CHAPTER II
REVIEW OF LITERATURE

The main focus in this Chapter is to present an overview of conceptual formulations relating to entrepreneurial behaviour and to specifically review the conceptual and empirical research in agricultural entrepreneurship. The review covers the following areas:

(A) Concept of Entrepreneurship;
(B) Source of Entrepreneurship;
(C) Entrepreneurial Characteristics; and
(D) Empirical Studies on Agricultural Entrepreneurship.

(A) CONCEPT OF ENTREPRENEURSHIP

The word "entrepreneur" is derived from the French word, "entreprendre," which means to undertake. Thus, any one who undertook some activity on his own volition, was considered to be an entrepreneur. In the beginning, when creative aspects of entrepreneur were recognized, he was referred to as a "projector." By the early sixteenth century, men engaged in leading military expeditions were referred to as entrepreneurs. With the onset of industrial revolution, the term was popularly applied in France to contractors, who built roads, bridges and harbours and to architects. The modern term came into use in England only in 1878, when it signified a "director or manager of public musical institution" or one who got up entertainments. Thirty years earlier to this inclusion, Mill (1848) had mentioned the word as a French term in a footnote to his
"Principles," in which he expressed regret at the lack of an English equivalent.

The process of giving a unique status to this word was initiated by the economists. Marshall (1890) indirectly injected the concept of entrepreneurship into economic analysis in the guise of "organization" as the fourth factor of production. However, Smith (1912) attributed net income of a proprietor to returns for direction and organization. It was Walras (1954), who considered the entrepreneur as the fourth factor of production, whose principal function, according to him, was of hiring others and in this capacity, he bought production services from the market and sold the goods produced. However, it is important to note that the word has not been recognised as denoting the fourth factor of production and many treatises on economics continue to portray "organization" as the fourth factor of production. In fact, the word "entrepreneurship" has emanated from organization culminating in a unique status given to it in the study of economics, because of its dynamic role in the development.

In tune with the evolution of the usage of the word, we also witness a number of definitions, which have varied from time to time. Drawing the attention to entrepreneur as a technical term, Cantillon (1755) called him the bearer of uncertainty. Say (1815) described him as the agent, who united all means of production and in the value of products - the re-establishment of the entire capital he employed, and the value of wages, the
interest and rent which he paid, as well as the profits belonging to himself. Hawley (1882) saw risk taking as the distinguishing attribute of an entrepreneur and ranked this as a factor of production on par with land, labour and capital. Schumpeter (1947) pioneered the definition of entrepreneur as a creative and innovative person and it was reiterated in his book in 1961. However Danhof (1949) emphasized entrepreneurship being associated with changes in the formula of production over which the entrepreneur had control. Endorsing the view of Schumpeter, Lamb (1952) defined entrepreneurship as innovative decision making and the ability to recognise and exploit economic opportunity. Further Redlich (1952) defined an entrepreneur as a risk bearer, a decision maker or as a "RISKOGESTALTER" implying risk moulder. A significant reversal took place when Knight (1957) associated risk, uncertainty and profit with entrepreneurship. Further Cole (1959) defined entrepreneurship as the purposeful activity of an individual or group of associated individuals, undertaken to initiate, maintain or aggrandize a profit oriented business unit in the production or distribution of goods and services.

Combining innovation and risk taking, Gordon (1961) states that the entrepreneurs are not simply innovators but they are men with the will to act, to assume risks and to bring about changes through the organization of the human efforts. McClelland (1961) identifies an entrepreneur to be basically an organizer increasing the productive capacity. Lockwood (1965) hails entrepreneurship as the ability to recognize and exploit economic
opportunity. Florence (1969) states an entrepreneur to be a person making prime decisions. Leeds and Stainton (1978) define entrepreneur as a person initiating production, taking decisions, bearing risks and organizing and co-ordinating the factors of production. Fellner (1983) observes that entrepreneurship relates to the reactions of people to specific market opportunities and incentives. Similarly Kirzner (1983) defines him as the identifier and exploiter of market opportunities. Drucker (1986) considers innovation as the basic tool of entrepreneurs, by which they exploit change as an opportunity for a different business or for a different service. According to him, entrepreneurs create something new and something different.

All these definitions of entrepreneur seem to have been based on entrepreneur being essentially an owner of the enterprise. As a deviation from this criterion, there has been an attempt to define entrepreneur as a person not possessing own capital but running an enterprise by hiring both capital and labour. The forerunner for this approach seems to be based on the findings of Berle and Means (1956) who evidenced the dichotomy between owners having right over property without control and the managers having control over property without ownership rights. This view has been endorsed by Brockhaus and Horwitz (1986), who believe in the possibility of existence of entrepreneur in large organizations and they term these people as "entrepreneurs." However, Penrose (1968), Wilken (1979) and Baumol (1983) differentiate between entrepreneurial functions
and managerial activities and they opine that entrepreneurial functions are not visible in managerial activities. Further, this approach to include managers of a corporation in the category of entrepreneurs has been resented by Backman (1983), Schollhammer (1982) and Cursurd, Olm and Eddy (1986).

On the whole, there has been an attempt to define an entrepreneur as a risk taker, an uncertainty bearer, a coordinator of factors of production, an innovator, an exploiter of economic opportunities, a decision maker or as a corporate manager. There seems to be no universal definition and the contradictions are increasingly unfolded. As a result of this trend, Kilby (1971) likens the search for entrepreneur to hunting the Heffalump, which is a rather large and important animal hunted by many individuals with ingenious trapping devices, but not having been able to capture him, to see him and to describe him. Hence, it is no wonder that the directions in entrepreneurial research are fragmented, creative and diverse. It is important to note that an entrepreneur has been defined by the researchers according to the circumstances they encountered in their search coupled with their own pre-conceived notions. In the words of Kilby (1971): "The array of all possible entrepreneurial roles encompasses the perception of economic opportunity, technical and organizational innovations, gaining command over scarce resources, taking responsibility for internal management and for the external advancement of the firm in all its aspects." Broadly speaking, an entrepreneur is a person facing a problem in the background of an objective. He is a risk
taker, an uncertainty bearer, a co-ordinator, an innovator and a decision maker at a time or all the time according to circumstances.

