Research Work on The Form of Social Capital, Best to Promotes Agricultural Productions in Nine Selected Local Government Areas of Plateau State, Nigeria

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Introduction

Potato is the major cash crop of farmers in nine local governments of Plateau state and their livelihoods depended on this crop until the last six years (2010 – 2015) when manmade and natural factors raised their ugly heads to take great tolls on the production and marketing of potato, thus significantly reducing the income from this crop.

First was the commencement of activities of insurgents in the north eastern zone of Nigeria. The northeast apart from being the gateway to the nations of Niger, Chad, Cameroon and Central African Republic, was a major consumer of the crop. The Boko Haram insurgency not only bars passage of any trade commodity to the neighboring countries, marketing activities in the north east cities grinded to a halt. This unfortunate development has significantly affected potato production in Plateau state as prices have remained low all this while that the insurgency lasts.

2014 and 2015 production seasons, witnessed the incidence of late blight, particularly in the rainy season. This wiped off hundreds of hectares of farms leaving the farmers in real agony.

With this development there is little or no income coming to the farmer from potato.

It is upon the strength of these developments that GIZ seeks to explore the potentials of other complimentary crops that these farmers grow that could augment the income from potato.

The specific objectives of the study are:

1. To identify five complimentary crops that potato farmers grow and have good economic value to be able to augment the income from potato.
2. Determine the available local and outside markets for these crops.

- Provide the approximated cost of producing a hectare of each of these crops.

1. Ascertain the production constraints of these crops
2. Identify good quality input suppliers
3. Identify reputable trainers with on hand experience of farmers training and have familiarity with the plateau terrain as well as good knowledge of the identified crops.

- Bring out a SWOT analysis for these five crops.

Methodology

The main strategy employed in this study was to award it to a local consultant who have inter- disciplinary experience with adequate proven knowledge on the crops, farming systems and terrain of the plateau. The consultant reviewed background documents and designed field data collection instruments to facilitate the

survey. To ensure better supervision, coordination and quality assurance, teams comprising of experienced professional supervisors and enumerators from the nine local governments were composed. The study was undertaken over a one month period (From late December, 2015 to end of January, 2016.

Sampling Strategy and Sample Size

The baseline adopted a sampling strategy that ensures that all respondents have an equal chance of being selected. The sample was designed by first purposively selecting target geographic areas and respondents (farmers). The respondents (farmers) and geographic areas of interest for this survey are those that had been found to posses the criteria set for selection. The criterion is that the communities are within the Nine Local Government Areas (L.G.A) where potato is cultivated in Plateau State. One hundred and eighty (180) respondents (farmers) and thirty three (33) communities were purposively sampled for the survey. The main reason for using purposive sampling is that a researcher can reach a targeted sample quickly. It is easy to get a sample of subjects with specific characteristics. Additionally, this type of sampling technique is easier to make generalizations about your sample. A complete list of all communities can be found in Annex 1. The number of communities surveyed in each Local Government Area (L.G.A)

Farmers' questionnaire

A one day workshop was held in Jos for the development of the survey instrument. The content of the questionnaire was guided by the objectives of the study.

The questionnaire has mainly six components**:**

1. Identification
2. Agronomy

  • Financing

1. Complimentary crops)Agronomy)
2. Complimentary crops (marketing)
3. Extension and training

See annexure 1 for copy of the questionnaire.

Field work

A one day training of enumerators was conducted on the 28th day of December, 2015 in Jos.Detail discussions of the questionnaire was done and immediately after the training, the enumerators , supervisors and consultant went to the field to administer the questionnaires. Each local government area had one enumerator and one supervisor covered three LGAs. Consequently there were a total of nine enumerators and three supervisors in all collecting data in the nine LGAs.

Care was taken to ensure that every enumerator enlisted had at least five years professional enumeration experience and a good understanding of the respective LGA s/he is covering. They were further guided by the supervisors who had overarching supervision of the field enumeration. Field data collection was carried out between 29th December, 2015 and 2nd January, 2016.The duration varied between three and five days depending on the terrain of the LGAs.

At the end of the exercise, the supervisors collected back the questionnaires, checked them for completeness and consistency and transmitted them to the consultant.

Area of study

The baseline survey was undertaken in Nine Local Government Areas of two senatorial districts – Central zone had Pankshin, Mangu, and Bokkos, while the northen zone covers Barkin Ladi, Riyom, Jos South, Jos North, Jos East,and Bassa.

One hundred and eighty (180) farmers ie 20 per local government and thirty three (33) communities were visited, as tabulated in Appendix A. For the purpose of markets, surveys were conducted locally within plateau states and the states of Lagos, Rivers, Anambra and Kogi.

Table 1. Number of communities surveyed and the number of respondents interviewed in each community per L.G.A

l.g.a	Number of Communities Surveyed	Number of respondents interviewed	Proportion of total sample
Pankshin	10	20	11.11%
Mangu	20	20	11.11%
Barkin Ladi	14	20	11.11%
Bokkos	18	20	11.11%
Riyom	14	20	11.11%
Jos Sourth	15	20	11.11%
Jos North	6	20	11.11%
Jos East	14	20	11.11%
Bassa	19	20	11.11%
Total	**33**	**180**	**100**

