

Essence of Organic Agriculture in *Khana's* Sayings

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Abstract—The sayings of *Khana* were composed in Bengal during pre-turk age after the days of 'Charyyapada' writings, that is, in the 12th century A.D. 'Khanar Bachan' or the sayings of 'Khana' are composed in rhymes and language of which are very familiar with the people of Bengal and so these continue to be prevalent in our country through ages. One cannot deny the importance of 'Khanar Bachan' which are followed by the farmers of rural Bengal and thought to be rewarding for hundreds of years. The authors of this treatise think that since agricultural science is the result of long standing regional observation and experimentation, 'Khanar Bachan' very well falls within the jurisdiction of that observation based agricultural science of the past. This study recollects the farm-lore of Bengal in the perspective of organic farming and also to get an essence of primeval extension efficacy pertaining to agriculture of Bengal. In Oxford English Dictionary, Organic Farming or Organic Gardening means growing plants without the use of chemical fertilizers, pesticides etc, and adding only organic manures to the soil. Organic manure is produced from natural substances, usually without the addition of chemicals. Organic soils are soils composed mainly of organic material; the organic content being sufficient to dominate the soil characteristics. Considering this, in the propositions of *Khana* the following manures and their application were mentioned which leads to organic farming in this context: Indi Pindi / Farm waste burning, Gobor / Cow dung manure, Chita / Rice husk, Lune Mati / NaCl, Pochla / Well decomposed night soil, Gondhola / Pocha Gobor / Goda / Gotol / Cattle shed wash, Ghuter Chhai / Cowdung cake ash, Machher Jol / Fish meal, Kuti / Kutokata / pieces of straw, grasses, creepers, Mandar (*Erythrina indica*) leaves as Green leaf manure. Farming based on *Khana's* Sayings is sustainable, folk-friendly and cost effective farming in nature.

Keywords: Agricultural extension, Folklore, *Khana's* sayings, Organic Farming.

1. INTRODUCTION

Organic farming is a crop production system admiring the convention of the nature aimed to make nutritive, healthy and pollution free food. It takes the advantages of the use of on-farm resources to curtail the use of off farm inputs. Assurance to protect and preserve nature is a pre-requisite for working in organic farming. In organic farming the whole ecosystem (*i.e.* plant, animal, soil, water & microorganism) is to be protected.

Organic cultivation perks up the structure and fertility of the soil in the course of balanced choice of crops and realization of diversified cropping systems. As the consumers are ready to pay premium price for such foods, the demand for organic agriculture products is on the increase day by day.

It reveals that the importance of organic farming is deeply felt in the social and cultural life of the folk. A large number of farmers of Bengal used to cultivate his choice crops in their own land for their own consumption without giving any chemical fertilizers and pesticides. Moreover the buyers of the rural and urban markets are looking for indigenous varieties of crops and even the pest infested ones due less residual toxicity of harmful chemicals there. In the poetry of *Khana* (*Khana's* Sayings), descriptions are found about organic farming of agricultural crops and extensive mention is made on horticulture. There is a close-set linkage between knowledge and folklore. Folklore, in fact, is the 'language of root' and the 'song of soil'. That is created in the minds of human beings in associated with the crop fields, meadows, the trees and creepers. This unknown, unlighted and undescribed life culture and mind culture is mostly agriculture based. 'Folk' means the similar group of populace united by ethnic, semantic, theological and artistic affairs. 'Lore' is spread in the life style and philosophy and it passes from generation to generation by simple words of mouth. In human society there is hardly any subject that folklore has not touched. Just as crops grow in land, and a smell of the soil sticks to it, similarly folk literatures also have a smell of the soil in them. Even today the life philosophy of rural Bengal is modelled after the propositions of '*Khana*'. '*Khanar Bachan*' or the sayings of '*Khana*' are composed in rhymes and language of which are very familiar with the people of Bengal and so these continue to be prevalent in our country through ages. One cannot deny the importance of '*Khanar Bachan*' which are followed by the farmers of rural Bengal and thought to be rewarding for hundreds of years. The authors of this treatise think that since agricultural science is the result of long standing regional observation and experimentation, '*Khanar Bachan*' very well falls within the jurisdiction of that observation based

agricultural science of the past. Therefore, the objective of this study is to recollect the farm-lore of Bengal in the perspective of organic farming and also to get an essence of primeval extension efficacy pertaining to agriculture of Bengal.

