CHAPTER-III

ROLE OF FARM ENTREPRENEURS IN AGRICULTURAL DEVELOPMENT

The main purpose of this chapter is to present a resume of conceptual formulations pertaining to the entrepreneurial ability, as well as research findings drawn from a review of literature relevant to this study. The chapter is divided into three sections.

Section - I describes the Meaning of Entrepreneurship in general and Farm Entrepreneurs in particular.

Section - II deals with the significance of the farm entrepreneurs.

Section - III analyses theoretical aspects regarding farm entrepreneurs.

SECTION - I

Meaning of entrepreneurship and farm entrepreneurs:

The meaning of entrepreneurship should depend upon the level of development of the country. And, as such, it should change from the developed countries to the underdeveloped countries and from the rural areas to the urban areas within the country.

The term "entrepreneurship" used in this study, of course, does not strictly conform to its usually accepted meaning in
economics, which denotes an "Ideal type rather than a term continuously applicable to the real person." For, apart from those who co-ordinate the factors of production, "if the achievement level is high, there will be presumably more people who behave like entrepreneurs. Therefore McClelland defined an entrepreneur as, "some one who exercises some control over the means of production and produces more than what he can consume in order to sell (or exchange) it for individual (or household) income. One of the prominent authors who put strong emphasis on the role of entrepreneurs in the phase of economic development was Schumpeter. He argued that creative innovations are the functions of free entrepreneurial activity requiring the knowledge and skills of the entrepreneur. An increase in the stock of knowledge changes the environment in which the entrepreneur decides whether or not to engage in a given activity. In short, Schumpeter concluded, the function is innovation, and the personage who is responsible for innovating is called the entrepreneur. According to him, an entrepreneur is the person who carries out a new combination of factors of production and distribution of goods and services.

According to J.B. Say, "entrepreneur is the agent who combines the necessary factors into productive organism, thereby playing a central role both in production and distribution, whether it is agriculture or industry."

Adam Smith focussed on entrepreneur as, "a proprietary capitalist, a supplier of capital and at the same time working as manager intervening between the labour and consumer. Adam Smith
also treated him as employer, master, merchant and undertaker, but explicitly identified him with capitalist, probably in view of the English economic background."

F.H. Knight, propounded the theory that entrepreneurs are a specialised group of people who bear risks and deal with uncertainty.

David Ricardo, in his famous book, "The Principles of Political Economy and Taxation" noted that, "the farmer and manufacturer can no more live without profit than the labourer without wages."

John Stuart Mill emphasised the function of direction in production process and he repeatedly stressed that the function required no 'ordinary skill'.

Thus, a large number of authorities can be quoted stressing the different facets of entrepreneurship. By its very nature, entrepreneurial function appears to be a composite one. Analysis of the development of entrepreneurship reveals that an entrepreneur is multi-functional personality discharging different roles such as capitalist, investor, promoter, co-ordinator, manager, administrator, risk-bearer, uncertainty undertaker, innovator, decision-maker and organiser. The specific combination of these functions or roles has been varying in relation to time, place and country.
Entrepreneurship may be defined as the purposeful activity of an individual or group of associated persons, initiating, promoting and maintaining business activity for the production of wealth and distribution of goods and services with a pecuniary motive, or such benefits in the given social and political conditions, and enjoying an appreciable measure of freedom of choice and decision to run the business units. Therefore, the term "entrepreneurship" refers to the production, the processing and the business sphere of the economy. Entrepreneurship does not mean either a specific individual or occupation. It is an activity, which an individual may carry out habitually, occasionally, very rarely or never. The clear identification of entrepreneurship with a specific individual as is done in economic theory is not correct. An individual may, however, be characterised by activity of entrepreneurial nature and individuals do constitute the source of entrepreneurial skills.

