



STATUS AND RATIONAL USE OF ROCK PHOSPHATE IN AGRICULTURAL CROP PRODUCTION A REVIEW

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ABSTRACT

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Agriculture is the main source of economic livelihood for the majority of the India's population and agricultural inputs and services are the basic requirements in the agriculture. Raising the productivity of the crops and livestock is depends on the farm inputs and services. Therefore, an efficient delivery system for agricultural inputs and services can play a crucial role in the growth of farm income. Most of the farmers and input dealers are experiencing challenges and constraints in accessing and supplying the agricultural inputs respectively. In case of developing countries, it has also been realized that farm machinery, equipments and agri inputs are relatively expensive. Hence, nowadays timely and accurate availability of farm inputs and service is the need of hours for better agricultural growth as well as development of farming community. There is the need to critically look at how can we get the opportunities and how can alleviate the constraints or problems faced by the farming community in the country. The study intends to suggest intervention strategies that can assist in developing the efficient inputs and service delivery system for the better growth in income level of all classes of farmers.

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INTRODUCTION

Nowadays, in developing countries, improvement of agricultural production, profitability and sustainability depends on the farmers, to adopt change and their innovative use of technologies, organizational approaches, management systems, institutions, and availability of resources. Agricultural extension through advisory services and programs forges to strengthen the people's capacity to innovate by providing access to knowledge and information. According to the rural extension and advisory service report of America (USAID, 2010) farmer capacity building can be achieved through (1) advising farmers on opportunities not only in agricultural production as it is the case in developing countries, but in marketing, conservation, and family livelihoods; (2) facilitating development of local skills, organizations, links with other programs, and related institutions; (3) developing and transferring new technologies to farmers; and (4), taking a wholesome approach to addressing public interest issues in rural areas such as resource conservation, health, monitoring of food security and agricultural production, food safety, nutrition, family education, and youth development (Tladi and

Tselaesele, 2010). This paper provides a synthesis on agricultural inputs and services, through an examination of the effectiveness of their farm material and service delivery system. After land, the provision of farm inputs such seeds, machinery and equipment, fertilizer and agrochemicals is probably the most important factor in the productivity of farms. Highly productive farmers require the right inputs, in the correct quantities, at the right time and at affordable prices. The effectiveness of input supplying industries in satisfying these requirements is largely influenced by the structure, conduct, and regulatory environment facing them. This paper review assesses the demand, availability, accessibility of agricultural inputs and the constraints currently being experienced by farmers across the country. The general objective of the study is to evaluate the delivery systems and structure of the existing agricultural inputs and service in case of marketing channels. Later, the study also highlights the challenges faced by farmers as well as input dealer in the farm inputs sector. This study is based the secondary information collected from different research

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articles, studies, documents and internet to make this study more useful and relevant.

Structure of the existing marketing channels

The marketing channels are a set of interdependent organizations. It is not just one organization making its best, but several firms involved in many activities in a certain channel structure. Each marketing channel member depends on others to develop its function efficiently marketing channels are defined as “a set of interdependent organizations involved in the process of making available a product or service for use or consumption” (Coughlan, 2002). Among suppliers, retailers, wholesalers, and the farmers, several activities are performed in order to make available the product at the right time, place, condition, a competitive price. For understanding these activities, the simple marketing system and the networks for delivering value are good theoretical models

The structures of farm inputs and services market are imperfect competition *i.e.* monopolistic in nature in the country. Marketing channels includes a set of activities which are necessary to transfer the ownership of goods and to move goods from the production place to consumption and these consists of all the agencies and all the marketing process. The problem of poor communications, inadequate transport systems and lack of competition among traders generally result in high costs and delivery problems for farm inputs such as seeds, fertilizers, and agro chemicals, and support services such as animal health care and extension advice. In the past these services were providing through the Ministry of Agriculture but, quality and standard of the services provided has always been open to criticism and subject to policy constraints (Kimana, 2009). An efficient agri input marketing channels includes the chain of agents such as suppliers, retailers, wholesalers, and farmers in order to make available the agri inputs and service at the right time, place, condition, at a competitive price. The agricultural inputs and service requires a marketing channel for distribution so as to reach the consumer. Different marketing channels are used for different farm inputs such as seed, fertilizer distribution channels mostly used in India are given below:

Constraints in farm inputs and service delivery

Agricultural development depends to large an extent on the efficient use of modern farm inputs such as chemical fertilizers, genetically modified seeds, pesticides, machinery, and veterinary services. Farmers in developing countries like India are often denied access to modern inputs due to poor infrastructure and the presence of various constraints arising from restrictive policies and the presence of powerful parastatal organizations. The limited use of modern inputs is also due to lack of finance, inadequate information, and unfavorable input and output prices (Goletti and Govindan, 1995). The constraints in the

accessibility of farm inputs and services to farmers usually arises from political, managerial, financial and legal factors. Managerial factors include strong pool of talented personnel for priority setting, monitoring, evaluation, financial management, and impact assessment and the reluctance of the implementing entities to seek advice from experienced agencies.

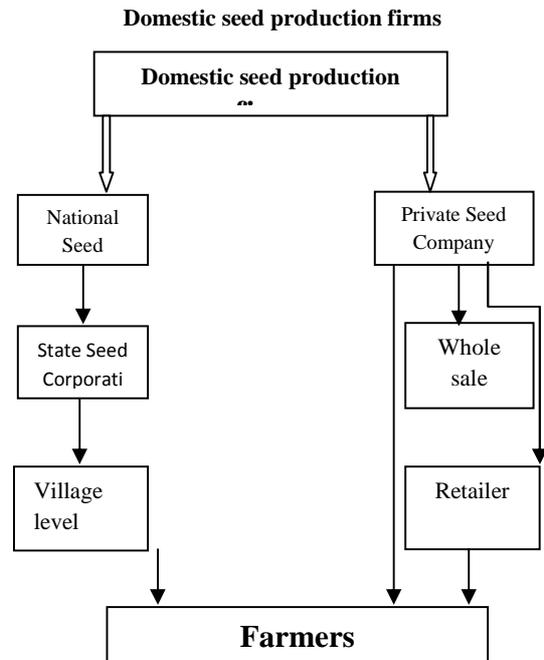


Figure 1 - The marketing channels used for seed distribution

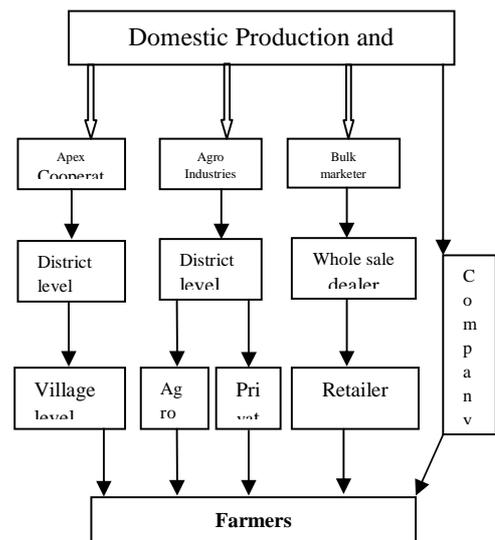


Figure 2 - The marketing channels used

Constraints faced by inputs dealer

Farm input dealers generally faced some major business constraints including high transport cost due to poor infrastructure, lack of market information, lack of storage facilities, and limited business skill and knowledge (Jonas *et al.*, 2008). The poor domestic infrastructure and limited access to agricultural credit (including seasonal credit) also undermine the effect and equitable participation in agricultural inputs trade (Sanchez, 2005).

Constraints faced by farming community

There is still not to be ensured the adequate supply of quality seeds, pesticides, credits, farm implements and other services at right time and reasonable prices. There is also lack of support and guidance from agriculture department on agri inputs and their prices. Farmers are doubtful about price of inputs because of most agricultural inputs and pesticides dealers did not display rate lists of agricultural inputs. Lack of publicity of governmental subsidy schemes related to farm inputs among rural poor, particularly illiterate farmers. There is lack of sufficient number of agriclinic and agribusiness centres in the rural areas thereby farmers cannot access farm input timely and at reasonable prices. There are also many problems such as price variations, inadequate transportation, high transportation costs and lack of storage facilities for the farm inputs in rural areas.