2. MATERIAL AND METHODS

Participatory Rural Appraisal was the methodology for interacting with the farmers' folk, understanding them and learning from them. Observation based horticultural knowledge in the sector of agro-climate, soil, land preparation, sowing and planting of propagules, manuring, irrigation, intercultural operation, intercropping and harvesting etc was considered for the purpose. To explore the horticultural knowledge in the folklore items Content Analysis (Berelson, 1952) had been undertaken.

3. OBSERVATION

The following subjects are found in *Khana's* sayings regarding agriculture: a. flood, epidemic, rains and drought, b. ploughing, c. sale and purchase of cow and buffalo and the way of identifying good cow and buffalo, d. cultivation of various crops including paddy, e. manuring and crop protection, f. construction of village houses, g. sericulture. In *Khana's* sayings descriptions are found about agronomic crops or field crops, horticultural crops and other homestead common plants. The proverbs on *Aman* and *Aus* paddy are more in number. Among horticultural crops, extensive mention is made of fruits, vegetables, spices, medicinal plants, betel vine and bamboo. Among the field crops special mention is made of ancient crops like cotton, sugarcane and sesame. Even the medicinal plant of 'Neem' is not omitted. Agricultural and Horticultural information in the context of cultivation of crops that have been mentioned in *Khanar Bachan* is as follows: similarity and dissimilarity in crop production, agro climatic requirements of crops, soil and land preparation, time and method of sowing and planting, optimum spacing for sowing and planting, manuring, irrigation, intercultural operation, agricultural implements, intercropping, crop rotation, maturity and harvesting.

It is supported that The present researchers think that may be in succeeding ages agricultural proverbs made in Bengal were ascribed to the name of *Khana*. There is a similar case with *Chandidas* of Bengal to whose name many verses were attributed afterwards. As a result the proverbs of same theme have more than one reading or version with change in dialect. However, the language has changed a bit from time to time and from place to place, with the theme remaining the same.

Khana addressed to the farmers that without applying manures to the crops good harvest would not be possible (*Shono shuno chasa bhai/ sar na dile fosol nai*). It is pointed out that the waste materials of human and farm animals may be goods sources of plant's nutrition later on (*Eker khadyo*

arer bish / je na bujhe harae dish / keu na tare chasa koe/ sorbokal dukkho roe).

This is the list of sayings for manuring of the crops:

1. **Indi pindi** purie dae lau gachher gore
2. Goe **gobor**, banshee mati, ophola narikel-shekor kati.
3. Khana dak diye bole / **chita** dile narikel-mule/ gachh hoe taja mota/ shigra shigra dhore gota.
4. Narikel gachhe **lune mati** / shigra shigra bandhe guti
5. Suno babu chaser beta / banshjhare dao **dhaner chita** / chita dile bansher gore / bighe vuin berobe jhare.
6. Fagune **agun**, chaite **mati** / bansh bole shigra uthi.
7. Manush more jate/ gachhla sare tate / **pochla** sorae gachhla sare / **gondhla** die manush mare.
8. Ole **kuti**, mane **chhai** ? eirupe chas korge bhai.
9. Nodir dhare puntle kochu / kochu hoe tin hat uchu./ kochubone chorale **chhai**/ Khana bole tar sonkhya nai.
10. Lauer bol **machher jol** / dhenom jomite jhal probol.
11. **Chhae** lau, uthane jhal/ koro babu chaser chawal.
12. Sonre babu chaser po/ supari bage **mandar** tho. / mandar pata porle gore/ fol barbe jhotpot kore.
13. Maner gorae felo **chhai** / tatei man barbe bhai.
14. Tamak khete **gobor sar** / tamak bare bejae bar.

In the propositions of *Khana* the following manures and their application was mentioned which leads to organic farming in this context: *Indi Pindi* / Burnt farm waste, *Gobor* / Cowdung manure, *Chita* / Rice husk, *Lune Mati* / NaCl, *Pochla* / Well decomposed night soil, *Gondhola* / *Pocha Gobor* / Goda / *Gotol* / Cattle shed wash, *Ghuter Chhai* / Cowdung cake ash, *Machher Jol* / Fish meal, *Kuti* / *Kutokata* / pieces of straw, grasses, creepers, *Mandar* (*Erythrina indica*) leaves as Green leaf manure. The following recommendation of manuring is revealed based on content analysis.

Table 1: Advice for manuring in crops as suggested by *Khana*

Sl. No.	Manures	Crops
1.	Burnt farm wastes	Bottle Gourd
2.	Cow dung manure	Areca nut, Tobacco
3.	Earthing up of fertile soil along with waste ashes	Bamboo groves
4.	Rice husk	Coconut, Bamboo groves
5.	Common salt	Coconut
6.	Well decomposed pieces of straw, grasses, creepers	Elephant's foot yam,
7.	Ashes	Colocasia (<i>Maan and kachu</i>)
8.	Fish wash and fish meal	Bottle Gourd

9.	<i>Mandar (Erythrina indica)</i> leaves as Green leaf manure	Arecanut
10.	Well decomposed night soil	Almost all crops

Here, some sayings have been critically analyzed.