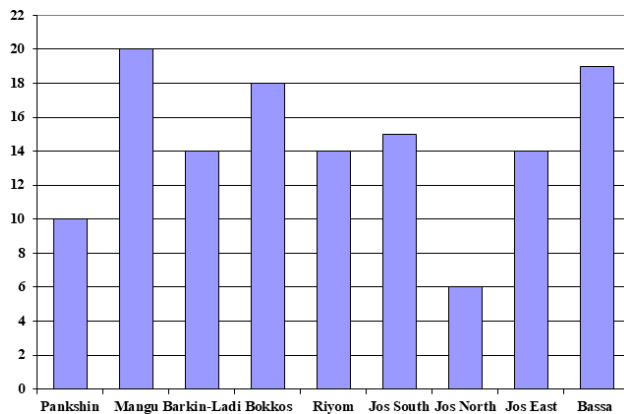**Source:** *Field Survey, 2016*

Figure 1.0 Distribution of the Number of Communities Surveyed in each l.g.a

Baseline Data Sources & Data Collection

Both qualitative and quantitative data were collected using structured questionnaires specifically designed for this survey and focus group discussion (FGD). The data collection in the thirty three (33) communities and various markets within and outside the state was done by a team of 11 persons who were selected and contracted by the consultant. Moreover, enumerators who administered these questionnaires received orientation on the questionnaire,

Data Management and Analysis

Data management and analysis took the following steps: Coding; cleaning, entry and filling. To make data management easier, a MS Access application was developed which mirrored the questionnaires to guide the representation of data and make it easy for entry and analysis. To ensure validity and authenticity of quantitative data, a data verification stage was added to an initial entry stage. This enabled the second entry to qualify data entered at first entry and correction of any errors in the process before eventually analyzing the data. Errors identified were corrected before and during the data entry stage. After data entry was completed, the data entry application developer converted the MS Access data into spreadsheets (MS –Excel 2007). Data was then exported to the Statistical Product and Service Solutions (SPSS) software package for major statistical analysis after which results were expressed in descriptive statistics, in the form of frequencies, percentages, totals, and means (averages). Data analysis was conducted for the purposes of drafting of this report.

Limitation of the study

The task is to identify five major complimentary crops that potato farmers grow that augment their income from potato and source markets for these crops. It would therefore have been appropriate for the study to identify the five crops first before the aspect of marketing follows. The present arrangement left the consultant with the herculean task of marketing all the crops grown by the farmers and not the prioritized five. The findings though interesting, consequently increased time and cost.

Agronomy

Agronomy was analyzed in terms of number of hectares farmers crop to potato, source of inputs, varieties of potatoes plant, sources of seeds, potato yield per hectare, season of farming and major constrains in dry and wet season production.

Table 2.1: Number of hectares crop to potato

Numberof hectares crop to potato	Local government area									Total	%
	Pankshin	Mangu	Bokkos	B/Ladi	Riyom	Jos South	Jos North	Jos East	Bassa		
a. <1.0ha	18	8	5	9	6	7	15	13	5	**86**	**47.7**
b. 1-2ha	2	7	7	7	13	8	4	7	10	**65**	**36.2**
c. 2.5-4ha	0	5	8	4	1	1	1	0	5	**25**	**13.9**
d. >4ha	0	0	0	0	0	4	0	0	0	**4**	**2.2**
Total	20	20	20	20	20	20	20	20	20	180	100

Source: *Field Survey, 2016*

Availability of farming land is an important factor in agricultural production. In the current survey, results indicated that 86 farmers representing 47.5% use less than 1.0ha for potato farming. Majority of the farmers,65 (representing 36.2%) use between 1 – 2ha for potato farming. About 25 farmers use 2.5 – 4ha of land to crop potato. The rest, 2.2% of farmers use more than 4ha of land to crop potato. The land tenure system where land is mostly acquired through inheritance makes farmers' holdings very fragmented and scattered. The household composition table shows that the population in the age bracket of 0 – 25 is high and this portends that the land holding per farmer in the not too distant future will be further reduced. This calls for adoption of technologies of intensive production on minimum land area and also diversification to downstream sectors of processing and marketing.

This result also shows that most of the farmers are small scale farmers with holdings not exceeding two hectares.
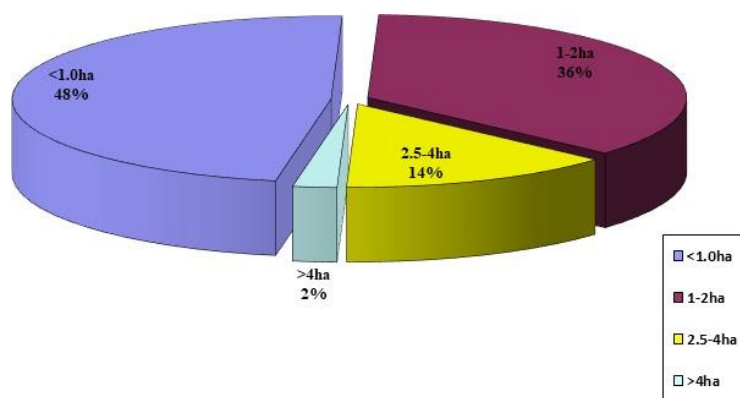

Figure 2.1: Percentage of hectares crop to potato

Table 2.2: Sources of Farmers Inputs

Source where Farmers Buy Inputs	Local government area									
	Pankshin	Mangu	Bokkos	B/Ladi	Riyom	Jos South	Jos North	Jos East	Bassa	Total
a. ADP	0	0	0	0	0	5	0	0	2	7
b. Open Market	17	20	16	16	18	15	20	19	15	156
c. Input Supply agents	2	0	0	0	2	0	0	0	0	4
d. GES	1	0	1	4	0	0	0	1	3	10
e. Others	0	0	3	0	0	0	0	0	0	3
TOTAL	20	20	20	20	20	20	20	20	20	180

Source: *Field Survey, 2016*

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