Entrepreneurial studies may be undertaken from different angles. Firstly, entrepreneurship may be studied from the point of view of innovation, which is concerned broadly with the improvement in methods of production. Secondly, it may be studied from the point of the movement of entrepreneurs over distances in a country to avail new opportunities. Thirdly, the motivation of entrepreneurs in terms of speculation to take advantage of chance gain in the operation of the economic system, and speculation is often a concomitant of aggressive motivation and shrewd vision. Fourthly, the net result of the entrepreneurial activity as manifested in accumulation of riches
forms a basis for distinguishing the size of enterprise and the level of entrepreneurial activity. Correlation of wealth accumulated to the different entrepreneurial functions makes useful study. Finally, evaluation of the means utilised for accumulation of wealth and the achievement of ends raising the problems of business ethics reflecting the conduct and character of entrepreneurs in carrying on their business in practice, constitutes an interesting study. Thus the analytical approach to entrepreneurial research may be of five-fold.

Entrepreneurship

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Patterns of Entrepreneurship

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Like the classification of entrepreneurial function for the purpose of study, patterns of entrepreneurship can be distinguished. As they vary in relation to time, country, race, economic sector and personnel abilities, they provide scope for the study of historical, national, sociological, occupational, and individual patterns respectively. The different patterns possess their unique characteristics. For instance, 'great entrepreneurs are born, not made.' Hence, like others, there is a need to study the individual patterns of entrepreneurship.

Hirschman defines the term entrepreneurship, as both the "creative" and "co-operative" elements. On the assumption, as
Aitken has put it, that "the way behaviour was organized was functionally related to the sort of economic performance that resulted." That organization is related to innovation is well illustrated by Alexander's remark that in underdeveloped countries "entrepreneurial talent may be scarce, entrepreneurs must also possess managerial skills". In other words, entrepreneurship comprises "a more or less continuous set of functions running from the purely innovative toward the purely routine," performed within business firms or agricultural sector or other agencies "at many levels of initiative and responsibility, ..... Whenever significant decisions involving change are made affecting the combination and commitment of resources under conditions of uncertainty."

There is a major difference between the entrepreneurial and the managerial functions. We may define the manager to be the individual who oversees the ongoing efficiency of continuing processes. It is his task to see that available processes and techniques are combined in proportions appropriate for current output levels and for the future outputs that are already in prospect. He sees to it that inputs are not wasted, that schedules and contracts are met, he makes routine pricing and advertising outlay decisions, etc.

Whereas the entrepreneur has a different function. It is his job to locate new ideas and to put them into effect. He must lead, perhaps even inspire; he cannot allow things for tomorrow.
In short he is the Schumpeterian innovator and some more. According to Schumpeter, the nature of entrepreneurial function reveals the dynamic nature of economic development. Entrepreneurship is not ordinary managerial activity. Entrepreneurial activity consists of break through existing economic patterns and creating something entirely new. The entrepreneur may, but need not, be the inventor of the product or process that he introduces. According to Schumpeter innovation possibilities are necessary but not sufficient condition for development; entrepreneurs are also needed for carrying out innovations.

**Farm Entrepreneur:**

The physiocratic economists of the later eighteenth century, such as Francois Quesnay and Nicolas Baudean, called the agricultural cultivator an entrepreneur. Since the physiocrats also thought that only the land was a source of social product, this put the entrepreneur in a key position.

By 1800, many French economists had given special meanings to entrepreneur and entrepreneurship, with differences arising largely from the characteristics of the sector of the economy that chiefly attracted their attention. Those economists interested in government saw the entrepreneur as a contractor, the specialists on agriculture as a farmers, and the proponents of industry as risk-taking capitalists.
According to Dr. Bhattacharya Sib Nath, "some farmers have responded to the new enterprise commonly associated with the use of high yielding variety of seeds, use of chemical fertilisers, pesticides, etc. and of new agricultural machineries better than the other farmers, thus the former group of farmers is called agricultural enterprisers.

Singh, N.P. evaluated agricultural entrepreneurs as farmers who owned a considerable amount of land and were engaged in self-farming (with the assistance of family member, or hired labours or both), taking the entire risk of gain or loss for the crops they raised.

According to Hadimani, R.N. an agricultural entrepreneur, in the village was a person who, irrespective of the size of farm and mode of farming, co-ordinated resources for cultivating and developing his lands.

