

The Role of Private Sector in Agriculture Advisory Services in Gezira State, Sudan

Ahmed Mirghani Abdel Rahman

**Department of Agricultural Extension and Training, Faculty of Agricultural Sciences,
University of Gezira, Wad Medani, P. O. Box. 20, Sudan.**

Email:mirghani999@hotmail.com

Mobile phone: +249122315378

ABSTRACT

This article examines the role of the private sector in agriculture advisory services in Gezira State, Sudan. The data were gathered by administering a questionnaire among 100 agricultural service providers in the State in the 2021/ 2022 growing season and selected using the simple random sampling technique. This was done to obtain a fairly accurate result at a reasonable cost. The collected data were statistically analyzed and interpreted using percentage and frequency distributions. According to the results, percent of agricultural service providers hold BSc degrees in plant protection, while 50% provide pesticides to farmers. Also, 70 percent of the private sector provides farmers with technical information about pesticide use on crops, while 55 percent provide them with financial services in the form of cash or credit. There are many constraints facing private advisory services in Sudan. The study concludes that the private sector covers a reasonable part of the deficiencies of the public extension sector. However, it suffers from some constraints that limit its effectiveness in providing services to its clientele. A greater collaboration between the public and private sectors is therefore needed.

***Key words:* Agricultural extension services; private extension sector; Gezira State; Sudan.**

INTRODUCTION

Agricultural extension services help farmers increase their crop production and productivity to improve their income and other socio-economic status. This promotes rural communities' living standards and welfare. These services vary depending on a number of factors such as cultivated crops, production problems, agriculture policy, number of organizations that provide extension services as well as the rural people themselves and their personal and economic characteristics. Agricultural extension services help farmers identify and analyze their agriculture problems, so they can make decisions about their farms more effectively. In Adebayo (2004)'s view, agricultural extension services enable farmers to identify and analyze their own agriculture problems.

Globally agricultural extension services are provided by both government and private sector organizations as mentioned in the literature. Public agricultural extension provides farmers with free services to meet their needs, interest and solve their problems in all agriculture sectors. As a result of limited financial resources and global economic shifts, these services gradually became inadequate (Saliu et al., 2009). Privatization of agricultural extension services refers to services rendered in the area of agriculture and allied aspects by extension personnel working in specialized agencies or organizations for which farmers are expected to pay a fee (or free) and can be viewed as supplementary or alternative to public extension services (Saravanan et al, 1999). As extension organizations responded to an increasingly complex and rapidly changing environment, agricultural extension services were privatized worldwide (Lawrence et al, 1967). Privatization refers to the ending of total or substantial ownership and operational control from the government to the private sector. It involves the creation of new partnerships and associations between government agencies and non-governmental organizations (Connolly, 2004). A private extension service is one that provides advisory services in agriculture and is utilized as an alternative to public extension services (Bloome, 1993). In addition to sharing the responsibility for this service, farmers are also expected to contribute to the costs (Van Den Banetal, 1996).

In Sudan as in most developing countries ministry-based agricultural extension services were adopted and established after the Second World War as part of American Aid for developing countries in 1959. Sudan's privatization policy and agricultural reforms over the last two decades resulted in the creation of the non-public extension sector due to the inadequate extension services provided by public agricultural extension organizations in the country (Abdel Rahman et al, 2016)..The private sector is actively engaged in providing agricultural extension services particularly to the vegetable farming communities of Sudan. It is dominated of pesticide companies, farmer's unions and retailers. This paper investigates the role of the private sector in agriculture advisory services in Sudan.

MATERIALS AND METHOD

3.1. Area of the study:

This study was undertaken in Gezira State, Sudan. Gezira State is located in central Sudan and lies between the Blue and the White Nile. It has an area of 23,373 km² and an estimated population of approximately 3,300,000 (2000). The name comes from the Arabic word for peninsula. Gezira State represents Sudan's beating heart. It is a well-endowed State particularly in agricultural resources; secondly Gezira lies entirely in the central clay plain of Sudan, in an area of 2.76 million hectares of which 91.9 % is suitable for agriculture. Irrigation area is about 1.04 million ha. And rain-fed farming covers 0.63 million ha. Gezira is the world's largest scheme of its kind. Gezira scheme alone covers 84% of the cropped area in Gezira (50%

of the total irrigated area in Sudan). Gezira State also includes 60% of Rahad scheme (75.000 ha), in addition to Gunied Sugar Cane Scheme (18.300 ha) there are also many of the small and large scale irrigation schemes owned by individuals and companies and areas of which total 78.552 ha, in addition to more than two thousand feddans (833 ha) under traditional farming along Rahad river and Blue Nile banks. In addition, Gezira is one of the most populated states in Sudan, with the majority of its population working in agriculture, either directly or indirectly.

Study population:

The total number of agricultural service providers was estimated to be 200 in the four main agricultural input markets of Gezira State. These markets are Wad Medani Central Agricultural Inputs Market, Hasahisa Agricultural Inputs Market, Rufaa Agricultural Inputs Market and Kamlin Agricultural Inputs Market.

Sample size and data collection:

The study was based on primary (qualitative) data. Qualitative methods are ways of finding out what people do, know, think and feel by interviewing, observing and analyzing data from documents (Patton, 2002). The data were gathered by administering a questionnaire among 100 agricultural service providers in the State in 2020/ 2021 growing season selected using the simple random sampling technique to obtain a fairly accurate result at a reasonable cost (50 from Wad Medani, 20 from Hasahisa, 20 from Kamlin and 10 from Rufaa agricultural input markets).

