



## INNOVATION IN AGRICULTURAL RESEARCH AND EDUCATION FOR AGRIPRENEURSHIP DEVELOPMENT IN INDIA

**Mini**  
**Review**  
**Article**

Vinoth, R.<sup>1\*</sup> and R. Paramasivam<sup>2</sup>

<sup>1</sup>Department of Rice, Centre for Plant Breeding and Genetics,

<sup>2</sup>Dept. of Agri. Economics, Centre for Agriculture and Rural Development Studies,

Tamil Nadu Agricultural University, Coimbatore-3, Tamil Nadu

\*Corresponding author's E-mail: rvinothagri@gmail.com

### KEY WORDS

Agripreneurship,  
Agri export zone,  
Food security,  
Production

### ARTICLE INFO

#### Received on:

19.05.2016

#### Revised on:

06.07.2016

#### Accepted on:

08.07.2016

### ABSTRACT

Agriculture remains a key sector of the Indian economy accounting for 25 per cent share in the gross domestic product. Agriculture being vital for Indian economy, Government has very long played an important role. The time has come for private sector to come forward. Today, even Government is encouraging private sector participation by inviting trade bodies to suggest necessary reforms in Indian agriculture. A shift from agriculture to agribusiness is an essential pathway to revitalize Indian agriculture and to make more attractive and profitable venture. Agripreneurship have the potential to contribute to a range of social and economic development such as employment generation, income generation, poverty reduction and improvements in nutrition, health and overall food security in the national economy. These obstacles are solved through emerged technologies in agriculture which redesigned agricultural activities. To vitalise agripreneurship and technology, education is a key factor for making awareness about certain skilled activities. Agripreneurship has potential to generate growth, diversifying income, providing widespread employment and entrepreneurial opportunities in rural areas. With a view to promoting agricultural exports from the country and remunerative returns to the agripreneur community in a sustained manner, the concept of the agri export zones (AEZ) was floated in India. Rural entrepreneurship has been identified as the key factor for the survival of industries in the changing global economy. This paper mainly focused on basic concepts of agripreneurship, entrepreneurship skills, entrepreneurship education, agri export zones and needs of agripreneurship development in India along with major reason for promoting agripreneurship development in country.

### Introduction

Development of innovative farm business is a forward approach for sustaining economic well-being of farm households in rural India. Innovation (entrepreneur) in agriculture changes both backward and forward methods of production which resulted as shift in the production curve. Backward method of production like raw materials need to be efficiently utilized via, replacement of unskilled labour to skilled labour, value addition of food grains and fruits and vegetables crops. Forward method of production includes technology intervention in the place of post-harvest management to reduce wastage losses, produced nutrient rich crops, etc. Both cost minimization and output maximization

possible in this method of production through introduction of innovative technology in agriculture. Thus, the method may support for increase farm sector share to the Gross Domestic Product (GDP). So far research in agriculture carried out in the aspect of better yield, plant protection, value addition and farm household economy well-being. Further, an effective research is required in the field of agripreneurship which transit subsistence farming into profitable farming. Agripreneurship has vital scope for small and marginal farmers to take risk nature of farming and earn successive benefits.

An introduction of free economy during 1990's has developed entrepreneurs and a new spirit of enterprise

“Agripreneurship”. Entrepreneurship are possibly make profitable and declining wastage of resources in farm business. The terms, entrepreneurship and agripreneurship are commonly used in the aspect of education and small business formation in agriculture (Bairwa *et al.*, 2014). Dollinger (2003) stated entrepreneurship in agriculture is formulation of innovative economic organization for the purpose of gain or growth under conditions of risk and uncertainty in agriculture. It may solve obstacles of growing unemployment and poverty in rural areas and slow growth of agriculture. The Agripreneurship is an imperial program in farm sector to raise technical, entrepreneurs and management workforce to supply value added agricultural output across the world (Bairwa *et al.*, 2014b). Development of agripreneurship is subject to economic situation, education and culture (Singh, 2013).