(B) Source of Entrepreneurship

Analogous to the contradiction in entrepreneurial definitions, we witness many theories propounded on the sources of entrepreneurship. These theories are constructed from either psychological or sociological elements.

Eventhough Schumpeter (1934) came out with the theory that the appearance of entrepreneurs was not a function of some social, cultural or religious variable and economic leaders were individuals motivated by an atavistic will to power emerging randomly in any ethnically homogenous population, it was Weber (1959), who initiated the discussion on entrepreneurial source, which was taken for granted for a long time.

Weber is of the view that the driving entrepreneurial energies are generated by the adoption of exogeneously supplied religious beliefs. For the faithful, these beliefs, both in practical conduct and in the anxiety to generate signs of a favourable pre-distination, are held to produce intensive exertion in occupational pursuits, the systematic ordering of means to ends, and the accumulation of productive assets. He calls this religious fervour, the "Spirit of Capitalism" and advocates that "Protestant Ethic" provides this mental attitude. Hence, entrepreneurial supply is a function of religious beliefs and social cohesion.
Emphasising the psychological elements of entrepreneurial supply. McClelland (1961) hypothesises that entrepreneurial growth can be explained in terms of need for achievement (n/Ach). He describes the inculcation of achievement motive to child rearing practices, which stress standards of excellence, maternal warmth, self-reliance training and low father dominance. He gathers data to show that n/Ach levels are inversely related to the amount of capital required per unit of output. According to him, the achievement motive is formed during the middle childhood by "reasonably high standard of excellence imposed at a time when the son can attain them, a willingness to attain them without interference and real emotional pressure in his achievements short of overprotection and indulgence." The same view has been evidenced in his earlier works also. Modifying the need for achievement, Cole (1959) coins "need for recognition of achievement" and he bases his conclusion on the premise that entrepreneurs may be "inner directed" so as to gain complete satisfaction in the contemplation of their work well done with a tinge of psychic income.

While searching for the causes of transition to economic growth, Hagen (1962) identifies an entrepreneur as a creative personality with high need for achievement, order and autonomy. The core of his thesis is that such creative personalities emerge when the members of some social groups experience "the withdrawal of status respect", which may occur when a traditionally alike group is displaced by force from its previous status by another traditional group, or when any superior group changes its
attitude towards a subordinate group or migration to a new society. Further, he postulates that four types of events can produce status withdrawal: (1) displacement by force; (2) denigration of valued symbols; (3) inconsistency of status symbols with a changing distribution of economic power; and (4) non-acceptance of expected status on migration to a new society. Once status withdrawal has occurred, the sequences of change in personality formation are set in motion with the creative personality emerging after a minimum retreatist interval of five generations.

According to Cochran (1965), the key elements of entrepreneurial supply are cultural values, role expectations and social sanctions. Entrepreneurs are not seen as being deviant or supernormal individuals, but rather as representing society's modal personality. This modal personality is shaped by prevailing child-rearing practices and schooling common to the culture. The individual's performance is governed by his own attitudes towards his occupation, the role expectations held by sanctioning groups and the occupational requirements of the job.

Emphasising behavioural approach, Kunkel (1965) proposes that entrepreneur behavioural patterns are determined by reinforcing and aversive stimuli present in the social context, such rewards and punishments not being limited to child-rearing period. Hence, entrepreneurial behaviour is a function of the surrounding social structure, both past and present, and can be readily influenced by manipulable economic and social incentives. Further, he contends that the entrepreneurship depends upon four
structures, viz., limitation structure, demand structure, opportunity structure and labour structure. His hypothesis is that any discrepancy between opportunity structure and the actual incidence of entrepreneurship will be due to inadequate or incorrect perceptions of various structures.

Leibenstein (1968) argues that the demand for and supply of entrepreneurs are determined by the potential opportunities for gap fillers and input completers and availability of persons with capacities of gap filling and input completing.

Young (1971) proposes the source of entrepreneurship to be social clusters having transformation codes, which are developed by the solidarity groups to improve their symbolic position in the society. He maintains that entrepreneurial activity is guided by the particular family background and experience in the backdrop of an entrepreneur being a member of certain groups reflecting their general cultural values. Members, who exhibit positive reactions to cultural values, become entrepreneurs because of sharing entrepreneurial ability.

In nutshell, the Weberian theory is essentially based on religious belief system and to quote a few, it has been challenged by Pandey (1970), Tripathi (1971), Fox (1973), Mines (1973), Pupanek (1973) and Nandy (1973). Kunkel disapproves McClelland’s n/Ach and it is supported by Kilby (1971). In the present context, the theory of economic opportunities, incentives, social clusters and the knowledge of operational skills as a source of entrepreneurial supply seem to
be appropriate in achieving and explaining economic development. However, it is important to note that the emergence of entrepreneurs in a society depends upon closely interlinked economic, social, religious, cultural and psychological variables. Hence, it is for this reason, Drucker (1985) observes: "...... Everyone who can face up to decision making can learn to be an entrepreneur and to behave entrepreneurially. Entrepreneurship, then, is behaviour rather than personality trait and its foundation lies in concept and theory rather than in intuition."

(C) ENTREPRENEURIAL CHARACTERISTICS

A bibliographical survey published by Technology Development Institute of East West Centre, Hawai reports that there are only less than thirty studies on the entrepreneurial characteristics. However, researches have been conducted to specify these characteristics. Hence, the present review has been delineated to document the evidences of these researchers.

Berna (1960) in the study of entrepreneurship in the erstwhile Madras State, has disclosed that more important characteristics are access to capital, besides possession of experience of business and technical knowledge.