Data Analysis:

The collected data were statistically analyzed and interpreted using percentage and frequency distribution.

RESULTS AND DISCUSSION

Educational level and specialization of agricultural service providers:

Table (1) shows that the majority of agricultural service providers (70%) reported that they hold BSc degree in plant protection, while 15%, 10% and 05% of them hold BSc degree in crop production, animal production and BSc in other disciplines respectively. K. Adebayo (2004) noted that staff who deliver a service need appropriate expertise, knowledge and skills if they are to be effective and remain credible in clients' eyes. Abdul Halim et al (1997) reported that a successful

extension officer (BSc in agricultural extension) needs to possess both process and human skills and technical skills necessary for his work. Facilitating group formation and engaging stakeholders in programme planning are examples of process or functional skills. In addition, conducting demonstrations to show how to add chemical fertilizers to wheat crop are example of technical skills. Technical skills are necessary but not sufficient for effective teaching and learning in agriculture. Therefore, an effective extension officer must integrate technical skills with process skills. As we knew, process skills or human skills can only be acquired from agricultural extension disciplines, while technical skills can be acquired from other agricultural disciplines.

Table 1. Percentage distribution of agricultural service providers according to their education level and specialization

Education level	specialization	Frequency	%
1-BSc	Plant protection	70	70
2-BSc	Crop production	15	15
2-BSc	Animal production	10	10
2-BSc	Others	05	05
Total		100	100

Distribution of private sector contributions by type of input provided:

Table (2) reveals that 50% of the private sector provide farmers with pesticides, 20% of them provide farmers with improved seeds, 10% of them provide farmers with chemical fertilizers, 06% of them provide farmers with field equipment, 05% of them provide farmers with concentrated fodder, 05% of them provide farmers with veterinary drugs, 03% of them provide farmers with fuel (Gasoline) and 01% of them provide farmers with other production inputs. Developing countries have come to view private agricultural extension sector in the transfer of agricultural technology and marketing agriculture products as a more viable and efficient alternative to public extension (Swanson et al. 2002). In most countries, the private sector is involved in agricultural technology transfer. This includes the production and delivery of purchased inputs, such as seed, fertilizer, feed, agrochemicals, drugs, tools, equipment and machinery.

Table .2. Percentage distribution of private sector by kind of input provided

Kind of input services provided	Frequency	%
1- Chemical fertilizers	10	10
2- Improved seeds	20	20
3- Pesticides	50	50
4- Field equipment	06	06
5-Concentrated fodders	05	05
6-Veterinarydrugs	05	05

7-Fuel (Gasoline)	03	03
8- Others	01	01
Total	100	100

Distribution of private sector by technical services provided:

Table (3) indicates that the majority of the private sector (70%) provide farmers with technical information on the safe use of pesticides on their crops, (10%) of them provide farmers with problem solving practices especially all problems related to pest attacks and post-harvest techniques, (7%) of them provide farmers with technical information on cultural practices of their cultivated crops, (05%) of them provide farmers with information on the use of animal drugs, (05%) of them provide farmers with other services such as poultry equipment and (03%) of them provide farmers with information on new crop varieties Similarly ,Agro based private businesses in Eastern India are establishing rural business centers that serve as a single point of contact for rural residents (Ujjwal et al 2012).These centres supply consumables, farm inputs, technical information etc.

Table .3. Percentage distribution of private sector by kind of technical services provided

Kind of technical services provide	Frequency	%
1- Use of pesticides	70	70
2-Problem solving practices	10	13
3- Cultural practices	07	07
4- Information on new crop varieties	03	03
5- Use of animal drugs	05	05
6- others	05	02
Total	100	100

Distribution of the private sector by financial services provided:

Table (4) reveals that (55%) of the private sector provide farmers with financial services in form of cash or credit services, (25%) of them provide farmers with financial services in form of agricultural insurance services and (20%) of them provide farmers with financial services in form of murabaha services(Islamic formula of credit and loans services).

Djoumessi et al (2018) pointed out that among vegetable farmers in the Southwest region of Cameroon, education, membership in a farmers' association, extension services, and distance from credit sources all positively influence their chances of accessing credit. Farmers' participation in

the formal agricultural credit market was significantly increased by extension services, borrowing experience, farm size, number of livestock, collateral, and membership in associations (Yehuala 2008).

Table .4. Percentage distribution of private sector by kind of financial services provided

Kind of financial services provide	Frequency	%
1- Cash or credit services	55	55
2- Agricultural insurance services	25	25
3-Murabaha services	20	20
Total	100	100

Constraints facing Sudan's private sector:

We asked staff of the private sector about the most challenging constraints facing the private sector in their work. Their answers were as follows:

- 1- Limited coverage of the services in terms of distance and different agricultural sectors in the country.
- 2- Inadequate quality of services either inputs or technical services.
- 3- Failure to ensure service continuity
- 4- The majority of staff are not qualified to provide extension services.
- 5- Price instability
- 6- There is no coordination with the public extension sector, agricultural research or government policies.
- 7- Lack of technical skills among farmers.
- 8- Neglecting the training of the service staff.
- 9- High input prices compared to the public extension sector.

Despite the fact that some of the deficiencies of public extension systems can be overcome with private sector participation, Gershon Feder et al (2011) noted that there were still challenges to overcome, including misuse of public funds, inequitably providing services, inadequate quality, and limited coverage of farmers' needs.

Conclusion

The study concludes that the private sector covers a reasonable part of the deficiencies of the public extension sector. However, it suffers from some constraints that limit its effectiveness in providing services to its clientele. A greater collaboration between the public and private sectors is therefore needed.

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