals are significant factors influencing the two rice technologies in the area. The technical efficiency value for improved rice production was reported to be higher than that of traditional production. Even though there are comparative studies on agricultural systems and other aspects of the sector, there are no studies ascertaining the comparative profitability of cowpea and soybean in the study area. It is on this premise that the study estimated and compared the profitability of the two legume crops with a view to providing farmers with a basis for making a profitable choice between cowpea and soybean crops depending on the objective of cultivation.

Materials and Methods

Study area

The study was carried out in Gurara Local Government Area of Niger State, Nigeria. Crops cultivated in the study area include soybean, sesame, cowpea, groundnut, millet and maize. Farmers in this area intensively cultivate both cowpea and soybean as food and cash crops.

Data Sources and sampling procedure

Data for the study were collected from primary source. Multi-stage random sampling technique was used for the study. The procedure involved the random selection of three (3) communities, namely: Izom, Lambata and Gawu in the first instance. After which twenty (20) soybean and cowpea farmers each, were randomly selected from each of the communities. The total number of samples used for the study is a hundred and twenty (120) farmers.

Method of data collection

Structured questionnaire was used to collect data from the crops farmers. Data collected include input and output details. Descriptive statistics, the Gross Margin, Net Farm Income, and Return on Dollar Invested were used for the analyses. Furthermore, the student t-test was utilized to determine whether or not there is a significant difference between the estimated profit levels for the two legume crops. The gross margin and net farm income were used to compute the value of sale over cost of production and profitability of the soybean and cowpea enterprises. Gross Profit Ratio measures the overall resource performance of the farm, the lower the ratio the higher return per Dollar. The gross margin model and the net farm income are presented in equations 1 and 2.

$$GM = TR - TVC \quad .... (1)$$

Where,
GM = Gross Margin
TR = Total revenue (Py. Y)
TVC = Total variable cost
Py = Price per unit yield ($)
Y = Total quantity of yield (kg) per ha

NFI =TR - (TVC + TFC)   .... (2)

Where,

NFI   = Net Farm Income/ha
TR   = Total Revenue/ha
TVC   = Total Variable Cost/ha
TFC   = Total Fixed Cost/ha

$$GR = \frac{TFE}{GI}$$ .... (3)

Where,

GR   = Gross Ratio;
TFE   = Total Farm Expenses
GI   = Gross Income.

The Returns On Dollar invested (ROI) was calculated using the formula:

$$ROI = \frac{Net\ revenue}{Total\ production\ cost}$$ .... (4)

The return on investment (ROI) shows the relationship between the gains of an investment and the cost incurred. A higher return on investment shows a favorable performance of the enterprise as compared to its cost. The T test is a handy tool in determining whether or not there is a statistical difference between two values. It is utilized in the comparison of two means coming from different samples. In order to determine if there is a difference between the profit levels of the two enterprises, the T test was utilized in this study (Kim, 2015, Lynne *et al.*, undated, Singh and Masuku, (2012). The task was achieved using the formula below:

$$T = \frac{\overline{X}c - \overline{X}s}{\sqrt{\frac{S_c^2}{nc} + \frac{S_s^2}{ns}}}$$ .... (5)

Where,

$\overline{X}c$ = Mean profit of cowpea farmers

$\overline{X}s$ = Mean profit of soybean farmers

S_c^2 = Variance of the profit variable of cowpea farmers

S_s^2 = Variance of the profit variable of soybean farmers

n_s = Number of respondents for soybean

n_c = Number of respondents for cowpea

Results and Discussion

Descriptive analysis of the respondents

Majority of the cowpea and soybean farmers in the area are within the age range of 26 – 55 years. The group constitutes 91.7% and 86.6%, of the total respondents with mean ages of 37 and 38 years respectively (Table 1).This shows that the respondents are within the productive age range, hence, it is assumed that the respondents are capable of embarking on labour demanding cultivation activities. The result also implies that the respondents may be engaged in off-farm activities in order to increase income flow. This finding

is corroborated by the work of Steven (2015) who asserted in a study that youths constitute the majority of beneficiaries as well as non-beneficiaries of commercial agricultural development project for maize cooperative groups in Kano and Kaduna states of Nigeria. Gender wise, 86.7% and 81.7% of the respondents were of the male gender for cowpea and soybean farmers respectively. This finding implies that the legumes farmers in the area are predominantly of the male gender.