Cristopher, K.J. critically examined, that a farmer by merely adopting a new variety of wheat or new pesticide or new type of fertilizer does not become an entrepreneur. He becomes an entrepreneur only when he seizes to be farmer in the conventional sense and become an operator of farm business. A business involves deliberate decision of investment after assessing risk and uncertainly, possibility of profit and loss, a proposition which is distinct from the practice where agriculture serves merely as a means of livelihood or a hereditary vocation. Thus entrepreneurship is not simply adoption of new practices. It is transformation of a person to
his acquiring a new identity. So profitability rather than adoption of improved farm technology appears to be a better indicator of business orientation of a farmer to be taken as an entrepreneur.

Mishra, S.P., Sinha, B.P. and Mehta Prayag found in their study that, farm entrepreneurs had a high level of adoption of the farm technology, a greater return from their land over the expenditures made on crop cultivation were more efficacious and willing to shoulder responsibility, had a higher level of personal achievement motivation and a greater participation in economic institutions. Lack of high formal education did not come in their way to entrepreneurial activities.

Heredero, J.M. described agricultural entrepreneur as a person who introduced changes which directly or indirectly lead to higher agricultural output.

Joshi and Kapur defined Farm entrepreneur as the person (can be a group of persons also) who thinks, organizes and operates the business, and is responsible for the results i.e., losses and gains from the business. He is pioneer in organizing and developing the farm.

Forster while describing farming as a business, identified farmer as an entrepreneur, who he should apply business principles to the organization and management of the farm, if he expects to utilize his resources to the best advantage. Further he stated that farm management is the function of entrepreneurship. As a business entrepreneur the
farmer acts as an organizer, and operator of land, labour and capital. His success as a business proprietor will depend directly on his ability to organize and manage these factors of production.

In the operation of his farm, each farmer plays two roles. He is at the same time a cultivator and a manager. The role of each farmer is to take care of plants and animals which includes the preparation of a seed bed, the sowing of the crop, the elimination of weeds, the management of soil moisture, and measures for the control of pests and diseases. To these certain other activities are added step by step as farmers progress towards modern farming. They include application of insecticides and pesticides, etc. The other role of the farmer is to be a Manager. This involves the making of decisions. The decisions each farmer must make as a manager include choosing between different crops, choosing what livestock are to be kept on the farm, deciding how to distribute available labour time among different tasks, etc. As agriculture progresses, the farmer must develop more skills in buying and selling. Decisions must be made relating to the purchase of seeds, fertilisers, insecticides and new implements. He must also decide how much of each crop is to be kept for home consumption and how much is to be sold. He must decide when and to whom and on what terms the produce is to be sold.

The managerial tasks of farmers become more complex because of the variations in the soils and climatic conditions from place to place. If the soils in a region are similar in all respects,
then it would be possible to develop standard 'recipes' for the most productive use of each farm and each farmer could be supplied with standardised information from some expert as to what he should do and how and when he should do it. But in real world, since so many variations exist from farm to farm, most of the managerial decisions about the operation of each farm must be made by the operator of that farm.

Arthur T. Mosher further writes that the managerial role of the farmer is most vital for the following reasons:

(a) Agriculture varies markedly from place to place;
(b) The timing of farm operations must be fitted to weather conditions;
(c) The possibility for diversification of crops;
(d) Farmers must have wider variety of skills than factory workers;
(e) Each change in farming practice calls for additional changes;
(f) Perception of the changes in environment;
(g) Skills in human relations.

The foregoing analysis tends to sum up that an agricultural entrepreneur is one who possess the above mentioned qualities and skills. Although the list of the qualities analysed so far is not exhaustive, it suggests the qualities desired in an agricultural entrepreneur. Over and above this qualities an agricultural entrepreneur must basically have the dynamism to take risks and to shoulder new responsibilities. Once he develops an entrepreneurial zeal other things associated with it will take themselves in a routine way.
Thus, the farm entrepreneurs in our conceptual framework are the leading group of cultivators (farmers) who get higher net returns from their holdings in comparison to other sections of the farmers because they make a more rational use of their production factors and adopt technical innovations more quickly and attain high rate of productivity and income by skillful appliance of modern farming inputs, such as irrigation, fertilizers, agricultural implements or by an early introduction of new methods of agricultural practices, or by better farm organisation. These progressive farmers or entrepreneurs are identical with the innovators or in other words, early adopters, who are quite ahead of the rest of the other farmers.