1. Manuring: '*Narikel gachhe lune matee, shighra shighra bandhe gutee*'

Meaning: salinity of the soil helps coconut tree to bring fruits earlier.

Rationale: The use of crude common salt and salt pan waste as sources of nutrients for the palm has been an age old practice in places which are away from the coastal belts. The importance of sodium chloride in the nutrition of coconut palm is now an established fact (Thampan, 1999). On an average, one ser (~900 g approx) is applied per plant. The rate is increased with the increase in the age of the plant. Such use is reported to be beneficial to the coconut trees which need high quantity of K. The Na in NaCl may replace non-exchangeable form of K from soil sites and make it available to the plants. This practice is in use since long before the fertilising value of KCl became known. Potassium stimulates early shooting and early fruit maturity and it contributes about 25-39% increase in copra yield.

2. Optimum spacing for sowing and planting: '*Hate hate chhoe na, mara jhanti roi na*'.

Meaning: leaves of two adjacent palms should not touch each other; dried leaves should be removed.

Rationale: Rat infestation is a menace in coconut plantation. The damaged tender nuts thereby cause severe crop losses in many areas. The rats move from palm to palm through the fronds because of the dense coconut stand and removal of dried leaves, spathes and matrix regularly from the crown exposes the resting places of these arboreal rodents to predators. Therefore, density of the palm in an acre so much so that leaves of the adjacent palms should not intermingled with each other giving an impression of a coconut jungle rather than a coconut garden.

3. Intercropping: '*Age punte kala, bag bagicha fala / Sonre bali chasar po, krome narikel pare go*'.

Meaning: while establishing a new orchard, planting of banana first to be done. Subsequently coconut and areca nut are to be planted.

Rationale: coconut based cropping system involved growing multispecies of crops that can harvest solar radiation in different tiers have been developed to increase the farm output per unit area and time. Coconut farming system in all its combinations is practiced in India by the traditional coconut farmers. The farmers took advantage of the unique crown features of the coconut palm which permit a portion of the sunlight to percolate down and also the rooting pattern

which explores only a limited land area for growing seasonal, annual and perennial crops both in the inter row and intra row spaces in coconut holdings. The popular crops grown in coconut gardens in West Bengal are found to be areca nut and miscellaneous fruit crops. Banana is identified as the most popular ones. The residue or waste from understanding crop components viz, banana pseudostem are recycled as mulches and parts of the nutrients locked up in these parts are returned to the nutrient pool of the coconut based cropping system. The lower storey (1-3 m) of the harvesting plane is occupied by banana and the major portion of upper canopy (>25 m) went to coconut and areca nut.

4. Maturity and harvesting: '*Khana bale-jakhan chai takhon keno loi na*'

Meaning: The learned Bengali woman *Khana* tells-coconut can be harvested throughout the year as desires.

Rationale: A bunch of coconuts goes through a long cycle of both non-visual and visual development of 44 months before being harvested. In this process a bunch matures more or less regularly each month and becomes ready to be harvested. The ripening stages of nut and the timing of harvest for specific purposes such as consumption as tender nut, household culinary use, copra making and coir production are within the knowledge system of the traditional farming community. It is revealed that harvesting mature branches at monthly intervals showed increased yield as against bi-monthly harvestings. The additional cost of harvesting is very minimal when compared to the higher net income that could be derived due to increase in yield.

4. CONCLUSION

In our agricultural state of West Bengal, a vast portion of the population is connected with agriculture directly or indirectly. As a whole the economy of our country is based on agriculture. Therefore, it is only natural that in Bengal's folk-poetry as for example *Khana's* Sayings, agriculture and peasant will have an important role. Different folklores are evolved in the agrarian folk societies in the form of oral literature which is preserved in folk memory and perpetuated in folk practices. Folk literature vis-à-vis folklore pertaining to agriculture is a verbal folk communication and the resource poor farmers use this wisdom because technological justice is beyond their reach and this sort of resource-poor farming is organic in nature by utilizing on farm resources. This knowledge should be validated and fine tuned so that plants may not be suffered from mal nutrition expressed deficiency symptoms. Moreover, this farming based on *Khana's* Sayings is sustainable, folk-friendly and cost effective farming in nature.

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