McClelland (1961) reports that entrepreneurs are characterized by (1) unusual creativeness; (2) propensity of risk taking and (3) strong need for achievement. This view has been further supported by the evidences of McClelland and Winter (1969), Rao, et.al. (1975), and Mehta and Mehta (1975).
However, the studies by Nandi (1973) and Javillionar and Peters (1973) have shown that n-Ach may help one become an entrepreneur, but need not be the only factor in entrepreneurship. Therefore, in a recent study, McClelland and Burnham (1976) conclude that an entrepreneur should have a need for influencing others, a low need to establish emotional relationships and a high capacity to discipline one's own self.

Often emphasizing n-Ach, we also observe the other characteristics evidenced in the following studies:

Collins and Moore (1964) conclude that entrepreneurs can be described as too restless, too independent and too creative.

Sharma, et.al. (1967) observe that most of the entrepreneurs, nearly 83.00 per cent, do not possess technical knowledge and they follow short-term approach by maximizing immediate returns without earning for long-term development and they are not dynamic to shift to new lines and methods of production.

Christopher (1969) finds entrepreneurs as young, having formal education, urban background, experience in industry, high scores on adoption propensity, high level of aspiration and of risk-taking. Further, he states that the factors like technical education, contact with influential people, membership in organizations and high scores on interpersonal trust and need for achievement are not found to be associated with them.
According to Berna (1970) good entrepreneurs are energetic, enterprising, resourceful, alert to new opportunities, able to adjust to new conditions and willing to assume risks involved in change. Further, they are interested in expanding business and reinvest earnings in business and they are technically advanced.

Patel (1970) reported that 70.00 per cent of the entrepreneurs are in the age group of 26 and 40 years and their education level and entrepreneurship are not significantly related.

Sharma (1970) states that people with higher levels of motivation work harder, learn faster and are more self-reliant. They have an activist outlook on life that encourages them to try and manipulate the environment to suit their own needs. They have aspirations and are very mobile while considering economic opportunities. These people are oriented towards saving and investing for the future.

Turner (1970) observes that persons with high n-Ach come from homes where fathers are performing entrepreneurial roles in their occupations, regardless of whether the surrounding community is highly modern or traditional.

Derossi (1970) reports that in developing countries, where illiteracy is still widespread and the percentage of highly educated people is extremely low, majority of the entrepreneurs are men with higher education.
Behavioural Sciences Centre (1971) identifies need to achieve, risk taking, positive self-concept, initiative and independence, problem solving, hopeful about future and searching environment and time bound planning as the important qualities of an entrepreneur.

Hornaday and Abond (1971), while analysing the significance of the characteristics, i.e., (a) n/Ach; (b) Autonomy; (c) Aggression; (d) Support; (e) Conformity; (f) Recognition; (g) Independence; (h) Benevolence; and (i) Leadership conclude that the need for achievement, support, independence and leadership are the most significant characteristics.

Singh and Singh (1971) report that business entrepreneurs are those with high need for achievement and they take high risks.

The study by Rao (1975) reveals that the entrepreneurs come from different social, economic and occupational backgrounds and education is not associated with the taking up of entrepreneurship.

Akhouri (1975), while studying the evaluation of entrepreneurial motivation training programme in Agra, states that the entrepreneurs have been very tenacious in pursuing their entrepreneurial goal in spite of many hurdles spread over a considerable period of time. They have been innovative in selecting and modelling their enterprises. Punctuality in payment of bank dues has been taken as a challenge by them and this alone
has successfully initiated a change in the attitude of local bankers.

Tandon (1975) identifies educated social background, technological guidance to others, ploughing back of the resources for expansion of scale of operations, awareness of the need to diversify the resources, innovativeness coupled with imitation and awareness of social responsibilities as the characteristics of effective entrepreneurs.

Rao (1979), while listing fifty-seven characteristics of entrepreneurship gives weightage to confidence, perseverance, determination, hardwork, general knowledge, dynamism, risk taking, optimism, technical knowledge, information gathering ability and initiative attitude.

In nutshell, the characteristics of entrepreneurs as evidenced by the researchers, are innumerable and the scope of it is getting enlarged. The characteristics listed so far are based on several studies and most of these are not conclusive. In the words of Rao and Mehta (1978), "There is no evidence to indicate that an entrepreneur cannot be successful without some of these characteristics. Entrepreneurs with strengths in creative abilities may emerge successful without possessing many of these characteristics. Answers to questions like what are the optimal combinations of characteristics needed to be an entrepreneur are not clearly available. The evidence only points to some dominant traits in successful entrepreneurs." Hence, these characteristics are almost coincidental and situational.
(D) EMPIRICAL STUDIES ON AGRICULTURAL ENTREPRENEURSHIP

The empirical studies on agricultural entrepreneurship fall into (i) Direct Approach; and (ii) Presumptive Approach. Under the direct approach, the researchers have called an agriculturist an entrepreneur and carried out their research. However, many researchers have studied the behaviour of farmers from the viewpoint of adoption, farm management efficiency and price responses. When these aspects were studied by them, they deliberately identified and emphasized a particular behaviour without mentioning that behaviour as a component of agricultural entrepreneurship, because the main thrust of their studies was on the particular component. Hence, the review of literature relating to agricultural entrepreneurship has been attempted below under these two approaches.

(i) Direct Approach:

Under the direct approach, the following studies on the entrepreneurial behaviour of agricultural farmers have been made and the major findings of these studies are presented below:

The study by Edwards (1961) related to the analysis of small farmers in Jamaica from the viewpoint of (a) attitudes towards adoption of improved practices; (b) entrepreneurial goals; (c) limited means; and (d) entrepreneurial behaviour under conditions of risk and uncertainty. The major conclusions of the study on each of the parameters are given below: (a) Attitude towards adoption of improved practices: (1) Many new practices were quite unknown to some of the farmers and many farmers were
not ready to change the farming practices because of their conservative attitude; (2) Diversity into animal rearing could not be taken up for fear of causing trouble to the other farmers; and (3) Many farmers were content with the current practices only because they believed that the new practices were not as good as those they employed already and they did not like the sacrificing of established crops in favour of new crops.

