

Assessment of the Agro-Input Supply Sector in Kogi State, Nigeria

Musa Ahmad Isah¹, Sanni Ozomata Abdullahi², Aishat Ammani Aliyu¹, Mohammed Sanusi Sadiq^{3*}

¹National Agricultural Extension Research and Liaison Services, Ahmadu Bello University, Zaria, Nigeria

²Agro-Processing, Productivity Enhancement and Livelihood Improvement Support (APPEALS) Project, Kogi State, Nigeria

³Department of Agricultural Economics and Extension, Federal University Dutse, Dutse, Nigeria

*Corresponding email: sadiqsanusi30@gmail.com

ARTICLE INFO

Article history

Received 24/06/2022

Revised 16/08/2022

Accepted 23/08/2022

Keywords

Actors;
Agro-input;
Kogi State;
Nigeria;
Supply chain

 10.12928/jafost.v3i1.6212

ABSTRACT

Most farmers are experiencing challenges and constraints in accessing agricultural inputs, thus leading to poor and underutilization of agro-inputs and consequently low agricultural productivity in most part of sub-Saharan Africa. This paper contribution is to assess the agro-input supply sector in Kogi state. A total of 157 input dealers were randomly selected across the twenty-one local government areas in the state. Data were collected using well-structured questionnaire complemented with interview schedule and were analyzed using simple descriptive statistics. Findings reveal that agro-chemicals, fertilizer and feed were the major inputs supplied by most of the retailers and wholesalers that hardly engage in activities that create awareness about their products. Input prices were the most important preference and consideration factor in the purchase of agro-input by customers and form the basis for competition. Casual, family and child labors that proved to be cheaper, commonly accessible and do not require signing of formal employment contract with workers dominated both the retail and wholesale sectors. Poor government support, poor business condition in addition to poor capital base, high transportation cost, price fluctuations, adulteration were the identified major constraints affecting the agripreneurs. The study recommends capacity development on new marketing strategies, registration of businesses with relevant agencies, provision of credit and financial services; formation of formidable, strong and mutual-trust co-operative societies for input supply actors so as to enhance efficiency and effectiveness of the agricultural inputs supply sector in the state.



1. INTRODUCTION

Agriculture is critical to Nigeria's economic sustainability. In fact, prior to the discovery of oil, it was the mainstay of the country's economy (petroleum). In 2015, the agriculture industry generated around 23% of the country's GDP, accounting for approximately 75% of non-oil export revenues (Federal Ministry of Agriculture and Rural Development, 2016). Over the years, the industry has employed the vast majority (more than 70%) of the country's population, particularly those living in rural areas (Ogbalubi and Wokocha, 2013).

To encourage global best agricultural practices among millions of small farmers—the backbones of Nigerian agriculture—supply of modern inputs such as seed, fertilizers, and other associated inputs should be expanded (IFDC, 2001). Farmers should have easy access to economical inputs. However, recent developments in Nigeria indicate that farmers are not only having trouble receiving the necessary inputs on time and in excellent quality, but they are also paying exorbitant rates, owing to Nigeria's fragmented and undeveloped agricultural input market (IFDC, 2001).

Finding reliable sources for high-quality agricultural inputs, such as seed, fertilizer, farm equipment, veterinary supplies and services, and sustainable extension services, are one of the most difficult challenges for smallholder farmers (Reddy et al., 2020; Elakkiya and Asokhan, 2021). Higher quality and quantity farm production yields higher profits and promotes increased on-farm production (Mwesigwa, 2020; Nyarko et al., 2022). The main cause of low agricultural output in most of Sub-Saharan Africa has been a lack of access to agricultural inputs (Sanches et al., 2002; Nwobodo et al., 2018). The low usage of farm inputs by smallholder farmers in SSA, compared to other emerging regions of the world, is responsible for the disparity between potential farmers' yields and actual crop yields at the farm level (Chianu et al., 2008; Amrago and Mensah, 2022). Meanwhile, smallholder farmers frequently have to travel long distances to obtain inputs, pay exorbitant rates for them, and suffer limited input availability (AgriLinks, 2013; Nyarko et al., 2022).

