ISSN NO: 2769-996X
January 2025

The Economic Contribution Of Soya Beans Production In Gusau Town 2000-2020

By
Sha'aban Magaji PhD., ACTI, ACCA
Department of Public Administration,
Zamfara College of Arts and Science Gusau, Zamfara State.
ibnmagaji2@yahoo.com
+2348036529231
and
Umar Alhassan PhD.
Department of History and International Studies,
Federal University Gusau.
+2349014474812

Abstract
The paper socio-economic of soyabeans production in Gusau town, 2000-2022" traces the historical origin of soyabean production in America, Asia and Africa. It showcase that the introduction and production of soyabean in Gusau town with which resulted to the production of employment opportunities and accumulation of capital among the producers of the crop. The paper also argued that the new crop largely dominated other cash crop both in external and internal consumption in the town under review, the significance of soyabeans production in the area the town was also discussed. Finally, the paper pinpointed some problem militating against the production of soyabeans in Gusau.
Keyword: soyabean, production, contribution, economic.

Introduction

Zamfara State, known for its slogan "Farming is Our Pride," has an estimated population of 2,938,769, as reported by the National Population Commission (NPC, 2003). Approximately 80% of the population resides in rural areas, relying on agriculture in varying capacities for their livelihoods. The state has around 450,000 farming households, the majority of which are small-scale farmers cultivating less than two hectares of land (ZADP, 2009). According to (ZACAREP, 2006)[1] the agricultural sector in Zamfara is marked by significant post-harvest losses, limited access to modern storage technologies, and poor market integration. Despite employing the bulk of the population, agriculture remains underdeveloped and minimally profitable for small-scale farmers. This has contributed to widespread, severe, and deep poverty, as evidenced by indicators such as malnutrition, illiteracy, poor health outcomes, and low life expectancy.

In 2004, the introduction of ZACAREP (Zamfara Comprehensive Agricultural Revolution Programme) marketed the era of adjustment in the production of food crops and cash crops in Zamfara at large. The programme provide change on the nature of crop production, in the case of soyabean (Glycine, max), fertilizer, loans, insecticide, pesticide, spraying machines, tractor for hiring on tilling and harrowing of land were provided with cheaper prices. The chemical application which before then only few farmers have access to such capital investment on the production. Under the ZACAREP another portion of programe was called "TARGET FARMER"[2] It comprises association of soyabean producers and other crops, the association include membership of 20 farmers in each Kungiya (group) purposely to ease the payment of the loans as well as the initial deposit. The programme also provided genetically and hybrid seed from authority companies. Soybean has taken over from cotton and groundnut as the dominant cash crop in the region.

Statement of the Problem

Soya bean production has been recognized as a significant agricultural activity in Nigeria, particularly in Gusau Town, Zamfara State, due to its potential economic contributions. However, despite the role of soya beans as a key income source for farmers, a contributor to food security, and a supplier of raw materials for

[1] ZACAREP (2006), Production Report "The Target Farmer", P. 4
[2] Ibid

ISSN NO: 2769-996X
January 2025

agro-industries, there has been limited research examining its specific economic impact within Gusau Town over the period from 2000 to 2020.

During this time frame, fluctuations in production levels, market dynamics, and government agricultural policies have likely affected the local soya bean industry. Additionally, farmers in Gusau have faced challenges such as inadequate access to modern farming technologies, insufficient infrastructure, and limited market access. These factors could have hindered the full potential of soya bean production and its contributions to the local economy.

This study is thus motivated by the need to assess the economic contribution of soya bean production in Gusau Town, identifying the key factors that have influenced its growth or decline. The findings will provide insights into how soya bean production has supported livelihoods, contributed to food security, and influenced the broader economic development of Gusau Town. Addressing this gap will help inform future policies and strategies aimed at improving agricultural productivity and economic sustainability in the region.