Strategies to improve farm input and service delivery system

Agricultural inputs and service sector should directly a related to the harmonization of agricultural input policies, access to crucial agricultural inputs such as fertilizer, seeds, agro chemicals, irrigation, and clear description of functions and responsibilities of the various sectors in the agricultural input delivery system. However, nowadays their use is not so much profitable to farmers due to lack or improper supply, absence of subsidies, poor infrastructure, lack of farm credit, weak marketing institutions for selling final products and poor delivery systems etc. Growth and development of agricultural input sector depends on the implementation of a strategy that embraces the modernization of the sector and enhances the private sector's capacity and public private partnership to engage where it can perform. The central as well as state governments need to work with private companies along with local and international NGOs, foundations, agricultural research organizations to scale up and expand public-private alliances in agri input business which helps in making the input delivery system more efficient Both the public and private sectors also need to develop alliances that mobilize the capacities and resources to support agricultural scientists, policy makers, and business leaders as well as farming community (Kargbo, 2010). We need to learn important

lessons from the Zimbabwe era of the 1940s and 1950s and the brief period of 1990s, when there was phenomenal growth in the Zimbabwean agricultural input supply system bolstered by conducive government policies which laid the foundation for profitable private sector participation. In order to map the way forward for the development of efficient and sustainable input supply strategies, it is important to first outline the long term strategy proposal for the growth of a vibrant private sector and then suggest roles for important stakeholders such as the government, private sector and NGOs (Ignatius *et al.*, 2009). the major roles suggested for different stakeholders are following:

Role of the Public Sector

Government should facilitate private sector involvement in farm inputs supply through enabling policies, enhancing capacity and profitability of the private sector in investment in marginal input markets (which have high capital requirements and low profit margins) e.g. deliberate subsidies on the provision of inputs in risky marginal areas such as tax breaks for setting up input distribution networks in remote and new farming areas. There is need to enhance farmers' effective demand for purchased inputs through policies that promote producer viability. In areas where off-farm income activities have a comparative advantage in generating income, these can also be used to create an effective demand for agricultural inputs. The government should facilitate collaboration between farmer associations, NGOs, and private firms to reduce marketing, extension and credit costs.

Role of the Private Sector

The private sector should take the leading role in the availability of farm inputs and services to farming community. The private sector should be innovative in order to reduce the costs and risks associated with the challenges of providing inputs to many smallholder farmers who are spread over wide geographical areas. The private firms should create goodwill among other stakeholders through good business practices that are based on innovation and good ethics even under the prevailing difficult macroeconomic environments. A less confrontational all-inclusive consultative approach would benefit the agricultural industry as a whole (Nicoleta, 2004) .

Role of Cooperative Sector and NGOs

The cooperative sector have an important role to play in facilitating the coordination between the public sector, private sector and farmers in order to promote the sharing of risks and costs among all stakeholders. To provide agricultural services such as improved agronomical practices to farmers with farm inputs which help to them in crop production. Enable farmers to receive inputs in a transparent and corruption-free market environment and minimize administrative costs of delivery of farm inputs. NGOs also

have a social obligation to supply quality assured agricultural inputs to farmers at right time at reasonable price.

CONCLUSION

The existing farm input and service delivery system is not appropriate and efficient for proper supply of agri inputs and dissemination of extension services to the needy farmers at reasonable prices at right time. Indian Agriculture still facing large number of constraints in efficient use of modern farm inputs such as chemical fertilizers, genetically modified seeds, pesticides, machinery, and veterinary services. Strategies should be focused on agricultural input policies, access to crucial agricultural inputs such as fertilizer, seeds, agro chemicals, irrigation, and clear description of functions and responsibilities of the various sectors in the agricultural input delivery system. The government may adjust suitable budget allocations to rural infrastructure plans, and proper supervision for effective plan implementation. State or central government should seek medium to long term policies to ensure vitality, growth and stability in the domestic agri inputs market. In present situation, it realized that the public-private partnership should be taken place in policy formation of the agriculture. The government should remove of barriers in the entry of various types of individual farmers and companies to engage in agri inputs and extension services which results improve farmer income levels and agriculture input growth. Government should make timely inspections for ensuring the quality of farm inputs and control the malpractices, black marketing of the agri inputs so that farmers can access the agricultural inputs at right time at reasonable prices.

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