Agro dealers are those that sell and distribute agricultural inputs to farmers. They are occasionally rural entrepreneurs who have gained basic business skills and may be lead farmers themselves (Ogundele et al., 2012; Handa et al., 2021). They play an important role in meeting farmers' agricultural input needs (Adetunbi et al., 2014; Srishailam et al., 2021). As a result, connecting agro-input dealers to essential stakeholders throughout the agricultural value chain is critical for Nigeria's long-term agricultural and rural development (Sanga et al., 2013; Singh et al., 2021). Connecting input-dealers with other stakeholders, such as farmers, enhances communication and interaction, resulting in more efficient collaboration among stakeholders (Dogbe et al., 2012; Handa et al., 2021).

The use of agricultural inputs is critical in modern agriculture since it is a powerful and effective weapon for achieving economic and social reforms, particularly in underdeveloped countries (Food and Agriculture Organization, 2015; Musyoka et al., 2022). Agribusiness is a system that brings together the intermediary parts: input sector, production sector, processing/manufacturing sector, as well as transport and marketing sector, in such a way that the success of one part is significantly dependent on the effective operation of the other (Malarkodi and SD, 2018; Verma et al., 2019). The first and most significant component is the input supply sector (Homum and Bolwigs, 2021). An effective agricultural input delivery system can make a significant difference in farm income growth. Farm input provision is critical for increasing farm output (Urmi et al.,

2020). Consequently, the main contribution of the study was to assess the agro-input supply sector in Kogi State while the specific objectives study seeks to: - assess the conduct and efficiency of input supply services; determine the nature of business support services offered by the agro-dealers; and, identify the major constraints associated with agro-input supply services across the state.

2. MATERIALS AND METHODS

2.1. Study Area

The study was conducted in Kogi State of Nigeria. It is located on longitudes 50° 10'E to 70 49' E and latitudes 6' 30' N to 0' 42'N on an altitude of four hundred and twenty meters above sea level. The State has twenty-one (21) local government areas and is located in the middle belt or what is historically referred to as the North Central area of Nigeria. It shares boundaries with nine other states in the country and the Federal Capital Territory (FCT). Agriculture is the principal means of livelihood; over 85 percent of the working populations are farmers engaged in crop production (Kogi State Agricultural Development Programme (KSADP), 1995). Farming is the traditional occupation with main emphasis on cultivation of food crops and keeping of small livestock (sheep and goats), fishing and poultry (fowls and ducks) on free-range basis. Kogi State has fertile soil which supports a variety of crops which ranges from annuals to perennials (Okwuteno, 2011). The state experiences two major seasons, dry and wet seasons which favours the growth of food crops like yam, cassava and rice while the cash crops include cashew, oil palm and sesame. The State is abundantly endowed with iron-ore, limestone and coal (Adofuet *al.*, 2013).

2.2. Sampling Procedure and Sample Size

The population of the study constituted major agro-dealers from the twenty-one local government areas of the state. The list of one thousand two hundred and fifty-six (1256) registered input dealers was obtained from Kogi State Agricultural Development Project and Agro-dealers association of which the study respondents were drawn proportionately based on the number of available dealers in the twenty-one local government areas across the state. On a proportionate scale of 12.5%, a total number of 157 input dealers were randomly selected and interviewed for the study.

2.3. Analytical Tools

Simple descriptive tools viz. frequency, percentages and proportions were adopted in analyzing and describing the findings of the study. The choice of this technique was informed by Adofu *et al.*, (2011; 2013) who opined that data collected from the field through the use of structured questionnaire can be subjected to analysis using the descriptive statistics.

3. RESULT AND DISCUSSION

3.1. Market Access and Efficiency

The result of the interview conducted as depicted in Table 1 revealed that both retailers and wholesalers of agro inputs majorly specializes in the supply of agro-chemicals, fertilizers and feed. Only about 20 percent of the retailers were involved in the supply of equipment/farm tools, suggesting that, agricultural machineries and other farming equipment that tends to be costly and not on high demand are not commonly sold by most of the agro-input dealers.