Objectives of the Study

1. To examine the trends in soya bean production in Gusau Town from 2000 to 2020
2. To assess the economic impact of soya bean production on farmers' income and livelihoods
3. To analyze the role of soya bean production in job creation and employment in Gusau Town
4. To identify the challenges faced by soya bean producers in Gusau Town during the period under study
5. To investigate the contribution of soya bean production to food security in Gusau Town

History of soyabean production in Gusau

Soybean was first introduced to Nigeria in 1908, initially cultivated as an export crop in a small area of Benue State, where the variety known as ‘Malayan’ was successfully adopted. Typically, soybean is grown on smallholdings and often intercropped with sorghum or maize, as well as in citrus orchards[3]. Nigeria has become the leading producer of soybeans in West Africa. The crop is extensively cultivated in several states, including Kaduna, Niger, Kebbi, Nasarawa, Kwara, Oyo, Jigawa, Taraba, Borno, Benue, Bauchi, Lagos, Sokoto, Plateau, Zamfara, and the Federal Capital Territory, Abuja.

In 2004, the introduction of ZACAREP marked the era of adjustment in the production of food crops and cash crops in Zamfara at large.[4] The programme provided change on the nature of production, in the case of soyabean, fertilizer, loan, insecticide, pesticide, spraying machines, tractor for hiring on tilling and harrowing of land were provided with cheaper prices. The chemical application which before the few farmers have access to such capital investment on the production. Under ZACAREP another portion of pragmme was called “TARGET FARMER” it comprises association of soyabean producers and other. The programme also provided genetically and hybrid seed from authorized companies. Soybean has gradually replaced cotton and groundnut as a primary crop in Gusau.

Farming Practices and Technologies for Soybean Production in Gusau

The process of soybean production in Gusau involves several key activities, including the selection of seeds, seed treatment methods, and the chemicals applied during seed treatment. Other aspects include determining planting dates, cropping systems, planting techniques, spacing practices, weed control measures, and fertilizer management. Farmers utilize various fertilizers, carefully considering the type and timing of application. Observations during cultivation include pest monitoring, identification of insect damage during flowering, and the use of insect sprays. Additionally, seed treatment is an important step when storing harvested soybeans[5].

Farming Processing

[3] ZMSG (2001), Zamfara State Government Bureau of Information, Ministry of Information and Culture, Zamfara State. Nigeria, www.zamfarastate.net

[4] Shannon D. K.M Mwamba M. Kubengu and M.C, Mpoy (1995), Adopted of soyabean: A Comparative Analysis of Cultural Practice in Zaire and Nigeria. Journal of Farming System Research and Extension, 5: 39-54.

[5] Adeniyan O.N and Ayoola O.T (2006), Growth and yield performance of some improved soyabean varieties as influenced by intercropping with maize and cassava in two contrast locations in Zamfara, Journal of Biotechnology, 5(2): 1882-889

Adeniyan O.N and Ayoola O.T (2006), Growth and yield performance of some improved soyabean varieties as influenced by intercropping with maize and cassava in two contrast locations in Zamfara, Journal of Biotechnology, 5(2): 1882-889

ISSN NO: 2769-996X
January 2025

a. **Seed treatment:** The Farmers in Gusau largely adopted the seed treatment technologies introduced by ZACAREP. A significant 96.4% of the farmers treated seeds before planting to protect against pests and diseases, promoting vigorous growth and healthy seedling emergence. The chemical Apron Plus, recommended by ZACAREP, serves as both an insecticide and fungicide, protecting seeds from fungal and insect damage before and shortly after germination. The prescribed dosage is 10g of Apron Plus per 4kg of seeds.[6][7]
b. **Planting period:** Soybean thrives across various planting periods, provided adequate moisture is available. In Gusau, planting typically begins in May but is most commonly established in early June for optimal germination. Approximately 17.2% of farmers plant late in June, which aligns with recommendations to avoid extended dry spells that may cause crop wilting and necessitate replanting. Late planting can also increase the risk of pest attacks later in the season.[8]
c. **Planting method:** Farmers in Gusau employ various planting techniques, including drilling and double-row spacing, with 16.4% and 20.4% adopting these methods, respectively. The drilling method was most commonly used, often supplemented by organic fertilizers sourced from plant or animal materials. Some farmers also combine organic and inorganic fertilizers. The application of phosphorus at 30kg P/ha using single super phosphate (SUPER) and a compound fertilizer (15:15:15) is recommended. Nitrogen and potassium are only applied in cases of noticeable mineral deficiencies.[9][10]
d. **Harvesting timing:** Soybean harvesting in Gusau occurs approximately 3.5 to 5 months after planting, depending on the variety and maturity stage. The crop is typically harvested when around 90% of the pods have turned brown, signaling readiness. Drought conditions are ideal for harvesting, as excess moisture can damage the beans. Harvest timing also depends on the crop's growth stage; soybeans can be harvested green, at the pod-yellowing stage, or after the pods have fully dried.[11]
e. **Storage method:** Soybean storage requires careful moisture management to maintain seed viability. The moisture content should be reduced to 12% for medium-term storage (6–12 months) or to 10–11% for long-term storage. Open-air drying is a practical method for reducing moisture. Proper storage includes placing clean soybeans in 50kg or 100kg bags on racks in a cool, shaded area. High moisture content encourages deterioration from insects and microorganisms. Effective storage management significantly impacts the germination potential of soybean seeds when replanted. Excessive exposure to high temperatures should be avoided to prevent damage and reduced seed viability[12].