The entrepreneur, as a causal variable in the growth process, has been differently interpreted by different disciplines. The psychologists hold the risk-bearing and innovation as essentially the prime movers for the entrepreneurial activity. They have mainly concentrated on need dispositions, value orientations and other personality attributes as behavioural determinants of entrepreneurship. In short, attitudes, values and motivations are the behavioural determinants of entrepreneurship.

The agricultural economists, in their interpretation of entrepreneurship, have been primarily concerned with the food production boosting output on an aggregate level. The indices of growth in these studies, by and large, have been the spread and the use of new inputs like high yielding crop varieties, chemical
fertilizers, new agricultural implements and irrigational facilities with consequent increase in productivity. As the new agricultural development is connected with major changes in the structure of rural societies, the whole phenomenon of the emergence of an entrepreneurs with modernising ideas in the present society, has to be seen within the context of the diversified intimate structure of village life.

SECTION-II

The significance of the farm entrepreneurs

(A) Entrepreneurship and Economic Development

Man remained a nomad for ages and ages. Then his occupation was mostly hunting. Thereafter, he turned to be a cattle-rearer. Nonetheless he was found to be wandering from place to place in search of newer grasslands for his cattle. It is only after realising the advantages of cultivation of land and the crops thus grown, he began to lead a settled life. Despite the tremendous advantages of settled life in agriculture, the man continues to move from one place to another, now in search of new land and opportunities.

This process of development of the man demonstrates that his enterprising capacity is very crucial factor. His thirst for non-farm activities is found to be much more than his thirst for farming. Consequently the cultivator turned to be a trader, then an industrialist and what not.
Development of economy of any nation depends primarily on the important role played by entrepreneurs. The part played by such entrepreneurs is of vital importance in a developing country like India, where there are ample opportunities for using innovations to exploit the available resources. Thus in all economic development activities more and more focus is being centred on entrepreneurship of the people. Entrepreneurship should be recognised as a concept, not only vital for starting industries but also for the development of agriculture.

An entrepreneur is the propellor of change and a catalyst. As Meier and Baldwin have put it, "development does not occur spontaneously as a natural consequence when economic conditions are in some sense 'right', a catalyst or agent is needed, and this requires entrepreneurial activity. The development or underdevelopment is the reflection of the abundance or scarcity of entrepreneurship in any society." For instance, in India, if the Green Revolution is a success, it is essentially because of the entrepreneurial lead of the Punjab farmers. Similar is the case with White Revolution which has been launched upon in the early 1970s, in respect of Milk Production which has popularly come to be known as "Anand Experiment." Which stands for the modernisation of traditional agriculture, has brought in its wake new opportunities for investment in Indian agriculture because of high rate of return to such investment. Although some changes in production technology have been taking place in Indian agriculture, a significant breakthrough has,, however, been
achieved only in recent years with the introduction and spread of high-yielding varieties of crops and intensive application of modern farm inputs. Several research findings do suggest that entrepreneurship is one of the dominant variables in economic growth and that the need for achievement is an important ingredient of entrepreneurship. An entrepreneurship is characterised by two fundamental factors. The first is the dominant element of innovation and streak of creativity. The second is the fact that these innovative process and actions lead to a creation of wealth in the society.

The most vital aspect for the growth of a modern society in any country is an adequate and increasing supply of enterprise. It has emerged as the most important factor of production for at least three reasons. Firstly, whatever may be the supply of other factors, nothing happens until such factors of production are galvanized into action by enterprise. "The chief claim to the pre-eminence of enterprise is simply that it is the activating one. It is like the spark to the internal combustion engine." Secondly, an adequate supply of enterprise can, to a considerable extent, make up for shortages of the others. Thirdly, enterprise is an intangible factor and history reveals that the rise and decline of nations in the past bear testimony to the intangible factors such as initiative, imagination, and determination of the people of those countries.

Development is, thus, rather a function of entrepreneurship. Comparing the relative growth rates of countries of South-East Asia with more advanced countries, Gunnar
Myrdal has come to the conclusion that what was wrong in the former states was the supply of enterprise and the attitude towards work. He designated such states as "soft state" as against those who are willing to take the risks and obligations involved in the growth process.