Table 1. Market access and efficiency

Market access and Efficiency	Retailer	Wholesaler
	Percentage	Percentage
A. Product supplied		
Agro-chemicals	42	35
Fertilizer	45	40
Feed	13	25
Equipment/Farm Tools	10	0
B. Major customers		
Producers	86	28
Processors	10	13
Retailers	4	55
C. Method of sell		
Direct	95	60
Agent	0	30
Intermediary	5	10
D. Market awareness		
Advert	3	17
Sales agents	12	10
Direct visit	2	5
Not care about	83	68
E. Meeting customers		
Daily	0	4
Weekly	0	5
Monthly	5	10
Not at all	95	81
F. Information to customers		
New products	2	15
Use of equipment	0	0
New technology	0	10
None	98	75
G. Customer services provided		
Training	0	0
Advice	5	18
None	95	82

Source: Field survey, 2020

The study identified small-scale producers as major customers of the retailers, while large producers and retailers prefer customers of wholesalers. Furthermore, about 83 percent of retailers and 68 percent of wholesalers did not care to engage in activities that will create market awareness of their products, which negatively affects the sales volume of both the retailers and wholesalers, respectively. Thus, implying the need and importance of creating awareness and information about agro-inputs with the aim of increasing market share and customer loyalty, as rightly observed by IFDC, IITA and WARDA in 2011, that market

information in agro-input is nearly absent. By and large, findings indicated that only 25 percent of the wholesalers provide information to their customers about new technology and new products available for adoption in the market, in addition to advice on good usage products or services. This confirms IFDC, IITA and WARDA in 2011, that “agricultural input markets are fragmented and underdeveloped in Nigeria” and because these markets are not functioning properly, the transaction cost of acquiring inputs is high, making inputs not readily available on time and in good quality.

3.2. Supply Dynamics

In an attempt to retain customers and increase market shares suppliers/companies provide some business-related services to their customers. In this regard, the major identified services offered to agro-input dealers were; marketing support, loan, training and maintenance support to both retailers and wholesalers as clearly depicted in Figure 1. These kinds of services offered by manufacturers are believed to add a lot of value and creating mutual benefit across the entire input supply value chain. Interestingly, Nwobodo et al., (2018) reported similarly that, input dealers engaged in a number of areas of interaction with other stakeholders including business deal, welfare loans and grants but lacks the requisite knowledge of appropriate inputs which will definitely impact on the farmers who are their direct customers.

Moreover, the study reveals that, for most retailers, their major source of supply lies with neighbouring wholesalers and invariably, majority of wholesalers obtained their supply from companies such as Jubaili, Indorama, Saroagro-chemicals etc. as depicted in Figure 2. Thus, imply that effective business linkage with many other manufacturing companies is a key to ensuring timely supply and good access to quality input for farmers in remote areas of the state. Additionally, it is posited that, when given needed genuine support and encouragement to build marketing infrastructure, the private sector has the potential to supply agricultural inputs in a cost-effective manner. This is in line with IITA, IFDC and WARDA (2011).