Due to the changing socio, economic, political, environmental and cultural dimensions among the farmers can promote entrepreneurship in agriculture. After liberalization the scenario of labour empowerment in agriculture has been consistently declined as drastic improvement over an urban area has attracted a portion of rural farmers, artisan and youngster. It was created scarcity of labour for carrying major farm intercultural practices such as weeding, life irrigations, harvesting and post-harvest management. Moreover, in recent decade, commercialised farming like vegetables and fruits crops need more amount of labour, water and modern inputs. Inappropriate usage of groundwater and fertilizers has gradually declined crop yields and soil fertility. Importantly, malpractices in marketing leads farmers remains indebtedness thus forced them to distress sale of produced commodities. These obstacles are solved through emerged technologies in agriculture which redesigned agricultural activities. To vitalise agripreneurship and technology, education is a key factor for making awareness about certain skilled activities. For instance, production of rice under system if rice intensification requires about nursery techniques, weeding practices, etc. Education may be provided by formal or informal but the attitude of farmers and graduates has to be changed towards adoption of technologically feasible farming, uplift of small and medium enterprises and so on. Investment on education is necessary as creation of education to the existed population need highest amount of expenditure. System of education is aims to follow value added product, direct marketing of farm products, interpersonal activities, allied farming. State as well as central agricultural universities have provided the education through formal or informal.

Spread on the thought and practice of entrepreneurship in the field of agriculture can provide significant economic benefits such as – rose up agricultural productivity, creation of new business ventures, new employment, innovative products and services, development of rural infrastructure and farmers welfare. The managerial, technical and innovative skills of entrepreneurship applied in the field of agriculture many yield positive results and a well trained agripreneurs may become a role model to all such disheartened farmers. Sah (2009) state that developing entrepreneurs in agriculture will solve the entire problem like (a) Reduce the burden of agriculture (b) Generate employment opportunities for rural youth (c) Control migration from rural to urban areas (d) Increase national income (e) Support industrial development in rural areas (f) Reduces the pressure on urban cities. This paper mainly focused on basic concepts of agripreneurship, entrepreneurship skills, entrepreneurship education, agri export zones and needs of agripreneurship development in India along with major reason for promoting agripreneurship development in country.

#### **The terminologies related with Agripreneurship development**

**Agripreneurs** – in general, agripreneurs should be proactive, curious, determined, persistence, visionary, hard working, honest, integrity with strong management and organizational skills. Agripreneurs also known as entrepreneurs. Entrepreneurs may be defined as innovators who drive change in the economy by serving new markets or creating new ways of doing things. Thus, an agripreneurs may be someone who undertakes a variety of activities in agriculture sector in order to be an entrepreneur.

**Agripreneurship** – Agripreneurship is the profitable marriage of agriculture and entrepreneurship. Agripreneurship turn your farm into an agribusiness. The term Agripreneurship is synonym with entrepreneurship in agriculture and refers to agribusiness establishment in agriculture and allied sector.

**Agriclinics** – these are envisaged to provide expert advice and services to farmers on technology, cropping practices, protection from pests and diseases, market trends, prices of various crops in the markets and also clinical services for animal health which would enhance productivity of crops/animals and increased income to farmers (Global Agrisystem, 2010).

**Agribusiness Centres** – these are envisaged to provide farm equipments on hire, sale of inputs and other services. These centres will provide a package of input facilities; consultancy and other services with the aim of strengthen transfer of technology and extension services

and also provide self employment opportunities to technically trained persons (Chandra Shekara, 2003).

### **Agripreneurs and Agripreneurship Development**

There is no single definition of the term “Agripreneur”. However, an agripreneur may be thought of someone who undertakes a variety of activities in agricultural to be agripreneur. For example an agripreneur may start an agri-business, change a business’s direction, acquire a business or be involved in innovatory activity in agricultural value addition. Thus an agripreneur may undertake a range of different activities which have a common link - the perception of an opportunity and the willingness to do something to take advantage of it. Explicit in this is that the agripreneur is a risk-taker and has the opportunity to initiate and to implement decisions which deal with the uncertain agricultural business environment within which the firm operates.