(b) Entrepreneurial Goals: (1) The farmers' objective was to procure income both in the near and the distant future and their objectives were highly related to the size of land holdings; (2) The young farmers were more prone towards the objective of distant income generation; (3) The objective of income generation was motivated by a desire to be independent; and (4) The farmers were interested in "good" cultivation, assuming that this would fetch good income.

(c) Limited Means: The farmers constantly emphasised their shortage of money and its effect on farming and living. This shortage of money affected the supply of labour, expenditure to be incurred regularly and the long term investments.

(d) Entrepreneurial Behaviour: (1) The farmers had to manage their farms under conditions of high risk and uncertainty consisting of lack of adequate data, weather, attacks of pests and diseases, accidents, theft and price variations; (2) Most of the farmers had informal insurance against losses in terms of reserves of cash and outputs, credit, sale of animals and
diversification of crops; (3) Their capital rationing was such that any project should assure them the minimum return under worst circumstances also; and (4) They had the great experience in assessing the risk in formal farm practices.

Wharton (1966) reported that subsistence farmers responded quickly to an economic stimuli, which resulted in high achievement motivation and they were identified to be "the most commercial farmers in the world."

Underlining the role of entrepreneurship in agricultural development, Narayan (1966) added two more categories of entrepreneurship viz., over-cautious entrepreneurs and parasite entrepreneurs to the visualisation of agricultural entrepreneurs by Wohl (1952), who made a four-fold classification of entrepreneurs into innovating entrepreneurs, imitating entrepreneurs, fabian entrepreneurs and drone entrepreneurs. According to him, an overcautious entrepreneur is responsive but conservative enough to wait until the local people have accomplished success and a parasite entrepreneur appreciates the various facilities extended by the Government and other agencies to promote industry or agriculture. Further the author argues that the approaches on entrepreneurial behaviour analysis may revolve around innovation, migration, speculation, accumulation and ethics in the background of historical, national, sociological, occupational and industrial levels.
Epstein (1967) identified higher education, contacts with various people, innovation and inclination to adopt the improved practices as the characteristics of agricultural entrepreneurs.

Roy et al. (1968) studied the agricultural innovations in Indian agriculture selecting 365 villages in the States of Andhra Pradesh, Maharastra and West Bengal. The main findings of the study were: (a) The closer the farmers came to the propagators of modern technology, the greater was the rate of adoption; (b) Size of operation seemed to be a necessary pre-condition to modernization; (c) The general socio-economic status of the farmer in terms of his level of living, education and caste rank was strongly and positively related with innovativeness; (d) The closer the farmer's linkage with the outside world, the higher was his level of adoption.

The study by Singh (1969) indicated that farmers with medium-size of land holdings showed greater motivation to achieve and readiness to change, compared to both small and bigger landholders. The same conclusion was reiterated in his later study in 1971.

Grunig (1970), while studying communication and economic decision making process of Colombian peasants observed that problem solving, economic rationality, adoption and achievement motivation were high. These farmers were endowed with high education or literacy, high income, high information seeking, substantial exposure to authoritative source, good credit supervision and high degree of exposure to mass media.
Singh (1970), while studying n-Ach among agricultural and business entrepreneurs reported that business entrepreneurs were exposed relatively to more economic opportunities than agricultural entrepreneurs.

Hunter (1970) observed that small farmers needed various management services for getting credit or input deliveries along with marketing services. His main suggestion was that these small farmers should organize their own association to deal with their needs.

Sinha and Mehta (1972) indicated that farmers with medium size of land holdings showed greater motivation to achieve and readiness to change than the small and big landlords. Further, he observed that the younger farmers, irrespective of their size of land holdings, were better disposed to achieve change.

Dwarakinath (1973) studied 242 farmers in two taluks of Bangalore District and observed that farmers' perceived incentives were found to be positively associated with their knowledge of practices, information seeking, economic status and input accessibility. On the other hand, farmers' perceived disincentives were found to be negatively related to their knowledge of practices, information seeking, economic status, and market facilities.

The study by Saha (1973) attributed the following reasons for the lack of entrepreneurial attitude in small farmers: 
(i) Unproductive small and fragmented holding; (ii) Lack of
assured means of irrigation; (iii) Seventy-five per cent of their receipts being directed towards household expenditure resulting in financial handicap; and (iv) Non-acceptance of new ideas, which attracted high risk level.

Coombs and Ahmad (1974) observed that small farmers needed help in becoming better planners and farm managers through an organized provision of management services. Their observation was that eventhough the Government in varying degrees had been providing the services relating to engineering, technical, economic and social services, it had failed in providing management services. The emphasis of thier suggestion was that "the management services for small farmers combined with the development of participatory institutions would help them break away from subsitence life and give them a chance to move into the modernizing agricultural world."

According to Sambrani (1974), the subsistence farmer was not irrational, but he hesitated to adopt an innovation that had been proved successful elsewhere, because his decision making horizon did not allow him to entertain such risks. As a result, the subsitence farmer had been characterized by low aspiration, low productive expectation and low distributive expectation.

The study by Chandidas (1975) related to transcribing scientific farming practices into agriculture. The conclusion of the study was that this task required meticulous attention consisting of parennial water system, scientific and judicious application of manures and fertilizers, timely maintenance of
crops in good condition along with a well supported institutional network. Further, the results showed that farmers were quick in adopting these practices provided there existed a good institutional network.

Blankenburg (1975) attributed the reasons for not taking up risk to low level of production and low education in case of small farmers.

Hundal and Singh (1978) made a study on a few correlates of progressive farm behaviour. The main conclusion was that n-Ach was particularly associated with farm success and this was attributed to intelligence, aspiration to advance, need for power, tender-minded temperament and radical outlook.