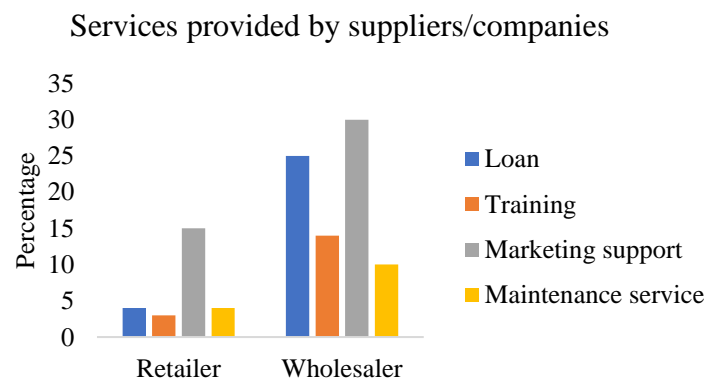


Figure 1. Supply dynamics
Source: Field survey, 2020

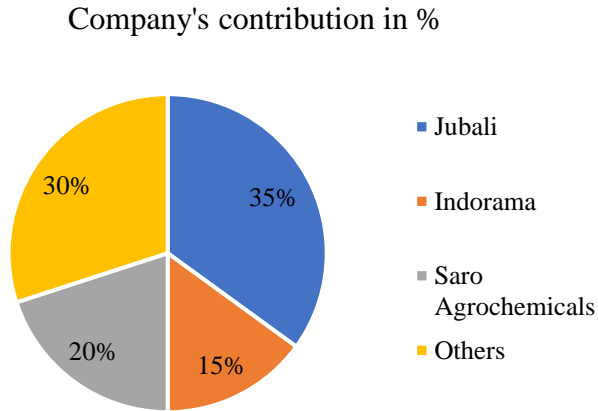


Figure 2. Source of supply for wholesale
Source: Field survey, 2020

3.3. Product Differentiation/Competition

Market products can be differentiated base on many choices or considerations like market segmentation, niche, customer preference and so on which mostly serves as the basis for competition in the market. As depicted in Figure 3, it was observed that, among retailers of input supply, price differentials of input products are the most important consideration by customers followed by warranty, quality and brand name of the input. In a similar pattern, consideration and preference for input among wholesalers’ customers is also mostly influenced by price before quality, brand name and warranty of an input. This finding is not in agreement with that of Syed *et al.*, (2013) where it was reported that buying preferences and decisions of farmers are highly influenced by social customs, traditions and beliefs in the rural markets. Consequently, knowing buying preferences of farmers in an organized retailing has become one of the critical success factors for the retail service providers to tap in order to serve farmers and gain long term sustainable competitive advantage. Suffice to relate the findings of Dharni and Singh (2011) who reported that, farmers considered price, fresh inventory and trustworthiness as most important factors in their choice rather than quality, brand and packaging. No doubt, the productive farmers require the right inputs in the correct quantities at the right time and at affordable prices (Urmi *et al.*, 2020).

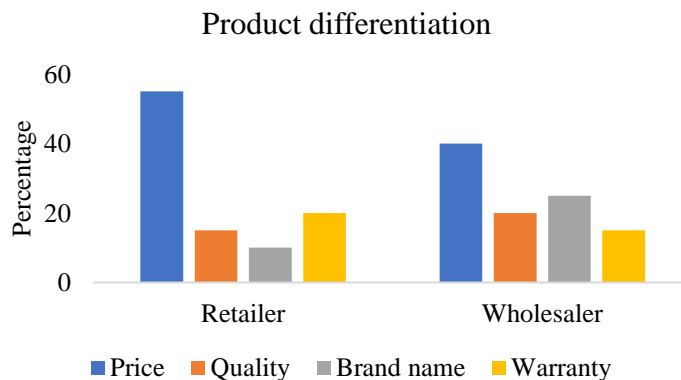


Figure 3. Product differentiation
Source: Field survey, 2020

The study observed further that, 42 percent of retailers attest to the existence of competition among input supply actors, and 35 percent in their wholesalers' counterparts. Interestingly, the competitive nature was reported to be largely cordial and beneficial for both the retailers and wholesalers across the study area as shown in Table 2 below. This portrays a positive atmosphere that certainly continues to foster unity, harmony, respect, and peaceful coexistence between agro dealers in the value chain segment.

Table 2. Actor's competitiveness

Competition	Retailer	Wholesaler
	Percentage	Percentage
A. Existence of competition		
Yes	42	35
No	45	40
B. Nature of competition		
Helpful	39	55
Cordial	32	23
Bitter	14	12
Rivalry	15	10

Source: Field survey, 2020

3.4. Labour Practices

The form of labour practice that dominates both retail and wholesale value chain was observed to be casual and family labour. Other form of occasionally used labour was observed to be child labour as illustrated in Figure 4. Like in many typical situation of agriculture related activities where labour practices were dominated by either, family, casual or child labour. Further, the results in Table 2 depicted that 84 percent of retailers and 73 percent of wholesaler didn't sign any employment contract with their worker. This absence of signed employment contracts could be one of the reasons why labour wages tend to be very low in the input supply sector as presented in Table.