The business environment consists of many complex interrelated elements including: customers, competition, economic factors, social and demographic trends, government policy (both macroeconomic and microeconomic) and technology. In this paper I have identify five frameworks within which to analyse entrepreneurial activity. First, the Intuitive which stresses the personal psychological makeup of the individual to avail the opportunity; second, the Classical which highlights the importance of recognising opportunities; third, the Leadership which concentrates on a person’s ability to motivate and direct people for success; fourth, the Management which looks at the importance of organising businesses by such means as developing strategies and improved decision-making; fifth, the Intrepreneurship looks at innovation within organisations. Within these frameworks of thought, the entrepreneur is responsible for identifying and meeting market needs. Entrepreneurs are often discussed in terms of starting a business. Research identifies a number of strategies necessary for successful entrepreneurial start-ups which include identifying unmet demand, developing new products which meet changing market conditions, producing marketing and financial plans, weighing up risks and rewards and having the necessary resources to launch the business.

Agripreneurship requires more than just the identification of new opportunities. Additional qualities such as imagination, commitment, decisiveness and self confidence are also important elements of the entrepreneurial process. Thus the agripreneur introduces change into the market place but must also be aware of the outside pressures for change which are being experienced as the result of other entrepreneurial activity. The “Agricultural” of current approaches to Agripreneurship education and the “art” of

agripreneurship education which is needed. The poor farmers have failed in agriculture but agripreneurs are becoming very successful by doing business in Agri Export Zones (AEZ) of India.

1. Agricultural is selective, whereas the Art of Agripreneurship is generative.
2. Agricultural moves only if there is a direction in which to move, whereas the art of Agripreneurship moves in order to generate direction.
3. Agricultural is mechanical, whereas the Art of Agripreneurship is provocative.
4. Agricultural is sequential, whereas the Art of Agripreneurship can make jumps.
5. Agricultural requires each step to be correct, whereas with the Art of Agripreneurship this does not need to be so.
6. Agricultural uses the negative to block off certain pathways, whereas with the Art of Agripreneurship there is no negative.
7. Agricultural excludes irrelevant information, whereas the Art of Entrepreneurship welcomes chance intrusions.

### **Need of Agripreneurship Development**

Since the inception of New Economic Reforms, adoption of liberalization, privatization and globalization (LPG) and world trade organization (WTO) in 1992 – 95, it is expected that rural area will grow at par with urban area. Performance of agriculture during first phase of economic reforms till 1998 remained driving force for this notion among all the spheres of academia, administration and government (Singh, 2013). However, things went on different path in the later years and performance of agriculture has not remained satisfactory. Till recently, agriculture used to be treated as just an activity of land tilling and crop harvesting but growing waste land, depleting natural resources, growing migration by rural youth to urban areas, negative perception of the children of farmers towards farming, and emerging technologies in agriculture have necessitated redesigning of agricultural activities. Applying the thought and practice of entrepreneurship in the field of agriculture generates wide range of economic benefits like – increased agri productivity, creation of new business ventures, new Jobs, innovative products and services, development of rural areas and increased wealth. Traditional farmers who are unaware of scientific agriculture and effective agri management systems are unable to cope up with delaying monsoons, drought, crop debts, fake seeds and shortage of fertilizer, as a result resort to committing suicide.

### Role of Agripreneurship in National Economy

Agripreneurship plays various roles in the growth and development of national economy through entrepreneurship development which increases the income level and employment opportunities in rural as well as urban areas (Bairwa *et al.*, 2012). Agripreneurship also play following role in the economic system (Sah, 2009). It helps in inducing productivity gains by smallholder farmers and integrating them into local, national and international markets.

- It helps in reducing food costs, supply uncertainties and improving the diets of the rural and urban poor in the country.
- It also generating growth, increasing and diversifying income, and providing entrepreneurial opportunities in both rural and urban areas.