Singh (1978) identified that high scores on attitude toward farming, preference for activity, pride in work, upward striving and high degree of cautiousness in decision making were associated with progressive and dynamic farm behaviour. The low scores on these variables acted as a deterring force in achieving success for other farmers.

Pachanadikar and Pachanadikar (1978) examined the entrepreneurial behaviour of tobacco cultivators of Kaira District in Maharashtra. Normally, these farmers were innovative and market oriented. However, the small land owners and the poor cultivators did not have the innovative attitude and they did not expose themselves to risk.
The study by Nandapurkar (1982) related to entrepreneurial behaviour of 160 respondents each of participating and non-participating small farmers of Basmath and Parbhani Taluks of Parbhani District in Maharashtra. Participating small farmers consisted of those who obtained the assistance from Small Farmer's Development Agency in the Parbhani district since 1972. The parameters used to judge the entrepreneurial behaviour were innovativeness, decision making, achievement motivation, knowledge of farming enterprise, information seeking, risk taking ability, co-ordination, assistance of management services, leadership ability and cosmopolitanism. The dependent variables to analyse the entrepreneurs consisted of age, education, caste, family size, income, extension participation, social participation and cropping intensity.

The major findings of the study were: (i) Participant small farmers had high entrepreneurial behaviour than non-participants; (ii) The entrepreneurial behaviour did not differ significantly in different age groups and caste groups; (iii) There were positive relationships between entrepreneurial behaviour on one hand and formal education, high income, high extension service and high social participation. In the background of these findings, the suggestions were to promote educational programmes, which instilled aspiration for higher income through village meetings frequently.
Bhattacharya (1983) analysed the problem of entrepreneurship development in South-East Asian countries. Specifically, the study highlighted the agricultural enterprise model consisting of conceptual acts, conceptual environment, physical environment, individual and cooperative objectives with a successful integration of planning, organization, directing and controlling of farm operations. It was an armchair study made by using secondary source of information.

Hadimani (1984) studied 194 land owning cultivators in Chakrabhavi village of Bangalore District and found that the success of these agricultural entrepreneurs was a joint product of several factors in operation. The large farmers succeeded in agriculture because of the favourable factors and small farmers because of unfavourable factors. He also found that the general level of agricultural entrepreneurship was low in the village because most of the favourable factors in operation were lacking in the village.

The study by Singh (1985) examined the relationship between the development programmes and political leadership in rural India based on the responses of 415 respondents consisting of rural political leaders and agricultural entrepreneurs in Bilariaganj block of Ajamgarh district in Uttar Pradesh by evaluating the value attributes consisting of politicization, democratization and universalism and value components consisting of empathy, efficacy and achievement. The major conclusions of the study were: (i) Majority of rural entrepreneurs were
democratic and they mainly belonged to dominant upper caste groups; (ii) The entrepreneurs were found with land oriented conservatism as they associated special values with land; (iii) They were well exposed to mass media with greater political awareness and involvement; and (iv) With low awareness of political process, the weaker sections of the society had not been provided with adequate loans and subsidies, even though they had all the potentialities to take up agricultural ventures; instead these facilities were garnered by the upper strata of society having political linkages.

Swamy (1988) studied the entrepreneurial behaviour of 600 migrated Andhra farmers, who settled down as agriculturists in the command area of the irrigation projects consisting of Nizam Sagar, Nagarjuna Sagar, Tungabhadra and Hirkud. The behavioural analysis included push and pull factors in migration, socio-economic changes of migrated farmers and the problems faced by them. Major findings of the study were: (i) For nearly half of the migrants, dynamism and preparedness to take up risk were the primary driving forces to exploit the economic opportunities through irrigation instead of continuing with dry land farming; (ii) Ambition to become rich was the primary factor that induced 55.10 per cent of the farmers to migrate and this was followed by 44.80 per cent of the farmers migrating to the commanding areas because of low cost of agricultural land; (iii) 73.20 per cent of the respondents fully dedicated their attention on farming and 67.20 per cent of the respondents were influenced by mass media and other programmes in their entrepreneurial success; iv) 70.50
per cent of the respondents were very prompt in trying out modern
techniques of cultivation to seize the economic opportunities;
and (v) For most of the respondents, their successful management
and decision making depended on growing commercial crops and on
political involvement in getting financial and non-financial
assistance from government institutions.

(B) PRESumptive Approach:

Under presumptive approach, the studies may be grouped into
(i) Adoption of new farm practices; (ii) Inputs productivity;
(iii) Economic efficiency; and (iv) Responses to prices; and the
findings under each of these groups are presented below.

(i) Adoption of New Farm Practices:

Before we dwelve into the findings on the adoption of farm
practices, it is very important to differentiate between
innovation and adoption in agriculture. Innovation refers to
pioneering a new practice and adoption refers to the new practice
pioneered by some one earlier being used by other farmers
subsequently. Agriculture has been highly characterized with
adoption and not innovation. Hence, adoption has become the
mainstay of farm practices and the findings on adoption behaviour
of farmers are given below under (1) General characteristics of
Adoption; and (2) Specific Characteristics of Adoption.
(1) General Characteristics of Adoption:

Barnett (1953) found that the compatibility or incompatibility of an innovation with tradition and several other attributes of innovations seem to be relevant in the adoption decision.

Brandner and Straus (1959) found that familiarity or congruity of the new practice with recently accepted practice accounts for dramatically higher acceptance than the latter and the same conclusion was evidenced in another study by Brandner and Straus (1960).

McCorkle (1961) found that because of congruence with rural midwestern culture, chiropractice enjoyed a continued high rate of acceptance.

Fliegel and Kilvin (1962) found that those new farm practices, which were least complex and most nearly compatible with existing procedures tended to be adopted rapidly and radical departures from traditional practices required more intensive and effective education programmes. The same conclusion was also reached by Rogers (1963).