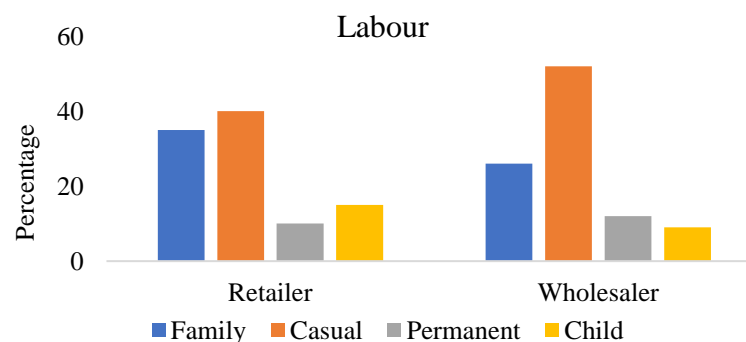


Figure 4. Labour use
Source: Field survey, 2020

Table 3. Signed contract with employee

Response	Retailer	Wholesaler
	Percentage	Percentage
A. Sign contract with employee		
Yes	16	27
No	84	73
B. Cost of labour		
Very low	67	55
Low	30	35
High	3	10

Source: Field survey, 2020

3.5. Business Environment and Support Service

As input supply is a critical factor in inclusive agricultural and rural development, and pertinently for any business to thrive and flourish there must be the availability of favourable environment and support services to the actors, participants and supporters across the entire agribusiness system. From the result in Table 4, the two input supply actors under study reported almost complete absence of government support toward improving their business condition. Business support mostly come through membership of business associations as reported by 57 percent of the retailers and 79 percent of the wholesalers. By and large, majority of these actors are satisfied with the services offered by their respective associations.

Table 4. Business environment

Response	Retailer	Wholesaler
	Percentage	Percentage
A. Membership of Business association		
Yes	57	79
No	43	21
B. Satisfaction with services of association		
Yes	67	55
No	33	45
C. Support from government		
Yes	6	12
No	94	88

Source: Field survey, 2020

3.6. Binding Constraint

Agricultural related businesses were also very prone and susceptible to seasonality, risk and other macro-economic variables. As indicated in Figure 5, the study identified the biggest constraints for both retail and wholesale input suppliers as poor capital base, high transportation cost and price fluctuations. Others include adulteration and competition. On the contrary, Goni (2018) reported that, high taxation and difficulties in sourcing for foreign exchange were the major constraints that affected agro-inputs business in the study area. Similarly, in another study conducted by Nwobodo *et al.*, (2011), it was reported that one of the greatest

constraints of input dealers was weak linkages with manufacturers, research institute, extension development agencies/NGO and government policy workers; the implication of which makes any substantial progress in agricultural development difficult. For agriculture to prosper, farm inputs need to be available, affordable, accessible, timely and of good quality. Seeds, fertilizers, and agro-chemicals are essential for improving the productivity and incomes of smallholder farmers in developing countries (Rosegrant *et al.*, 2001; World Bank, 2007, 2013; AGRA 2013; FAO, 2013).