### Why India Promoting Agripreneurship

In India, 52% of total land is cultivable as against 11% in the world. All 15 major climates of the world, snow bound Himalayas to hot humid southern peninsula; Thar Desert to heavy rain areas all exist in India. There are 20 agro-climatic regions and nearly 46 out of 60 soil types in the country. Sunshine hours and day length are ideally suited for round the year cultivation of crops. India is the centre for biodiversity in plants, animals, insects, micro-organism and accounts for 17% animal, 12% plants and 10% fish genetic resources of the globe. In the live stock sector, India has 16% of cattle, 57% of buffalo, 17% of goats and 5 % of sheep population of the world. Agriculture contributes 24.2% to GDP, 15.2% of total exports and provides employment to 58.4% of country's work force.

- Agriculture remains a key sector of the Indian economy accounting for 25 per cent share in the gross domestic product (GDP) and about 13 per cent of the total export earnings.
- India is the second largest producer of rice and wheat in the world; first in pulses and fourth in coarse grains. India is also one of the largest producers of cotton, sugar, sugarcane, peanuts, jute, tea and an assortment of spices.
- In terms of the real value added, the Indian agriculture sector ranks third, after China and the United States.
- The share of agriculture in the total value added to the economy, at around 25 per cent, is still quite high. This implies that agriculture is likely to remain a priority, both for policy makers as well as businesses, in the foreseeable future and any move to ramp up the sector calls for a multi-pronged strategy.

- Second highest fruit and vegetable producer in the world (134.5 million tones) with cold storage facilities available only for 10% of the produce.
- Second highest producer of milk with a cold storage capacity of 70,000 tonne.
- Fifth largest producer of eggs. Investments in cold chain required to store 20% of surplus of meat and poultry products during 10th plan requires Rs 500 Crore (US\$100M).
- Sixth largest producer of fish with harvesting volumes of 5.2 million tones.
- In recent years, there has been a considerable emphasis on crop diversification towards horticulture (fruits, vegetables, ornamental crops, medicinal & aromatic plants and spices), plantation crops (coconut, cashew nuts and cocoa) and allied activities.
- Creation of critical infrastructure for cold storage, refrigerated transportation, rapid transit, grading, processing, packaging and quality control measures open major opportunities for investment.

### Possible areas of Entrepreneurship Development in Agriculture

Nowadays, Easy access to technology, emergence of micro financing, liberalized government rules, awareness and training programmes on agri and allied sectors and finally changing mindset of the highly qualified people to go for self employment in the field of agriculture have contributed significantly in enhancing the potentiality for agripreneurship in India (Bairwa *et al.*, 2014). Agriculture have several areas of entrepreneurship which include the activities like, Dairying, Sericulture, Goat rearing, Rabbit rearing, Floriculture, Fisheries, Shrimp Farming, Sheep rearing, vegetable cultivation, nursery farming, farm forestry (Pandey, 2013). The possible areas of entrepreneurship in agriculture are:-

**Agro produce processing units** – There units do not manufacture any new product. They merely process the agriculture produce e.g. Rice mills, Dal mills, decorticating mills etc.

**Agro Produce manufacturing units** – These units produce entirely new products based on the agricultural produce as the main raw material. E.g.-Sugar factories, Bakery, Straw board units etc.

**Agro-inputs manufacturing units** – These units produce goods either for mechanization of agriculture on for increasing manufacturing plants, e.g.-Fertilizer production units food processing units, agricultural implements etc.

**Agro service centres** –These include the workshops and service centre for repairing and serving the agricultural implement used in agriculture.

**Miscellaneous areas** – besides the above mentioned areas, the following areas may prove to be encouraging to establish agri enterprises such as setting up of Apiaries, feed processing units, seed processing units, mushroom production units, commercial vermin-compose units, goat rearing farmers club, organic vegetable and fruits retail outlet, bamboo plantation and jatropha cultivation.