Fliegel and Kilvin (1966) observed very low partial correlation between compatibility and rate of adoption. They further stated that a high degree of compatibility between new practice and the context in which it was introduced were contributing to rapid adoption.
However, in another study, Kilvin and Fliegel (1967) found a considerable tendency to adopt the innovations, which departed from traditional ways.

Dyer (1969) stated that congruence could function well in relation to certain socially established controls that kept it within limits.

While analysing the adoption behaviour of Chotalok people Danda and Danda (1971) found that the farmers were unfamiliar with the idea of modern chicken raising techniques, though the idea of raising chickens was compatible with their way of life.

Mendras and Lerner (1971) observed that the mechanism of change was very slow and innovation was really accepted only when it no longer appeared new having been integrated fully with the existing system.

The study by Sachchidananda (1972) found that the adoption was highly positively related to caste hierarchy, size of the family, education, size of land holding, socio-economic status, optimistic attitude to life and achievement motivation and it was negatively related to age.

Singh and Singh (1974) found that attitude similarity had a greater magnitude of effect on adoption than the personality similarity.

Testing the relationship of ethnic and religious coherence with adoption, Baril (1977) found that the group having ethnic
and religious reasons started adoption hesitantly. But once the starting took place, the adoption process was at a faster rate than the rest of the community.

Associating four innovations viz., IR-8 rice, fertilizer application, mould board plough and line planting with five characteristics viz., cost, profitability, complexity, physical compatibility and cultural compatibility, Ramamurthy and Hanumanthappa (1978) found that there was no relationship across innovations except in the case of cost and cultural compatibility.

While studying the congruity and innovation in Jowar cultivation by the farmers of Nagpur, Ingle (1987) concluded that (1) congruence factors were important in increasing the level of adoption; (2) socio-economic status and scientific orientation helped in increasing the level of adoption; and (3) greater education decreased the adoption level.

The study by Waghmare and Waghmare (1987) dealt with the entrepreneurial behaviour of wheat growing small farmers in Kaira District of Gujarat. The main conclusions of the study were: (1) the main motivation for cultivation was to earn more money; (2) education and social participation had significant relationship with the information source used; (3) socio-economic characteristics and technology adoption were positively related; and (4) technological gap was significantly associated with decreasing the yield of wheat crop.
A study of 81 small and 69 marginal farmers of Varanasi by Pandey (1989) reveals that majority of the farmers had the favourable attitude for the adoption of various agricultural innovations. Most of them were acquainted with recommended agricultural practices. The study also found significant relationship of cropping intensity and irrigation potentiality with innovations. Almost all the personal factors except age and caste were found to be positively correlated with the adoption of agricultural innovations by the farmers.

(2) Specific Characteristics of Adoption:

The empirical evidences on specific characteristics of adoption are analysed from the viewpoint of (a) Application of Modern Fertilizers; and (b) Factors Associated with Adoption.

(a) Application of Modern Fertilizers:

It was interesting to note that almost all the studies concluded that the standard dose of fertilizers with standard mix was not applied at all and the actual application fell short of standard application very substantially. The main reason was observed to be economic constraint coupled with untimely availability.

(b) Factors Associated with Adoption:

The researchers have carried out their empirical analysis on the factors associated with adoption taking age, education, family type, family size, caste, social participation,
cultivation experience, knowledge of agricultural technology, characteristics of agricultural technology, farm size, extension contact, use of information source, source credibility, constraints in new technology adoption and risk orientation.

From the viewpoint of age as the factor associated with adoptions, contradictory evidences are found. While Wilson and Jaccard (1930), Hoffer (1942), Thripathy and Mishra (1971), Opare (1978) and Deshpande (1980) found no correlation, Padmarao (1968) and Lakshminarayan (1970) found positive correlation.

Regarding educational level and adoption, the positive relationship was observed in the studies of Hoffer (1942), Ryan and Gross (1950), Wilkening (1952), Dimit (1954), Sangle (1962), Gupta (1968), Deb and Sharma (1969), Patel and Modalia (1974), Singh (1975) and Shetay (1976). No association was witnessed in the study of Jetley (1977).

The studies by Sinha (1966), Reddy (1976) and De (1977) indicated no significant relationship of family type with adoption.

While Deshpande and Nikade (1965), Mukherjee (1970), Choubey (1972) and Shahi (1974) reported the positive relationship between family size and adoption, Bhatia (1974) and Deshpande (1980) found no relationship.
There was unanimous observation made by Desai and Mehta (1964), Salve (1966), Mundra and Batham (1967), Roy et.al. (1968) and Reddy (1976) on the positive relationship between caste hierarchy and adoption. But the studies by Copp (1956), Narayan (1963), Ernest (1973) and Somasundaram (1976) observed the positive relationship between social participation and adoption. Patel (1965), Supe and Solude (1975), Patel (1975), Mukhopadoay (1979) and Deshpande (1980) revealed no relationship.

If Kulkarni (1979) reported no association between cultivation experience and adoption, Bhati et.al (1974) reported the positive relationship.

The knowledge of agricultural technology and adoptions were positively related in the studies of Parson and Shills (1952), Williams (1958) and Jaiswal (1965) with no relationship in the study by Reddy (1962).

The complexity of technology and adoption were negatively related in the study by Kivlin (1971) and the relationship depended on the farmers perception of characteristics of innovative technology as per the observations of Rogers (1962) and Jaiswal (1971).

While Gross and Taves (1952), Rahudker (1962), Deshpande (1980), Chattopadyay (1976) and Chavan (1979) observed the positive relationship between farm size and adoption, Lomte (1977) found negative relationship and Choubey (1972) found no significant relationship.
From the viewpoint of impact of extension contact on adoption, the studies by Wilkening (1952), Poul and Coleman (1955), Amarsingh (1965), Moulik (1965) and De (1977) found positive relationship. The study by Singh (1971) concluded that the big farmers had high level of extension contact compared to small farmers and that extension contacts by these farmers were highly correlated with agricultural progressiveness.

