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**OYO STATE AGRICULTURAL DEVELOPMENT PROGRAMME IN
COLLABORATION WITH SAFGRAD**

**TOPIC: EXPANDING ECONOMIC BASE OF LOW INCOME
EARNERS THROUGH ECONOMIC PRODUCTION OF
SOYBEAN AS INDUSTRIAL CROP.**

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INTRODUCTION

Soyabean (Glycine max) is an annual legumne crop. It is one of the oldest cultivated crops with written records dated to about 5000 years. However because it can not be consumed directly like other crops such as cowpea maize, without thorough processing the technology of which was not available, its popularity was insignificant.

Wild fields of the crop were growing in south China plains around the eleventh century B.C.

There were many impediments towards successfull adoption of this crop in Nigeria, however due to research activities and acceptability and campaign through extension services, soyabean is now a house hold food crop and more economically an industrial crop.

Table I

Production of soybean in selected African countries
(1000 M. Tonne.).

COUNTRY	Y E A R				
	1979-81	1989	1990	1991	1992
World	86067	10693	108132	103581	110590
Africa	326	436	594	636	522
Nigeria	60	55	142	150	160
Rwanda	5	9	9	9	10
South Africa	32	80	119	124	63

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Tanzania	1	1	1	1	1
Zaire	8	11	12	12	13
Zimbabwe	86	121	106	111	51

Source: FAO (1993)

2.0 ECONOMIC IMPORTANCE OF SOYBEANS

Soybean has been identified as one of the most important oil seeds in the world. This is more so as it has higher lysine content than all conventional vegetable protein sources.

The emerging importance of soybean is because of its high protein content (40%), dry basis and as rich source of edible oil cake (meal) and is utilised at the home level as food. The cake is most used for animal feed formulation where it serves as a good source of protein.

The most dramatic increase in soybean processing activities in West Africa occurred in Nigeria. Nigeria had less than 5 soybean processing companies in 1987 and this has increased to over 70 in 1999. Consequently Nigeria has the largest industrial soybean processing and utilisation capacity in West Africa. However, the problem is that does the Nigerian farmer meet the industrial raw soybean demand? Encouragement of farmers through governmental and non-governmental organisation intervention to help solve the problem. Although the last few decades have experienced a worldwide improvement in nutritional standard the one that has experienced negative growth is Sub Saharan Africa. Nigeria is not exempted. Presently the most serious problem of food shortage range from outright famine in some African countries to the more deciduous Protein Energy Malnutrition (PEM). Protein energy malnutrition is a major problem in Nigeria particularly among infants, pregnant and lactating mothers as well as in livestock.

DOMESTIC UTILISATION OF SOYA BEAN

The domestic uses of soybean are almost limitless. It is used for the protein rich, infant weaning food called soy-ogi, soy-bread and soy-cakes. This food recipes fortified with soybean will augment our mainly starch based food items. The low starch content of soybean makes it an invaluable food for the diabetic.

OBJECTIVES

The objectives of this proposal is to promote production of soybean to meet industrial raw material capacity and they make available viable seed for ever demanding seed market.

- (2) Increase the protein intake level of both man and livestock in Nigeria.
- (3) Improve the economic power base across the economic strata in the country.
- (4) Improve export and source of foreign exchange earning of the country through export of industrial finished product from soybean like baby food, livestock feed and low cholesterol level soy oil.

These objectives will be achieved through tackling of the problems militating against large production of soybean in Nigeria.

3974

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Among the problems in the soybean production are:

- (a) Poor /lack of enough seed to satisfy demand from the farmers.
- (b) Poor seed viability. This is due to lack of right technology, on the part of the farmers.
- (c) Planting and harvesting of soybean. Harvesting proved to be the most difficult of all operation. Farmers have no access to harvesting equipment.
- (d) Weed control.

TARGET GROUPS

- (1) Soyabean growers group Maya Ibara east local government Oyo state.

Number of farmers 30
Hectareage cultivable 90Ha

- (2) Soya bean growers group Ogbomosho Oyo state

Number of farmers 20
Hectareage cultivable 60Ha

- (3) Soyabean growers group Saki, Oyo state

Number of farmers 30
Hectareage 90Ha

Total Hectareage 240Ha

Involvement of other stakeholders in food production in problem solving viable seed availability is one of the greatest problem facing soybean production. High oil percentage in the seed and high humidity with conducive temperature aid loss of viability in soybean. Research Institutes, however have done a lot in solving this problems. Different small-scale storage technologies have being put in place.

2 lack of enough seed to serve large hactareage of production. Demand for soybean for local market plus poverty which leads to yearly sales of the seed as grain also contribute to lack of planting material.

3 Sales of grains as seeds during planting period usually affect the yield. Different varieties of soybean are mixed together and planted the different varieties will be matured at different times. This phenomenom will affect harvesting and eventual yield per hecture.

This problem will be solved through adoption of technologies on-shelf from the international research institutes.

(b) Presently the local farmers in Oyo sate and large scale producers still depend on manual labour to harvest thier farms this problems have a lot of defficiencies. There is wastage during harvesting, most of the crop is lost on the field through shatering.