As such, entrepreneurship is indispensable for the growth and development of any society. History is fully replete with spectacular advancements made by certain societies over the years which can be largely attributed to the entrepreneurial qualities of the people. Commenting on the causes of backwardness of many Asian and African countries, Galbraith pointed out in a sarcastic way; "the people are poor because they prefer it that way." He elucidated that because the people of those countries are lacking in ambition they are lagging behind others in development. The part played by entrepreneurs in the development of Western countries has made the people of developing nations very much conscious of the importance of entrepreneurship in the programme of rapid economic development.

Thus, the received theory of competition gives the impression that there is no need for entrepreneurship. If all inputs are marketed and their prices are known, and if all outputs are marketed and their prices are known, and if there is a definite production function that relates inputs to outputs in a determinate way, then we can always predict the profit for any activity that transforms inputs into outputs. If net profits are positive, then this should serve as a signal for entry into this
market. The problem of Marshaling resources and turning them into outputs appears to be a trivial activity. From this point of view it is hard to see why there should ever be a deficiency of entrepreneurship. The answer is that the standard competitive model hides the vital function of the entrepreneur.

Aim of this study is to suggest a theory of the economy and of farm entrepreneurship in which farm entrepreneurship has a unique and critical role and to use this theory to indicate why farm entrepreneurship is a significant variable in the agricultural development.

(B) Entrepreneurship in Agriculture:

Entrepreneurs are persons who initiate, organise, manage and control the affairs of business unit that combines the factors of production to supply goods and services, whether the business pertains to agriculture, industry, trade or professions. Though entrepreneurship may pertain to any of these fields, economic history of many advanced nations demonstrates that it has developed more conspicuously with considerable space in commerce and industry than agriculture. It is because the scientific and technological bases of commerce and industry are more advanced and widespread. As against this, in developing nations, entrepreneurship in industry in general and in agriculture in particular is rather mild and uninspiring. Nevertheless, agriculture still remained more as a way of life governed by tradition and customs than as a business proposition based on necessary economic equations. The farmer constitutes the
weakest agent of production in these countries. He lacks necessary capacity, professional strength and adequate protection from the state to emerge as a vigorous entrepreneur. Hence, the land is rich but the people are still poor in most of the underdeveloped countries.

It may appear paradoxical to note that in regard to traditional agriculture farmers of the underdeveloped nations were much ahead of their counterparts of the present day advanced nations particularly in the art of cultivation. Way back in the last quarter of the 19th century, the evaluation report of Dr. Volker on Indian agriculture revealed the superiority of the Indian farmers. In his words:

"At his best, the Indian farmer, is quite as good as and in some respects superior of the British farmers. Nor need our British farmers be surprised at what I say, for it must be remembered that the natives in India were cultivators of wheat centuries before we in England were. To take the ordinary acts of husbandry, no where would one find better instances of keeping land scrupulously clean from weeds, of ingenuity in device of water-raising appliances, of knowledge of soils and their capabilities, as well as the exact time to sow and to reap as one would in Indian agriculture. Certain it is that, I at least, have never seen a mere perfect picture of fertility of resources, than I have seen in many of the halting places of my tour in India".

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This observation obviously, points out how efficient were the Indian farmers in the traditional agriculture. A shift from such a traditional agriculture to modern agriculture based on advanced science and technology requires radical innovation in almost every aspect of farming practice. It is exactly on this score that the farmers in the developing nations lagged behind those of the advanced nations. For, industrial revolution took place in those countries much before the developing nations and obviously the improvements or advances in the fields of science and technology had their impact on agriculture also. The advent of fertiliser, modern pest control methods, the agricultural equipments are all the result of spectacular advances made in the sphere of industry. Agriculture in the present day developed nations could immediately absorb the various innovations. Thus, the transition from traditional agriculture to modern agriculture in those countries was smoother and quicker than in the developing nations.