Socio-economic impact of soyabean production, 2000-2020

Many studies assessing the impact of agricultural technologies tend to rely on economic models, often overlooking the direct social effects on resource-poor farmers.[13] This study applies a Social Impact Assessment (SIA) framework to analyze the adoption levels and impacts of soybean farming among

[6] Bush J. and Noura G. (2012), Zamfara Mixed Crops Livelihood Zone: Cotton, Groundnuts and Mixed Cereal, Save the Children Nigeria, December.
[7] International Institute of Tropical Agriculture (2010). Research gives birth to Nigerian soyabean industry. From http://www.iita.org (retrieved July 20, 2011)
[8] ZADP (2009), Monitoring and Evaluation Year Report. PME, Department of the Zamfara Agricultural Development Project PMB 1020, Samaru Gusau, Zamfara State
[9] ZMSG (2016), Zamfara State Government Bureau of Information, Ministry of Information and Culture, Zamfara State. Nigeria, www.zamfarastate.net
[10] Sanginga P.C (1998). Adoption and Social Impact Assessment of Agricultural Technologies: Case of soyabean in Benue State, Nigeria. Ph.D Thesis, University of Ibadan, Nigeria
Sanginga P.C (1998). Adoption and Social Impact Assessment of Agricultural Technologies: Case of soyabean in Benue State, Nigeria. Ph.D Thesis, University of Ibadan, Nigeria
[11] Adekunle A.A Fatunbi, A.O Asiwe, J.A.N and Abikoye J.O (2012), Growing commericially in Nigeria, An illustration guide IITA. Retrieved August 14, 2013 from www.iita.org.soyabean
[12] Hamza Sani, Agricultural Development Programme in Zamfara Motivational Factors that led to soyabean Farmers, Zamfara Agricultural Development Project, PMB 1020 Gusau, Zamfara State
[13] Morgan P.E (1985), Social Impact Analysis and the dynamics of advocacy in Development Assistance. In Social Impact analysis and development planning in the Third World, edited by W. Derman and S. Whiteford, Westview Press. Social Impact Assessment Series No. 12 Boulder, Colorado, USA.

ISSN NO: 2769-996X
January 2025

households in Gusau. Findings reveal that soybean has transformed from a minor export crop into a key agricultural commodity, widely cultivated by both male and female farmers in the region.[14] The availability of improved soybean varieties and technologies for household use has encouraged more women to engage in soybean production. This adoption has brought notable benefits, including increased household income, improved material welfare, enhanced human capital, better gender relations, and improved resource utilization and social equity within the community.[15] Furthermore, innovations in soybean processing have made the crop a staple food in many households in Gusau. A significant finding of the study is the positive impact of soybean consumption on the nutritional status of children in producing households. Multivariate analysis shows that income from soybean production and women's involvement in soybean processing trades have contributed to better short- and long-term nutritional outcomes. These findings support the argument that soybean can serve as an affordable solution to malnutrition and a pathway to poverty alleviation among resource-poor populations.