Table 1. Socioeconomic characteristics of cowpea and soybean Farmers

Age (yrs)	Cowpea		Soybean	
	Frequency	Percentage	Frequency	Percentage
Less than 25	1	2	2	3.3
26-35	12	20.0	15	25
36-45	25	42	23	38.3
46-55	18	30.0	14	23.4
Above 56	4	7	6	10.0
Total	60	100	60	100
Gender				
Male	52	876.7	49	81.7
Female	8	13.3	11	18.3
Total	60	100	60	100
Educational Level				
Quranic	14	23.3	12	20
Primary	5	8.3	4	6.7
Secondary	15	25	12	20.0
Tertiary	26	43.4	32	53.3
Total	60	100	60	100

Source: Field Survey, 2017

Regarding education, majority of the farmers (43.3% and 53.3% for cowpea and soybean respectively) have undergone tertiary education. Findings further revealed secondary education to be the next most acquired among the respondents. The implication of this finding is that most of the farmers cultivating the two crops have the requisite exposure to organized learning experiences. It can therefore be asserted that these groups of farmers are mainly driven by the profit potential of the crops. With the recent policy of government encouraging youths to utilize opportunities in the agricultural sector of Nigeria, it can also be asserted that educated youths are responding to the invitation by government. Moreover, exposure to educational experiences plays a vital role in decision making regarding production activities on farm. This is because educated farmers are better adopters of agricultural innovations which is an underlying factor to higher yields (Ntshangase *et al.*, 2018).

Production characteristics

The findings revealed that about 90% and 76.7% of the cowpea and soybean farmers in the study areas, obtained their farmlands through inheritance (Table 2).This is an indication of the existence of traditional land tenure system operating in the study area. The finding is corroborated by Bwala and Aniobi (2018) and Ogundari (2006) who also found inheritance to be the major mode of land acquisition in their study area. This finding, however, does not negate the existence of land acquisition through other means such as purchases and

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rents. Furthermore, about 91.7% and 64.9% of cowpea and soybean farmers, cultivate farm sizes between 0.1- 2 hectares respectively. The average farm size recorded among the respondents for the two crops is 1.8 hectares. This implies that both cowpea and soybean farmers are predominantly small-scale operators. Small-scale farms range from 0.1 hectare to 2 ha holdings (World Bank, 2003). This result is in consonance with the findings of Kolawole and Ojo (2007) who reported that most farmers in Nigeria operate on a small scale. These groups of farmers are most often scattered across wide expanse of land with sizes ranging from 0.5-3.0 hectares. Further analysis showed that family labour used in the

production of cowpea and soybean is 61.7% and 28.3% of total labour required respectively. While hired and family labor was observed to be 28.3% and 63.3%, respectively (Table 2). This finding is corroborated by Rahman and Mali (2011) who reported that the majority of the small scale farmers in their study area are poor and usually utilize family labour. Furthermore, the majority of cowpea (90%) and soybean (95%) farmers in the study area carry out their farm activities without sourcing for external finance. The observed low patronage to credit facilities by the farmers can be attributed to the fact that most of them don't have access to formal financial institutions.

Table 2. Distribution of Respondents According to Production Characteristics

	Cowpea		Soybean	
	Frequency	Percentage	Frequency	Percentage
Land acquisition				
Inheritance	54	90.0	46	76.7
Purchase	5	8.3	9	15.0
Borrowing	1	1.7	5	8.3
Total	60	100	60	100
Farm size (ha)				
≤1-2	55	91.7	39	64.9
2.1-4	2	3.3	16	26.7
4.1-10	3	5.0	3	5.0
10- above	0	0	2	3.4
Total	60	100	60	100
Source of Labor				
Family	37	61.7	17	28.3
Hired	6	10.0	5	8.3
Both Hired and Family	17	28.3	38	63.4
Total	60	100	60	100
Source of Finance				
Self-finance	54	90.0	57	95.0
Relatives and friends	1	1.7	0	0
Agricultural Banks	1	1.7	0	0
Cooperative Societies	4	6.7	2	3.3
Commercial Bank	0	0	1	1.7
Total	60	100	60	100

Source: Field Survey, 2017

Profitability of cowpea and soybean

Profitability is a tool used to determine the state of a farm enterprise. The result in Table 3 showed that the quantity of cowpea seeds planted by farmers is 25kg/ha with an average market price of $1.17 per kg. The cost of seeds amounted to 6.3% of the total cost of production. The quantity of fertilizer used by the farmers was reported to be 65kg/ha with an average market price of $0.40 per kg; this amount constitutes 5.6% of the total cost of production. Furthermore, the quantity of agrochemical used by the farmers was 7L/ha with an average market price of $5.01 per liter; this amount constitutes 7.6% of the total cost of production.