Analysing the relationship between the use of information source and adoption, Rogers (1958) and Rahudkar (1962) found the relationship to be positive. Sawhney (1967) observed that the farmer with larger farm size used personal cosmopolitan sources to a greater extent than farmers with smaller farms. Dudhani and Rao (1969) observed that village level workers were considered as an important source of information by farmers. Singh and Lokhande (1974) found that the farmers had greater dependence on interpersonal sources for information and consultation. On adopting plant protection measures, Lakshman and Sathyanarayana (1967) evidenced that neighbours were the most influential sources of information. Bhilegoankar (1976) observed the high degree of relationship between sophisticated information source and larger land holdings.

Regarding the credibility of the information source, Singh and Shankaraiah (1969) observed least credibility to news papers and bulletins from non-progressive farmers but higher credibility attached to radio by non-progressive farmers. In
another study by Kalamegum and Menon (1977), the village level worker had more credibility in progressive villages and neighbours and friends played dominant role in less progressive villages. However, Wakade (1981) indicated that in progressive villages, mass media were accorded highest credibility followed by personal sources, while in traditional villages, mixed pattern of source credibility was observed. Reddy (1968) suggested the ideal role incumbants as source credibility to progressive villages and sociometric stars to traditional villages.

The constraints in the adoption of new technology were also evidenced in some studies. Sinha (1966) observed that 63.00 per cent did not get sufficient credit, about 16.00 per cent did not get it in time and about 37.00 per cent did not receive any credit at all. Patel (1965) reported the lack of knowledge of agricultural activities, lesser contact with the extension agents, lack of availability of seeds and fertilizers of local market, small size of land holding and low income were the problems of small farmers. Gupta (1967) revealed that water scarcity, financial difficulty and the belief that high doses of fertilizers being not beneficial were the reasons for the partial adoption of fertilizers.

Regarding risk orientation and adoption, Beals and Sibley (1967) found that individuals varied in willingness to take risk. Sangale (1977) indicated that risk orientation was positively related with adoption behaviour. Similarly, Nair (1969) observed that economic motivation was positively
related with the adoption behaviour. Chaudhury (1978) showed that exploitative and non-egalitarian social structure in the villages was mainly responsible for reducing small farmers risk-taking potential. The studies by Rajgopalan (1975), Bose (1961) and Kulkarni (1979) found negative correlation between belief in science and adoption. The studies by Hoffer (1942), Lionberger (1964), Fliegel (1967), Choubey (1972), Shahi (1974), Karim and Mehboob (1974), Bhatia (1974), Modalia and Rajwad (1976) and Chavan (1979) showed high degree of positive association between income expectation and adoption behaviour.

(ii) Inputs Productivity:

The per capita availability of any product is dependent upon the quality of inputs and their efficient utilization. The review of the literature on this issue has been covered under (1) Investment; (2) Cropping Intensity; (3) Cost of Inputs; (4) Profitability of Farming; (5) Returns to Scale; (6) and Yield from Inputs.

(1) Investment:

The studies by Maral and Waghmare (1971) and Garg et.al. (1977) revealed that the average investment in fixed capital per farm increased with the size of farm. While finding out the impact of irrigation on investment in fixed capital, Garg and Singh (1971) applied the t-test. The calculated value of 't'
between the investment in fixed capital on the irrigated farms and that on the dry farms came to above 18.02, which was highly significant at the 5.00 per cent level, showing that the investment in fixed capital was significantly higher on the irrigated farms than on the dry farms.

(2) Cropping Intensity:

_Yeshwanth (1965)_ concluded that the intensity of cropping was 100.00 per cent in case of dry farms, whereas it was 168.00 per cent in case of pumpset owners. This reflected the positive relationship between the cropping intensity and irrigation. Examining the relationship between holding size and gross area, _Rao (1967)_ concluded that the regression coefficients were significant and none deviated significantly from the unity at 1.00 per cent level of significance. This indicated that the intensity of cultivation remained constant over the holding sizes. Similarly, _Rani (1971)_ observed that no firm generalization could be made about the variation of intensity of cropping over different sizes of land holdings. However, _Garg and Singh (1971)_ found that intensity of cropping varied positively with the farm size, as it was 150.64 per cent on the smallest size-group and 158.53 per cent on the largest. The study by _Kahlon et al (1971)_ showed that the cropping intensity was substantially higher in the irrigated areas than in the unirrigated areas and they also concluded that the intensity declined with the increase in the size of land-holding both in the irrigated and unirrigated areas. However, _Nishar (1975)_
found a positive relationship between cropping intensity and irrigation and also between cropping intensity and farm size.

(3) Cost of Inputs:

The study by Rao (1964) revealed that the per acre cost of cultivation declined as the size of farm increased in Uttar Pradesh, West Bengal and Madras and there was no systematic variation for different size groups in Andhra Pradesh, Madya Pradesh and Bombay. Establishing the relationship between net area sown and values of seed, fertilizers and manures, Rao (1967) concluded that per acre total cost due to these inputs remained constant over all the holding sizes. However, Nath (1967) observed that the cost of human labour, bullock labour and the total cost of cultivation per acre decreased as the size of holding increased for dry as well as for irrigated land holdings. The studies by Garg and Singh (1971) and Singh, Bhatia and Azad (1971) revealed that the per hectare cost of inputs was higher on irrigated farms as against dry farms.

(4) Profitability of Farming:

Establishing the relationship between net profit per acre and farm size, Khusro (1964) found that the regression coefficients were found positive but it was not significant. But Rao (1964) found that in four out of seven selected States, he found no such systematic relationship. However, Nath (1969) observed that profit per acre increased with the increase in the farm size, as per acre total cost on inputs declined at a higher
rate than that of gross output with the raise in the farm size. Further, he concluded that the profit per acre for irrigated crops was higher than that for unirrigated crops. As against this, Acharya and Purohit (1967) observed that the net earnings per acre of different size groups were not statistically different. Again, Garg and Singh's (1971) study came out with a different conclusions that size and net income were highly statistically related and the input-output relation was higher on irrigated farms as against dry-land farms.