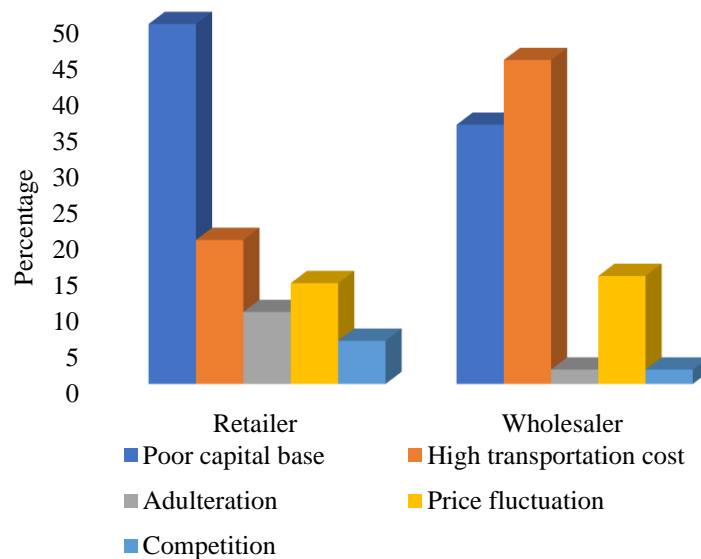


Figure 5. Binding constraint
Source: Field survey, 2020

4. CONCLUSIONS

It has been established that major items supplied by both wholesalers and retailers were agro-chemicals, fertilizer and feed with little or no attention given to activities that will create market awareness of these products. Price differentials is the major consideration in purchase pattern of agro-input by customers before considering other quality factors like warranty, quality and brand name. The nature of the competition among retailers and wholesalers was largely cordial and helpful. Casual and family labour dominates the entire labour supply in the agro-input supply industry because there is no signing of formal employment contract during employment of labour and wages were too small. The major constraints for both retail and wholesale input suppliers were poor capital base, high transportation cost and price fluctuations. Based on the findings of this study, the following recommendations are advanced. The first, encourage formation of formidable, strong and mutual-trust cooperative societies amongst input supply actors to enable them source for credit/finance to embark on bulk purchase of inputs from manufacturers to enjoy economies of scale and reduced transportation cost. Second, input supply actors should be guided to ensure the insurance of their business including registrations with relevant governmental agencies to facilitate securing of credit/loan from commercial banks and other financial institutions to increase their capital base for increase profitability. Third, there is need to organize training workshop/seminar for both retailers and wholesalers of input suppliers to develop their capacity on how to create marketing awareness about their products and services.

REFERENCES

- Adofu, I. Orebiyi, J.S., & Otitolaiye, J.O. (2013). Repayment performance and determinants of food crop farmers loan beneficiaries of Nigeria of Agricultural Cooperative and Rural Development Bank (NACRDB) in Kogi State, Nigeria (2008-2010). *International Journal of Farming and Allied Sciences*, 2(1):
- Adofu, I., Shaibu, S.O., & Yakubu, S. (2011). The economic impact of improved agricultural technology on cassava productivity in Kogi State of Nigeria. *International Journal of Food and Agricultural Economics*, 1(1):63-74
- Agrilink. (2013). Developing Private Sector Input Supply Systems. <https://www.agrilinks.org/events/developing-private-sector-input-supply-systems>
- Amrago, E.C., & Mensah, N.O. (2022). Trade credit from agrochemical vendors as an alternative source of finance for cabbage producers in the Bono East Region of Ghana. *Agricultural Finance Review*, (ahead-of-print).
- Chainu, J.N., Mairura, F., Ekise, I., & Chianu, J.N. (2008). Farm input marketing in western Kenya: Challenges and opportunities. *African journal of Agricultural Research*, 3(3) 167-173.
- Dogbe, W., Sogbedji, J., Mando, A., Buah, S.S.J., Natsugah, S.K., Kanton, R.A.L., Ndiaye, K. (2021). Partnership for improved access to agro-inputs and technology: Some experiences from the emergence rice initiative project in Ghana. *African Journal of Agricultural Research*, 7(34): 4790-4802
- Elakkiya, S., & Asokhan, M. (2021). Role and performance of Agri-input dealers in extension services in Coimbatore district of Tamil Nadu, India. *Journal of Applied and Natural Science*, 13(SI):156-161.
- Federal Ministry of Agriculture and Rural Development (FMARD). (2016). The Agriculture Promotion Policy (2016–2020). Abuja, Nigeria: FMARD
- Food and Agriculture Organization (FAO). (2015). Regional Overview of Food Insecurity. Accra, Ghana: FAO.
- Goni,A.A. (2018).Role of men and women in agro-input business in North West, Nigeria. *Journal of Agricultural Extension*, 22 (1): 15-21
- Handa, T., Khan, M.A., & Awasthi, H.K. (2021). Communicational behaviour of agri-input dealers and its role in knowledge and skill development.
- Hornum, S.T., & Bolwig, S. (2021). A functional analysis of the role of input suppliers in an agricultural innovation system: The case of small-scale irrigation in Kenya. *Agricultural Systems*, 193:103219.
- Kogi State Agricultural Development Programme (KSADP) (1995). *Kogi State Agricultural Development Programme Annual Report*. Kogi State Government Press: Lokoja
- Malarkodi, M., & SD, S. (2018). Level of Knowledge Management Orientation, Marketing Capability and Firm Performance among Trained and Untrained Agri-Input Retailers.
- Musyoka, D.M., Gathungu, E., & Gido, E.O. (2022). Factors influencing entrepreneurial orientation levels among agri-input suppliers in Nakuru county, Kenya. *African Crop Science Journal*, 30(s1), 171-183.
- Mwesigwa, W.T. (2020). 4.5 prospects for financing agricultural inputs in Uganda. *Agricultural Finance Year Book*, 122.
- Nwobodo, C.E., & Ajah, O.E. (2018). Assessment of linkages between agro-input dealers and other stakeholders in rice production in Ebonyi state, Nigeria. *Current Journal of Applied Science and Technology*, 29(6):1-9.
- Nyarko, B., Oppong Mensah, N., Boateng, K.A., & Donkor, A. (2022). Influences of commerce Adoption on Sales performance among agrochemical input dealers in the Ghanaian City. *Cogent Business and Management*, 9(1):2038763.
- Ogbalubi, L.N., & Wokocho, C.C. (2013). Agricultural development and employment