The cost of labour includes that for planting, land preparation, weeding, fertilizer application and harvesting. Family and hired labour used were computed on the basis of man-days of hired labour and opportunity cost for families. A wage rate of $2.22 per man-day was used for the estimations, a total of $148.92 and $132.92 was estimated for family and hired labour respectively. Labour costs for family and hired hand in percentage

were calculated to be 32.2% and 28.8% of the total cost of production respectively. While the total cost of fixed inputs (depreciation of tools and tractor costs) incurred in cowpea production was calculated to be $38.83 and constitutes 8.4% of the total fixed cost.

Estimations also revealed total revenue (TR) to be $1,120.89 while the total cost of production (TVC + TFC) as $460.90 for cowpea enterprise (Table 3). The gross margin and net farm income for cowpea were therefore, estimated as $698.82 and $659.99. The average rate of returns on investment (return per Dollar invested) was estimated to be 1.43 (143%). This indicates that for every $1 invested in cowpea production, a profit of $1.43 with a gross ratio of 0.41 is made by the farmers. It can therefore be concluded that cowpea production in the study area though on a small scale, is profitable.

For the soybean enterprise, the quantity of seed planted was reported to be 36kg/ha with an average market price of $0.89 per kg. This cost amounts to 7.8% of the total cost of production (Table 3). Concerning fertilizer usage,

quantity estimated was 89kg/ha with an average market price of $0.35 per kg. The quantity of agrochemical used was 4L/ha with an average market price of $4.64 per liter. Furthermore, labour costs consisted of fertilizer applications, planting, land preparations, weeding and harvesting. Family labour cost was estimated at $79.76 per hectare constituting 19.9% of the total cost of production. For hired hands, an average labour cost per hectare of $171.56 was estimated making 42.9% of the total cost of production. Furthermore, the total cost of fixed inputs (depreciation of tools and tractor costs) incurred on soybean production was estimated at $33.21 and this constitutes 8.3% of the total fixed cost. Results also show that total revenue (TR) for soybean enterprise was $553.82 while the total cost (TVC + TFC) was $400.23. The gross margin and net farm income as estimated were therefore $186.80 and $153.59 respectively. The average rate of returns on investment (return per Dollar invested) was calculated at 0.38 (38%). This show that for every $1 invested in the production of soybean a profit of $0.38 was made with a gross ratio of 0.72. It is, therefore the assertion of this study that soybean production in the study area is indeed profitable even though operations are on a small scale.

Comparative analysis

The results in Table 3 show that the cowpea farmers recorded an average yield of 875kg per hectare. The market price of a 50kg bag of cowpea as sold by the farmers was $64.05, giving a total revenue of $1120.89 per ha. For the soybean enterprise, farmers recorded an average yield of 1,500kg per hectare, with a market price of $36.92 per 50kg, the soybean enterprise returned a total revenue of $553.82 per ha.

Table 3. Average costs and returns for cowpea and soybean production ($/ha)

Variable	Cowpea		Soybean	
	Cost ($/ha)		Cost ($/ha)	
Labour				
Family (man-days)	148.92	(32.30)	79.76	(19.90)
Hired (man-days)	132.92	(28.80)	171.56	(42.90)
Seed (kg)	29.153	(6.30)	31.28	(7.80)
Fertilizer (50kg)	25.82	(5.60)	31.12	(7.80)
Agro-chemical (ltr)	35.08	(7.60)	18.56	(4.60)
Transportation	16.18	(3.50)	10.90	(2.70)
Threshing	15.44	(3.40)	10.32	(2.60)
Storage	12.93	(2.80)	9.00	(2.30)
Bags (50kg)	5.64	(1.02)	4.53	(1.10)
Total Variable Costs	422.07	(91.60)	367.02	(91.70)
Fixed costs				
Depreciation cost on hoe	2.95	(0.60)	1.46	(0.40)
Depreciation cost on cutlass	1.71	(0.04)	1.06	(0.30)
Depreciation cost on sprayer	6.94	(1.50)	3.47	(0.90)
Tractor costs	27.22	(5.90)	27.22	(6.80)
Total Fixed costs	38.83	(8.40)	33.21	(8.30)
Total Cost (TC) = (TVC+TFC)	460.90	(100)	400.23	(100)
Total Revenue	1120.89		553.82	
Gross Margin (GM) = (TR – TVC)	698.82		186.80	
Net Farm Income (NFI) = (TR – TC)	659.99		153.59	
Return on Investment = (NFI/TC)	1.43		0.38	
Gross Ratio = TFE/TR	0.41		0.72	