Theodre Schultz points out that differences in land are least important, differences in the quality of material capital are of substantial importance and differences in the capabilities of farm people are most important in explaining the differences in the amount and rate of increase of agricultural production. He further illustrated this point with the help of the trends in agricultural production in different parts of the world. Western Europe with a population density much greater than Asia's and with a poor endowment of farm land has been increasing its agricultural production at a rate that would have been thought
impossible only a couple of decades ago. Italy, Austria and Greece, for example, with less arable land per capita than India, and with farm land inferior to India's have increased agricultural production tremendously. Similar is the case with Israel. Again in Latin America, Mexico, Argentina, Chile and Uruguay made striking advances. Mexico stands as the best example for the many low income countries to develop a modern economy. It is one of the few countries that has been modernising both industry and agriculture unlike certain countries where emphasis is placed on one at the cost of other.

Similarly, in Asia, agricultural production in Japan has been increasing at a rate of 4.6 per cent per year while in India, it is 2.1 per cent. On a per capita basis, India has six times as much agricultural land as Japan. The land in India is also of better quality. Even in terms of irrigated area, India has three times more irrigated land than Japan. But total agricultural production in Japan is eight times more than that of India. Of course, the difference may be partly due to the material agricultural factors used in Japan. Mostly it is due to the high level of skills of the farmers of Japan as compared to low level of skills and general illiteracy that still prevail in rural India.

The success in agricultural production in the so-called industrially advanced nations such as U.S.A., France, Canada, England, U.S.S.R., needs no mention. These countries are far ahead of others in terms of yields, total output and in the farm practices. Theodre Schultz's above illustrations of a few
countries make it amply clear that notable achievements in agriculture are possible by the adoption of modern scientific methods in farming. Such an adoption once again requires skills in farming community. An entrepreneurial class of farmers should come forward to set a trend for others also. It is exactly here that agricultural entrepreneurs play a profound role in the transition of traditional agriculture. As the cost of earning an income is very high in the traditional agriculture and it is very low in the modernised agriculture based on improved technology, Schultz advocates fervently that the transformation of agriculture must be rapidly accomplished.

As has already been explained, entrepreneurship involves in seeking and seizing opportunities. Despite the basic differences in the nature of industrial and agricultural entrepreneurship, the quality of entrepreneurship is similar in the two sectors. Without the production of entrepreneurship transformation of traditional agriculture becomes impracticable.

**SECTION -III**

**Theoretical aspect of farm entrepreneur**

The explanation of the farmers as an entrepreneur is based on the following assumptions:

1. Output of farm is an increasing function of the amount of labour used on the farm, and since the amount of land is assumed to be constant, the law of diminishing returns
applies to labour.

2. Each farmer acts as a price-taker both with respect to his sales of output and his hiring of labour. We use the output of the farm as numeraire or unit of account and hence set its price equal to one. The wage rate is given by $W$.

3. Each farmer, when acting as entrepreneur choosing output and employment, given the wage rate to maximise the rental income of the land. The rental income will be the amount of output left after wages have been paid.

To see how the farmers behaves in his role as entrepreneur given these assumptions, we consider the case of the first farmer, called farmer 1. Farmer 1 has a production function that relates labour input to farm output as shown by the curve line $Q = F[L]$ in figure 1.

1. DEMAND FOR LABOUR AND SUPPLY OF OUTPUT

\[ Q = F[L] \]

\[ s1 \]

\[ 1 \]

\[ D1 \]
Q refers to the output of farmer 1, L is the amount of labour demanded by farmer 1 for use on his farm, and F [L ] is the production function of the first farmer. F is written as a function of labour only since land is assumed fixed. The function F [L ] is concave in accordance with the assumption (1) that the law of diminishing return applies to labour.

Now suppose the wage rate is W. The total wage bill for farmer 1 will be WL. This is shown in figure 1, as a straight line with slope W. At any given use of labour on the farm (along the horizontal axis) output is given by the line Q = F [L ], total wages are the corresponding point on the line WL, and the difference between F [L ] and WL is the output left for the entrepreneur after wages have been paid, (i.e., the rent on the land) rent on land will be maximized when the value of the marginal product of labour equals the wage rate. Since the price of output is set at 1, this means that the distance between F [L ] and WL is maximized when L is chosen so that the slope of F [L ] is equal to the wage rate. In figure 1, when wage rate is W the farmer hires OE Units of labour, produces EB (=0C) units of output, pays EA in wages and keeps BA (=EB-EA ) as rent on land. Since the slope of F [L ] is decreasing as more labour is used, it follows that to maximise rental income the farmer will hire more labour as the wage rate decreases and less labour as the wage rate increases. Hence, we get a demand for labour function that is increasingly related to the wage rate as shown by the line L in figure 2, as follows:
By similar arguments for farmer 2, we can derive his demand for labour. This is shown by \( L \) in figure 2. The total demand for labour at any given wage rate is the sum of the demands for labour by farmer 1 and farmer 2. In figure 2, this is shown by the line \( L \), which is the horizontal sum of \( L \) and \( L \) at each wage rate.