Often referred to as the "miracle bean" or "golden bean," soybean is an inexpensive, protein-rich crop containing 40% high-quality protein, 20% edible vegetable oil, and a balanced amino acid profile.[16] These attributes highlight its potential to improve nutritional standards and overall welfare. Additionally, soybean enhances the sustainability of intensified cropping systems by improving soil fertility through nitrogen fixation, extending ground cover duration, and providing valuable crop residues for animal feed. Despite its potential, soybean was relatively new to Gusau until recently and was primarily associated with large-scale commercial farming. Its use was often limited to industrial processing and livestock feed.[17] Government programs like the Zamfara Comprehensive Agricultural Revolution Programme (ZACAREP) aimed to promote soybean cultivation through farmer groups and bottom-up participatory approaches. These initiatives focused on achieving food self-sufficiency, supplying raw materials to industries, and raising farmers' income and living standards.[18] Farmers who participated in cooperatives benefited from improved resource utilization, farm planning, and capacity building. These associations also exposed them to new techniques and empowered them to increase production, contributing to hunger and poverty reduction. By fostering engagement in agricultural projects, such initiatives have had lasting positive effects on livelihoods, environmental sustainability, and social equity, while addressing the challenges of malnutrition and rapid population growth.

Conclusion

The study has attempted to explore the historical development of soyabean production and its socio-economic impact in Gusau from 2000 – 2020, and had limitedly examined the formation of Gusau, with its brief history, land, people and environment, political organization and their socio-economic activities. It revealed that Gusau was a post jihad established town by the Jihadist, inhabited by Hausa, Fulani with other ethnic groups in Nigeria. The agricultural potentialities, commerce, sable political organization and security favoured the development of Gusau.

The work also explores the nature of agriculture in Gusau, paying much attention to the soyabean production and also moving further to explain the historical development of soyabean in Gusau and how is soyabean produced from its planting stage to the harvesting period, with the introduction of new variety of government and its programmes which also pave another way of increasing the volume of production.

The 2004 onward experience more industries, policies and programme (e.g SAP and ZACAREP) in Gusau additionally, increased the population, despite some neglect of the sector. Meanwhile the production help towards realization of income to farmers, producers, government, employment and other social amenities

[14] Dugje I.Y, Omoigui L.O, Ekeleme F. Bandynopadhyay R. Kumar P.L. and A.Y Kamara (2009), Farmers' Guide to SOyabean Production in Northern Nigeria. IITA: Ibadan

[15] Hamza Sani, Agricultural Development Programme in Zamfara Motivational Factors that led to soyabean Farmers, Zamfara Agricultural Development Project, PMB 1020 Gusau, Zamfara State

[16] ZASIDEP (2004), Zamfara State Integrated Development Programme: Technical Coordinating Committee Report (TTC), Zamfara Seeds. www.zacarep.com

[17] Atala T.K, T.D Ajia and J.O Olukosi (1992). Adoption of soyabean ulitization innovations among women in Samaru village of Gusau Local Government Area of Zamfara State, Nigeria. Agricultural System in Africa 2:18-24

[18] Shurtleff W., Aoyagi A. (2009), History of soyabean and soyfoods in Africa (1857-2009). Extensively Annotated Bibliography and Source Book Soyinfo Center, Lafayette, California, USA.

ISSN NO: 2769-996X
January 2025

(electiricity, road, hospital to mention just a few). The participation of the government which included federal and state government has help in the high level of production of soyabean in Gusau and it has led to the establishment of new training centers and increase in the farm production in Gusau.