Crude and effective processing method that make use of manual method to remove the

seeds/grains from the pods do damage the grains causing splitting, extraneous materials like stone and weed seed are bagged with up and coming harvesting and processing machine developed in our research institute and those adopted by local fabricators and solve this problems.

(4) In addition lack of harvesting machines limit the scope of production and even where hecterage of production are reduced labour scarcity due to new salary structure may cause the crop to be incompletely, harvested or in most resident cases are abandoned. Harmattan wind atimes meet the crop in the field and the seed will shatter on the field within two days.

(5) Lack of adequate technology storage on the part of the farmer affects availability of seed. However cottage storage bins, from research organisation like national institute for stored products research will be introduced to the farmers

(6) Marketing of seed of all varieties of crops have witnessed a tremendous upsurge in Oyo state this year with hundred of tonnes sold this was due to marketing openings created by appintment of 70 seed sales agents for Oyo state ADP seed.

This agent also sell other input and serves as a link between the producers and the consumers the raw material market outfit in the ADP town, SAMEG has been linking farmers with industries that demand for farm produce.

AMREC. A market outlet linkage commitee from University of Agriculture (UNAB) Abeokuta had been linking farmers with industries for example. With this market outlet for the produce and over 700 soybean processor in the country by 1999, the produce from this proposal will enjoy a ready market.

ACTIVITIES INVOLVED.

PRODUCTION:

Sourcing for seeds.

land preparation

Planting: Contacting research institutes and local fabricators on the adoption of appropriate machine for weed control.

Harvesting.

Processing: Contacting research institute and local fabricators on the appropriate processing machine.

Storage: Introduction of new finding in storage technology.

Marketing: Linking farmers to the existing market locally and internationally through the existing agencies shade with this.

WORK PLAN.

Production of Soybean starts with land preparation in June/July. This depends on location.

Planting is done in July this will afford the crop to mature during the dry season of the year before Harmathan sets-in.

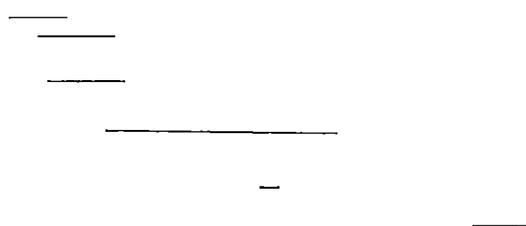
Among maintenbnace activities to be carried out are

1. Fertilizer application
2. Pre -emergency herbicide depending on weed ecology
3. Pest /disease management
4. Harvesting
5. Processing bagging and storage
6. Marketing

WORK-PLAN TIME-LINE CHART

Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec Jan Feb Mar Apr May

- 1) Procurement of Seed
- 2) Land Preparation
- 3) Planting
- 4) Weedcontrol (Maintenance)
- 5) Harvesting/Processing
- 6) Marketing/Market Sourcing



BUDGET

	Unit/Ha	Ha	Qty
Procurement of Seed	50kg	240	12,000Kg
Land Preparation	2/ha	240	480ha
Planting	1/ha	240	240ha
Fertilizer	2 bags	240	480ha
Weed control	2 bags	240	480ha
Fertilizer application	2 bag/ha	240	480 bags
Harvesting/Processing	1	240	240 bags
Marketing	900kg/ha	240	216,000

INPUT REQUIREMENT

	Unit	Qty	Unit price	amount
Seed	50kg	12,000kg	90/kg	1,000,000
Herbicide	50lts/ha	1200ha	1200	1,440,000
Processing machine	1 unit/group	3 unit	75,000	225,000
Bags	1/100kg seed	2160 units		64,800
				<u>2,809,800</u>

LABOUR REQUIREMENT

	No./Location	duration	rate	amount
Supervisors	3	6 months	6500/month	117,000
Herbicide application			2000/ha	480,000
Fertilizer application	480 bags		100/bag	48,000
Planting			15000/ha	360,000
	3		75 000/unit	225,000
Processors	60 (20/group)	30 days	300/day	540,000
	Sub Total			1,770,000
	Grand total			<u><u>₦ 4,579,800</u></u>

PROJECT RESULT FORECAST

Yield: With the appropriate input utilization, 80% yield is expected

Total number of crop land expected yield (ha)	average expected yield per ha	total (MT)
240	900 kg	216 MT

NESTLE Nigeria Plc and other companies with their 2001 soybean demand from OYSADEP alone standing at 500 MT at ₦40,000/MT. The market is readily available.

Secondly, soybean seed demand per annum from OYSADEP alone is 40MT. OYSADEP is the sole supplier of seed to other ADPs in the Southwest of the country. Apart from external demand 526,000 farm families in Oyo State demand over 20 MT of soybean annually.

EXPECTED INCOME

With the present market price of ₦ 40,000/MT. (industrial) of soybean, the expected income will stand at:

Cost of production (₦)	Income (₦)	net profit (₦)
4, 579,800	8,640,000	4,061,000

Thanks,

Ogungbade Oluniyi

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