Source: Field Survey, 2017, values in parenthesis are percentages

Further analysis of the result revealed that the total cost of production for cowpea enterprise was $460.90 per ha as compared to $400.23 per ha for the soybean enterprise. Also, total variable cost for the cowpea farmers was estimated to be $422.07 as compared to $367.02 per ha for soybean enterprise. A further comparison between the two enterprises showed the total variable costs of cowpea (91.6%) to be lower compared to that of soybean (91.7%). The implication of this finding is that, the cultivation of these legumes in the study area is carried out on a small scale by the farmers. This finding is in consonance with that of Baba (2010), where he reported low fixed costs reflecting a low investment behaviour on capital items for legume production. With labour cost accounting for 61.1% and 62.8% of the total cost for the cowpea and soybean farmers respectively, it goes without saying that legumes cultivation is labour intensive. These findings are corroborated by UNEP (2002) where it was reported that labour cost component accounts for the highest share of production cost across three agro-ecological zones in Nigeria with Niger State having a labour cost share of 79.74% of the total cost (Odhiambo, *et al.,* 1996).

Comparing the gross margins of the two legume enterprises per hectare, it is obvious that the cowpea enterprise had a higher gross margin than soybean. Cowpea farmers made a gross margin of $698.82 per ha with a net farm income of $659.99 per ha while the soybean farmers had a gross margin of $186.80 per ha and a net farm income of $153.59 per ha. A further comparison showed cowpea farmers made a return on Dollar invested of $2.43 while the Soybean farmers made a return on Dollar invested of $0.38. The implication of this finding is that, there is a difference between the profit levels of cowpea and soybean enterprises. Furthermore, in terms of magnitude, the profit level of cowpea enterprise and the return on every Dollar invested show that it is more profitable compared to the soybean enterprise. This assertion is, however not without a caveat, the values must be subjected to further analysis to determine whether or not there is a statistical difference between the profit levels for the two crop enterprises.

T-Test analysis of profitability values of cowpea and soybean enterprises

The mean profit values of cowpea and soybean enterprises were subjected to t- test analysis. The calculated T value was estimated to be 1.926 at the 5% level of significance with 118 degrees of freedom. Analysis revealed that the t-calculate value (1.926) was lower than the t-tabulated (1.980) at a 5% level of significance. This confirms that there is a statistical difference between the profit values of the two enterprises. It is therefore the assertion of this study that cowpea enterprise is more profitable than soybean enterprise in the study area (Table 4). It is therefore pertinent to ask what could be the factors responsible for the difference in the profitability rating of the enterprises?

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Table 4. T-test on profitability of cowpea and soybean enterprises in Niger State

Variable	Cowpea Enterprise	Soybean Enterprise
Mean	1226	477.61
No. of observation	60	60
Std Deviation	2822.91	1562.08
Std Error Mean	346.44	201.66
T calculated		1.926
T-tab		1.980
Sig 2 tail		0.59

Source: Field Survey, 2017

On the cost (input) side, comparing inputs used for the two enterprises show that total labour (family and hired) used as a percentage of total input for cowpea production is higher than that obtainable in soybean. Also agrochemicals, transportation and threshing have a higher percentage in total cost in cowpea production as compared to that of the same components in soybean enterprise. In summary, total variable cost and total fixed cost in absolute terms are higher in cowpea production as compared to soybean in the study area. However, as a percentage of total cost of production, the total variable cost for soybean is higher than that obtainable under cowpea production. However, on the returns (output) side, the revenue generated by cowpea is higher than that of soybean in absolute terms with a percentage difference of 33.86 percent (Fig. 2). Also, the Gross Margin and Net Farm Income for cowpea are higher than that of soybean in absolute terms with a percentage difference of 57.81% and 62.24% respectively (Fig. 2). It can therefore be asserted that cowpea is more profitable than soybean in the study area, even though, it appears that cowpea's requirement on the input side seem to be higher than that obtainable in soybean production.
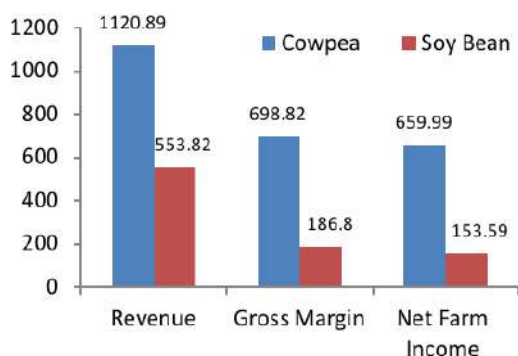