Agricultural development is one of the aspects of growth. Economic maturity is reached only when a diversified and multifunctional agricultural network in the hands of farm entrepreneurs has developed. Achievements of such a network is to be more deeply viewed as manifestation of the farm entrepreneurial initiative and the breadth of self-stimulated market adequate for the subsequent endurance and expansion of the specific economy in question.

Without payments no production can be carried on; hence wages are paid to labour, interest for the use of capital and...
funds, and rent for land. Profits are rewards reaped by the entrepreneur for his adventure, risk-taking and uncertainty bearing. Entrepreneur's functions are distinct from those of the organizer and manager. In agriculture such a fine distinction between organizer and entrepreneur is not so sharp as in industries. Generally, the farmer combines in himself the function of an entrepreneur, organizer, capitalist, landlord and even a labourer. On larger units, the farmer may spend more time on managerial functions but it is only on very large farms that there is a separation between managerial and entrepreneurial functions. Usually the same individual shoulders both these responsibilities. Several studies have examined entrepreneurial functions. Some of these functions are:

(a) to perceive an opportunity,

(b) managerial functions involving establishment and running an enterprise.

In other words entrepreneurship is postulated here as the function of generalised agricultural experience, ability to anticipate and plan, adaptability to changing agriculture conditions, decisions pertaining to the diversification of agriculture, ability to recognize market opportunities, ability to recognize alternative possibilities of action, and ability to combine elements of rational decision making with some elements of irrational risk taking. In short, the entrepreneur must be willing to act in an independent manner. These functions are basically dependent on the socio-psychological orientations of
the persons concerned in terms of their motivations, aspirations and modernity. Conceptually all these variables are related to entrepreneurial success. He will now attempt to empirically study the role of different entrepreneurial functions in the attainment of agricultural success.

It is clear that, many farmers all over the country, still use old and inadequate farming techniques. Precious resources are lost because no proper use is made of organic matter, cattle urine, soil conservation and grain storage techniques. The desert is advancing at the rate of one kilometre a year, the loss of soil nutrients through erosion in India is more than the country's annual fertiliser output. Little effort is done to improve the soil by correcting the pH and maintaining the proper balance of essential elements in the soil. The farm yard manure used is of little value because it lacks dung and urine-cowdung being used as fuel or allowed to be lost in graze lands or by the roadside. Farm management in the technical sense is practically non-existent in most of our villages. The net result is consistently low standards with the consequent losses to the whole nation.

For improving above agricultural problems we require agricultural entrepreneurs. Where can we find them? The answer to this question is that we must create them. The task of developing entrepreneurship among farmers has to be seen as function of two factors, the process requires poor farmers to adopt a better technology and the supply of adequate resources.
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8. Ibid. pp. 5.


11. Research Centre in Entrepreneurial History: Harvard University, 1949, "Change and Entrepreneur", p. 88.


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20. Ibid.

21. Ibid.

22. Dr. Bhattacharya, Sib Nath, " op. cit. pp. 35-36.


25. Cristopher, K.J., "Socio-Psychological factors influencing the Adoption of the innovation of starting a small industry unit," ICSSR, New Delhi, 1970.


46. If \( P \) is the output price and \( W \) the wage rate, the equilibrium determines only \( W/P \) (or \( P/W \)) not \( P \) and \( W \) separately. Thus, we are justified in setting \( P = 1 \) for expositional purposes. Note that \( W \) is the real wage when this convention is used.
47. The rent on the land is the residual $F(L) - WL$, and this is maximized when $F(L) = W$. The slope $f(L)$ is the marginal product of labour.


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