- generation: The Nigeria experience. *IOSR Journal of Agriculture and Veterinary Science*, 2(2): 60-69
- Reddy, U.K.K., Satyagopal, P.V., Sailaja and, V., & Prasad, S.V. (2020). Profile characteristics of agri-input dealers. *Department of Agricultural Extension, SV Agricultural College, ANGRAU, Tirupati, 517502*.
- Saha, A., Pal, P.K., & Mandal, T.K. (2015). Role and perceived quality of services of agro advisory agents in Nadia district, West Bengal. *International Journal of Farm Sciences*, 5(3): 230-236.
- Sanches, P.A., & Jama, B.A. (2002). Soil fertility replenishment takes off in easy Africa.
- Sanga, C., Tumbo, S., Milozi, M.K.S. and Kilima, F. (2013). Stakeholders' analysis using value chain analysis: AHP in action. *Interdisciplinary Studies on Information Technology and Business*, 1(2):85-104
- Singh, N., Gupta, B.K., & Gautam, U.S. (2021). Training needs assessment of agro-input dealers in Banda district of Uttar Pradesh. *Indian Journal of Extension Education*, 57(2):56-62.
- Srishailam, B., Jirli, B., & Manasa, K. (2021). A critical analysis on performance of farm based agri-input entrepreneur in central Telangana region.
- Syed, H.A., & Smriti, S. (2013). Buying preferences of customers for agri-inputs from organized rural retail stores. *The International Journal's-Research Journal of Social Science and Management*, 3(2):96-101
- Ukwuteno, S.O. (2011). Economics of small-scale oil palm production in Kogi State, Nigeria. An unpublished *Thesis* submitted to the Department of Agricultural Economics, Faculty of Agriculture, University of Nigeria, Nsukka. Pp. 52
- Urmi, P., Minati, M., & Tarun, K.O. (2020). Input supply in agriculture: The role of financial institutions.
- Verma, A.P., Yadav, V.R., Patel, D., & Roy, N. (2019). Relevance and utility of different training needs of input dealers in Jhansi District of Bundelkhand Region. *Asian Journal of Agricultural Extension, Economics and Sociology*, 37(4):1-8.