### **Agri-Business Development- Private Sector Role**

Agriculture being vital for Indian economy, Government has very long played an important role. The time has come for private sector to come forward. Today, even Government is encouraging private sector participation by inviting trade bodies to suggest necessary reforms in Indian agriculture. The Task Force highlighted the potential for global opportunities and India's competitive advantages in the context of WTO and Globalization. Somehow, this initiative while preparing a document to completely transform Indian agriculture got new light through new policies and regulations prevalent in the country. In this document, many success stories have been presented, and final solution come with clear cut action plans for the future. It also started private sector role that could also complement and supplement the government efforts.

1. Many individuals, small business houses and large corporates were looking for new investment opportunities. In many sectors of the economy, not much scope was available. With the reducing interest rates, business plans with long gestation periods have acquired new relevance for the private sector. Agriculture Export Zones has become a new business opportunity for their entry at any investment level.

2. Agriculture being top priority, its business environment in terms of regulations, is also conducive. It attracts minimum taxes and gets maximum support. Reforms in agriculture have become top agenda for the government in the country.

3. Many private sector players engaged in agriculture related business activities have synergy in either backward or forward business linkages related to AEZ's

4. Increasing demand for quality and convenience food by the world consumers has created new level of business opportunities.

5. Many interest groups and development agencies etc. have also identified Agriculture Export Zones as a new agenda that will create conducive Agri environment for healthy development in future.

### **Agri Export Zones (AEZs)**

The primary objective of boosting agricultural exports from India, in March 2001, Government of India announced a policy of setting up of Agri Export Zones (AEZs) across the country. The Central Government has

sanctioned 60 AEZs comprising about 40 agricultural commodities till March 2005. These AEZs are spread across 20 states in the country. AEZ are identified by the State Government, who would evolve a comprehensive package of services provided by all State Government agencies, State agriculture universities and all institutions and agencies of the Union Government for intensive delivery in these zones to develop agripreneurship. Private sector with proven credentials would be encouraged through entrepreneurship development to sponsor new agri export zone or take over already notified agri export zone or part of such zones for boosting agri exports from the zones. Services which would be managed and co-coordinated by State Government/Private sector and would include provision of pre/post harvest treatment and operations, plant protection, processing, packaging, storage and related research & development etc. Nodal agency will supplement, within its schemes and provisions, efforts of State Governments for facilitating such exports.

Agri Export zones are concerned with A to Z of Agri – exports. The emphasis is on partnership on various agencies / systems and convergence of interventions of various agencies like APEDA, Ministry of Food Processing Industries (MFPI), National Horticulture Board (NHB) etc. The focus will be on increasing exports of identified commodities, which is very important factor for entrepreneurship development.

The Concept of AEZ's which aims to give fillip to agriculture exports through entrepreneurship development, comprises the following

- Identifying a potential zone based on agro-climatic requirements for a particular crop.
- Integrating various assistance programmes of Central and State Government agencies and providing fiscal incentives to exporters.
- Implementing the same through involvement of private and public partnership and Integrating all the activities till the produce reaches the market.

### **Promote Agricultural Exports by Agripreneurs**

#### **Financial Assistance to motivate entrepreneur**

Both central as well as state government and their agencies are providing a variety of financial assistance to various agri export related activities. These extend from providing financial assistance for training and extension, R&D, quality up gradation, infrastructure, marketing etc. All these facilities have to be dovetailed and extended to promote agri exports from the proposed zones in a coordinated manner to promote agripreneurship.

### **Fiscal Incentives for the entrepreneurial support**

The benefits under Export Promotion of Capital Goods Scheme, which were hitherto available to direct exporters, have now been extended to service exporters in the Agri Export Zones. Thus even service provided to ultimate exporters will be eligible for import of capital goods at a concessional duty for setting up common facilities. They shall fulfill their export obligation through receipt of foreign exchange from ultimate exporters who will make payments from their account.