ISSN NO: 2769-996X
January 2025

Recommendations

1. The government and agricultural agencies should work on providing farmers with greater access to high-quality seeds, fertilizers, and modern farming technologies. This would help boost soya bean yields and enhance productivity, contributing to higher income for farmers.
2. There is a need to expand agricultural extension services in Gusau Town, ensuring that farmers are regularly trained on modern farming practices, pest control, and post-harvest management techniques. These services should also offer advice on sustainable farming to prevent land degradation.
3. Farmers face challenges in marketing their produce due to inadequate infrastructure. The government should prioritize investments in road infrastructure, storage facilities, and transportation networks to minimize post-harvest losses and improve market access. Additionally, establishing local processing facilities for soya bean products could add value and increase the income of farmers.
4. Many farmers in Gusau face difficulties in accessing credit for purchasing inputs or investing in farm expansion. Financial institutions should offer flexible loan schemes and insurance packages tailored to the needs of soya bean farmers. The government can also provide subsidies or grants to support smallholder farmers.
5. The government should introduce policies and incentives to encourage soya bean farming, including price stabilization measures, tax incentives for agro-based industries, and export promotion policies for soya bean products. This would promote a more stable and profitable environment for soya bean farmers.
6. Farmers should be motivated to establish cooperative societies, which would allow them to pool resources, negotiate better prices for inputs and outputs, and collectively access financial support. This can also empower small-scale farmers by providing them with stronger bargaining power in the market.
7. The private sector should be incentivized to encourage investment in the processing and marketing of soya bean products. This can lead to the creation of local industries, provide employment opportunities, and stimulate the growth of the agricultural economy in Gusau Town.
8. Special programs should be designed to empower women and youth to engage in soya bean farming by offering them training, financial support, and access to land. This would help diversify income streams and reduce unemployment rates.

References

1. Adekunle A.A Fatunbi, A.O Asiwe, J.A.N and Abikoye J.O (2012), Growing commericially in Nigeria, An illustration guide IITA. Retrieved August 14, 2013 from www.iita.org.soyabean
2. Adeniyan O.N and Ayoola O.T (2006), Growth and yield performance of some improved soyabean varieties as influenced by intercropping with maize and cassava in two contrast locations in Zamfara, Journal of Biotechnology, 5(2): 1882-889
3. Atala T.K, T.D Ajia and J.O Olukosi (1992). Adoption of soyabean ulitization innovations among women in Samaru village of Gusau Local Government Area of Zamfara State, Nigeria. Agricultural System in Africa 2:18-24
4. Bush J. and Noura G. (2012), Zamfara Mixed Crops Livelihood Zone: Cotton, Groundnuts and Mixed Cereal, Save the Children Nigeria, December.
5. Dugje I.Y, Omoigui L.O, Ekeleme F. Bandynopadhyay R. Kumar P.L. and A.Y Kamara (2009), Farmers' Guide to SOyabean Production in Northern Nigeria. IITA: Ibadan
6. Hamza Sani, Agricultural Development Programme in Zamfara Motivational Factors that led to soyabean Farmers, Zamfara Agricultural Development Project, PMB 1020 Gusau, Zamfara State
7. International Institute of Tropical Agriculture (2010). Research gives birth to Nigerian soyabean industry. From http://www.iita.org (retrieved July 20, 2011)
8. Morgan P.E (1985), Social Impact Analysis and the dynamics of advocacy in Development Assistance. In Social Impact analysis and development planning in the Third World, edited by W. Derman and S. Whiteford, Westview Press. Social Impact Assessment Series No. 12 Boulder, Colorado, USA.

ISSN NO: 2769-996X
January 2025

9. Sanginga P.C (1998). Adoption and Social Impact Assessment of Agricultural Technologies: Case of soyabean in Benue State, Nigeria. Ph.D Thesis, University of Ibadan, Nigeria
10. Shannon D. K.M Mwamba M. Kubengu and M.C, Mpoy (1995), Adopted of soyabean: A Comparative Analysis of Cultural Practice in Zaire and Nigeria. Journal of Farming System Research and Extension, 5: 39-54.
11. Shurtleff W., Aoyagi A. (2009), History of soyabean and soyfoods in Africa (1857-2009). Extensively Annotated Bibliography and Source Book Soyinfo Center, Lafayette, California, USA.
12. ZACAREP (2006), Production Report "The Target Farmer", P. 4
13. ZADP (2009), Monitoring and Evaluation Year Report. PME, Department of the Zamfara Agricultural Development Project PMB 1020, Samaru Gusau, Zamfara State
14. ZASIDEP (2004), Zamfara State Integrated Development Programme: Technical Coordinating Committee Report (TTC), Zamfara Seeds. www.zacarep.com
15. ZMSG (2001), Zamfara State Government Bureau of Information, Ministry of Information and Culture, Zamfara State. Nigeria, www.zamfarastate.net
16. ZMSG (2016), Zamfara State Government Bureau of Information, Ministry of Information and Culture, Zamfara State. Nigeria, www.zamfarastate.net