Fig. 2. Comparative profitability of cowpea and soy bean in Niger State

Constraints encountered by cowpea and soybean farmers

Farming at every level involves drudgery, in as much as the intensity may differ across enterprises, it is a common fact that the labour demands of farming is a deterrent to unprepared participants. Just as drudgery is a common factor in farm work, difficulties exists that are not as a result of a process of doing a task on farm but a hindrance to such activity. Farmers in the study area were asked about difficulties hindering the attainment of the full potential of the legume enterprises. For the cowpea enterprise, responses ranked poor credit facility first (95%) in the line of constraints affecting the production of cowpea. The next constraint has to do with cost of labour (93.3%) which was earlier reported to be high. Furthermore, lack of capital was reported and ranked third (88.3%) in the line of constraints. Also, bad road and inadequate market information were reported by the farmers as a challenge and were both ranked fourth (83.3%). Inadequate extension contact, shortage of farm input, and instability of planting calendar were ranked fifth, sixth and seventh in the list of constraints. For the soybean enterprise, the reverse is the case as compared to the constraints identified in cowpea production. High cost of labour was reported and ranked first while poor credit facility was reported and ranked second in the list of constraints listed. Lack of capital and inadequate extension contact were reported and ranked third and fourth in the identified constraints respectively. Poor soil fertility, bad road and shortage of farm input were reported and ranked fifth, sixth and seventh in the list of constraints reported for soybean respectively. Finally inadequate market information was ranked 8th for the soybean enterprise (Table 5).

Table 5. Constraint encountered in cowpea and soybean production in Niger State

Constraint	Cowpea		Soybean	
	Frequency	Rank	Frequency	Rank
Poor credit facilities	57 (95.0)	1st	56 (93.3)	2nd
High cost of labour	56 (93.3)	2nd	58 (96.7)	1st
Lack of capital	53 (88.3)	3rd	52 (83.7)	3rd
Inadequate market information (price)	50 (83.3)	4th	37 (61.7)	8rd
Poor/bad road	50 (83.3)	4th	43 (71.7)	6th
Inadequate extension contact	49 (81.7)	5th	50 (83.3)	4th
Shortage of farm input	47 (78.3)	6th	42 (70.0)	7th
Instability in planting calendar	45 (75.3)	7th	34 (56.7)	10th
Small farm size	44 (73.3)	8th	36 (60.0)	9th
Poor soil fertility	38 (63.3)	9th	48 (80.0)	5th
Substandard chemical	29 (48.3)	10th	34 (56.7)	10th
Land tenure	12 (35.0)	11th	24 (40.0)	11th

Source: Field Survey, 2017, values in parenthesis are percentages

It is obvious that the importance of the constraints as listed and ranked vary between the two enterprises. Considering the variation of the importance of the constraints for the two enterprises as reported and ranked, it appears that access to credit facility, cost of labour, and lack of capital were the most important constraint listed for cowpea: Whereas for the soybean enterprise cost of labour, credit facility, lack of capital and inadequate extension contact were rated highly in terms of importance. This goes to show the difference in the challenges faced by players in the two enterprises. Even though the crops are both legumes, the associated peculiarities are different, therefore, any attempt to address the constraints must be enterprise specific. The finding is corroborated by the submission of Agbo *et al.* (2015) who reported that access to input, capital and credit were among the major difficulties encountered by

rural farmers. The difficulties identified, hinders the operational level and efficiency of the farmers (Asogwa *et al.,* 2014). Furthermore, lack of access to credit is also a factor to reckon with, this is because access to credit affords the farmer the much needed liquidity to meet farm operational non-farm consumption requirements.

Conclusion and Recommendations

Farmers have in recent times been encouraged to approach farming as a business. For a business venture to be attractive, it must be lucrative. Hence the attraction to cultivate a particular crop enterprise is hinged on the potential returns of the crop as envisaged by the farmer. Therefore, profitability is a common factor farmer must consider before venturing into any crop enterprise. The cultivation of the two legumes in the study area is lucrative. However, the cowpea enterprise appeared to be more profitable as compared with soybean. It is therefore, the opinion of the study that cowpea is a crop of choice for cash in the study area.

Based on the findings of this study, it is recommended that credit facilities be made available especially for cowpea farmers, as this will enable the farmers have a cash flow to attend to the financial demands (labour, chemicals) of the crop during cultivation. Furthermore, attention of extension agents should be focused on the crop enterprises. This will avail the farmers the necessary information and guide on how to utilize the opportunities associated with the cultivation of the crops. Finally, farmers should be encouraged through extension services to grow cowpeas not just as a subsistence crop but as a cash crop. This is because the income from the enterprise has the potential to improve the income flow of the farmers if properly harnessed.

Acknowledgement

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