### **Challenges/ Barriers faced by the Agripreneurs**

#### **Lack of funds**

Lack of finance available to rural entrepreneurs is one of the biggest problems which entrepreneurs are bearing now days especially due to global recession. Major difficulties faced by rural entrepreneurs includes low level of purchasing power of rural consumer so sales volume is insufficient, lack of finance to start business, reduced profits due to competition, pricing of goods and services. Major sources of finance in rural areas are loans from regional rural banks or from zamindars but their rate of interest are usually very high. Government has various institutions for this purpose but the results are not up to the level expected. Industrial Finance Corporation of India (IFCI), Industrial development bank of India, Industrial Credit and Investment Corporation of India (ICICI), Small Scale Industry development bank of India (SIDBI) are some of the national level (SFC) institutions that are helping out rural entrepreneurs.

#### **Lack of infrastructure**

The growth of rural entrepreneurs is not very healthy in spite of efforts made by government due to lack of proper and adequate infrastructural facilities.

#### **Risk**

Rural entrepreneurs have less risk bearing capacity due to lack of financial resources and external support.

#### **Marketing problems and competition-**

Rural entrepreneurs face severe competition from large sized organizations and urban entrepreneurs. Major problems faced by marketers are the problem of standardization and competition from large scale units.

### **Development and Promotion Agripreneurship among Farmers**

Given the above problems, the agribusiness sector needs customized financial services so that the service providers as well as the beneficiary are benefited. Some potential solutions that need to be explored and empirically tested are.

**New financing instruments-** such as weather index-based insurance and micro insurance also have great potential for managing the risks faced by small farmers.

**Bundling financial services with nonfinancial services-** like marketing and extension services offers new opportunities for small farmers to increase their productivity and incomes.

**Supportive infrastructure-** An enabling policy environment and legal framework, enforcement of rules and regulations, and a supportive rural infrastructure all contribute immensely to making sustainable access to finance a reality

**Issue of financial literacy-** The agripreneurs must be educated regarding the financial services available for them. They must be made aware of all schemes and projects for them.

**Facilitating electronic payment systems-**The financial institutions can drastically reduce the transaction charges by the adoption of electronic payment system. This would encourage the banks and financial institutions to reach the agripreneurs situated in far-off areas.

**Branchless banking-** This technology can also significantly slash transaction costs for both service providers and consumers.

**Portable smart technology-** to establish identification and monitor clients can significantly alleviate information asymmetries and help improve repayment rates.

### **Entrepreneurship education in Agricultural Sector**

Over 100 different departments of universities offer courses in entrepreneurship education in India. For instance, NMIMS conducts a two-year, fulltime program on family business management. Most of the courses cover the legal and managerial aspects of entrepreneurship. But the motivational aspect taught at NMIMS is equally important, since it creates an aspiration and improves confidence levels. This program has equipped students with the skills, knowledge, and mind-set to run their family business. ISB in Hyderabad, affiliated to non-profit organization Wadhvani Foundation (committed to promoting entrepreneurship), offers entrepreneurial and incubation assistance. ISB has knowledgeable instructors equipped with business experience.

In India, many entrepreneurship centers have been founded to coordinate the broad array of activities, programs, and resources within the educational institutions. For example, the NS Raghavan Center for Entrepreneurial Learning in IIM Bangalore (NSRCEL—IIMB) carries out international collaboration projects. The Global Entrepreneurship Monitor (GEM) Project with the London Business School, the Ewing Marion Kaufmann Foundation, and Babson College has been a major project for the last three years. In the case of IIM Calcutta, activities on innovation and entrepreneurship are more practical and

driven by students, along with the faculty advisors. The IIMC's entrepreneurship cell holds one of the biggest business plan contest in Asia, i2I—ideas to implementation with Yale University's Yale Entrepreneurial Society (YES). Many ideas are focused on solving the problems of rural poverty, since "innovation is getting compassionate, too." The Entrepreneurship Development Program (EDP) in India has a long history. It is designed to help an individual in strengthening his/her entrepreneurial motivation and in acquiring skills and capabilities necessary for playing his/her entrepreneurial role effectively.