(5) Returns to Scale:

From the viewpoint of returns to scale, Radhakrishna (1964) found constant returns to scale existing in farm business both in the irrigated and dry regions but Sisodia and Agarkar (1971) obtained an increasing returns to scale for dry and partially irrigated farms and this finding was supported by Rao (1964) and Maral and Waghmare (1971).

(6) Yield from Inputs:

The yield from inputs has been studied from the viewpoint of the relationship of it to size and to output values. If the studies by Khusro (1964), Krishna (1964) and Rani (1971) found inverse relationship of yield with size of holdings, no relationships were observed by Rudra (1968) and Battarcharya and Saini (1972). The study by Rao (1967) revealed constant relationship. However, Sen (1964) observed increasing returns for small holdings and constant returns for big holdings.
Further, Patnaik (1972) revealed that yield per acre positively increased up to 20 acres and it was negative per acre when the size exceeded 25 acres. Sisodia and Agarkar (1971) showed that marginal product of land was the highest on small farms and it tended to decrease with an increase in the farm size and this was supported with similar findings by Verma and Pareek (1975). The studies by Radhakrishna (1964) and Nadkarni (1971) revealed that marginal value product of land had a higher positive relationship with irrigated land than with unirrigated land.

(iii) Economic Efficiency:

Agricultural growth depends upon the manner of utilization of resources by the farming community. This aspect is often referred to as economic efficiency, which is defined as to what crop activities to undertake, how much land to allocate to each crop activity and what method and combinations of inputs to use on each crop so that net farm returns are maximized.

Elaborating on the problem of economic efficiency, Schultz (1964) advanced the hypothesis that "the agricultural sector in a large class of poor countries is relatively efficient in using factors of production at its disposal." Since then, a number of studies have been conducted on economic efficiency of farmers in India and the results are ambiguous. These studies can be broadly classified into two categories, one supporting Schultz's hypothesis and another rejecting it. The studies by
Hopper (1965), Krishna (1964), Sahota (1968), Chennareddy (1967), Saini (1969), Yotopoulas, Lau and Somel (1970), Yotopoulas and Lau (1971) and Singh (1972) belong to the first category. On the other hand, the studies by Agarwal (1958), Desai (1963), Saran (1964), Rao (1965), Hati and Rudra (1973), Dey and Rudra (1973) Sampath (1979), and Singh (1989) reject the Schultz's hypothesis. Further, if Dillon (1973) evidenced profit maximizing behaviour of the Indian farmers, Rudra (1973) rejected this behavioural finding. Lastly, Pandey and Kausal (1980) suggested that there existed the possibility of increasing the net returns with the adoption of modern technology even under the existing resource constraints.

(iv) Responses to Prices:

Another dimension of agricultural entrepreneurship has been the role expected price level plays in farming decisions. The debate has led to the emergence of two groups, one group arguing that prices do not have a role in farm decisions and the other group evincing keen interest in expected prices affecting farm decisions. The latter group seems to have an edge over the former in the debate. In this regard, Schultz (1964) observes: "The economic acumen of people in poor agricultural communities is generally maligned. It is widely held that they pay no heed to changes in prices and they disregard normal economic incentives." Further he declares that "...... the doctrine that farmers in poor countries either are indifferent or respond perversely to
changes in prices is patently false and harmful." Hence, Krishnamurthy (1949) long back observed: "Prices are the objective indices guiding the subjective decisions of each individual that exercises choice, and the quantative decisions of each productive unit that undertakes production." Specifically, Mellor (1969) opines: "The relative level of agricultural prices influences the allocation of production resources and hence the level and pattern of agricultural production. Price relationships affect relative profitability and economic incentives." Further, the United States Department of Agriculture (1965) remarks: "For given levels of price, the larger the price fluctuation, the larger the depressing effect on output and productivity. Hence, prices are held to play a strategic role in farming decisions, which basically involve acreage allocation and production on one hand and market surplus on the other. Regarding the relationship between acreage allocation and production, there are twenty eight studies endorsing the positive relationship.

From the viewpoint of the relationship between prices and market surplus, we have different evidences. Mathur and Ezekiel (1961) and Khatkhate (1962) identified the existence of negative prices elasticities arising out of fixed cash/real income needs. Dandekar (1964) arrived at similar results but he opined this to be true only for a small group of farmers. Krishna (1962) observed that price elasticity of marketable surplus in respect of a single subsistence crop was likely to be positive though the possibility of a negative price elasticity
could not be ruled out. Khusro (1968) concluded that price elasticity of marketed surplus was positive and that farmers would retain more out of their production when prices were low, even though production might not have increased. However, Mathur and Ezekiel's conclusion was opposite to Khursro's. Lastly, Bhatia (1974) observed that yield and input use were responsive to price changes.

To conclude, entrepreneurship is sparked off through motivation to achieve something and it stems out according to circumstances. The success or failure of any entrepreneurial activity cannot be attributed to any single factor and it is the result of different factors having an effect under different circumstances. The studies on entrepreneurship have mainly centred around industrial entrepreneurship. However, the concept of entrepreneurship is highly related to agriculture. Hence, there has been an attempt to unfold the various dimensions of agricultural entrepreneurship in India and these attempts fall into two categories, viz., Direct Approach and Presumptive Approach. Under Direct Approach, entrepreneurial behaviour has been analysed and these studies are only a few. Many attempts have been made to study this behaviour of farmers from the viewpoint of adoption of new practices, inputs productivity, economic efficiency and responsiveness to price expectations. All these point towards the presence or absence of entrepreneurial behaviour and the findings are not unanimous.
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