A survey done by the Entrepreneurship Development Institute, India (EDII) in 2003 shows that young people are afraid to start their own business because they are not confident, not capable, and lack knowledge in starting a business. Many people have the opportunity to change jobs or become an entrepreneur if they are properly trained. The students in India are not satisfied with the "hands-on" support of their university in the founding process. The EE in the higher education system should, therefore, satisfy the need for entrepreneurship by: selecting + motivating + training + supporting. Unfortunately, the present EE in India just concentrates on related courses. Moreover, the so-called entrepreneurship courses are similar to the general business courses. But general business management education has no significant influence on entrepreneurial propensity (Hostager and Decker, 1999). The findings of a survey on business owners in India suggest that management education is not an important driver of entrepreneurial attitudes (Gupta, 1992). There is a demand for education programs specifically designed to expand students' knowledge and experience in entrepreneurship. The contents and teaching methods have to be differentiated between entrepreneurship and traditional business courses.

### Conclusion

Agripreneurship is the need of hours to make agriculture a more attractive and profitable venture. It is clear that there is a great scope for entrepreneurship in agriculture and this potentiality can be tapped only by effective management of agri elements such as – soil, seed, water and market needs. An individual with risk bearing capacity and a quest for latest knowledge in agriculture sector can prove to be a right agripreneurs. The agriculture sector has a large potential to contribute to the national income while at the same time providing direct employment and income to the numerically larger and vulnerable section of the society. Employment pressure has made entrepreneurship education in India's higher education system absolutely important, but the cultural barriers and the difficulties towards start-ups prevent EE from being successful. Agripreneurship is

not only an opportunity but also a necessity for improving the production and profitability in agriculture and allied sector.

### References

- Bairwa, S.L. and S. Kushwaha. 2012.** Agro Industry scenario in India: In Edited by Prof. S. P. Singh "Agricultural research and Sustainable development in India", Bharti Publications, New Delhi, 110093, pp. 159-182.
- Bairwa, S.L., A. Kalia, L.K. Meena, K. Lakra and S. Kushwaha. 2014.** Agribusiness Management Education: A Review on Employment Opportunities. *International Journal of Scientific and Research Publications (IJSRP)*, 4(2): 1-4.
- Bairwa, S.L., S. Kushwaha, L.K. Meena, K. Lakra and P. Kumar. 2014a.** Agribusiness Potential of North Eastern States: A SWOT Analysis. In: Edited by Singh et al., 2014 "Agribusiness Potentials in India: experience from hill states". EBH Publishers (India) Guwahati – New Delhi. pp. 544 – 556.
- Chandra Shekhra, P. 2003.** Third wave in Indian agriculture: introduction to Agriclincs and agribusiness centre scheme. *MANAGE Ext. Res. Rev.*, pp. 10-20.
- Dollinger, M.J. 2003.** Entrepreneurship – Strategies and Resources. Pearson International Edition, New Jersey.
- Global Agrisystem. 2010.** Evaluation Study of Agriclincs and agribusiness centre Scheme, Global Agrisystem Private Limited, New Delhi.
- Gupta, A. 1992.** The informal education of the Indian entrepreneur. *Journal of Small Business and Entrepreneurship*, 9(4): 1992.
- Hostager, T.J. and R.L. Decker. 1999.** The effects of an entrepreneurship program on achievement motivation: A preliminary study. SBIDA, San Francisco, CA: Small Business Institute Director's Association, <http://www.sbaer.uca.edu/Research/1999/SBIDA/sbi28.htm>
- Sah, Pooja, D.K. Sujan and S.K. Kashyap. 2009.** Role of Agripreneurship in the Development of Rural Area, Paper presentation in ICARD at Banaras Hindu University, Varanasi – 221005.
- Singh, A.P. 2013.** Strategies for Developing Agripreneurship among Farming Community in Uttar Pradesh, India. *Academicia*, 3(11): 1- 12.

### How to cite this article?

**Vinoth, R. and R. Paramasivam. 2016.** Innovation in agricultural research and education for agripreneurship development in India. *Innovative Farming*, 1(3): 72-78.