

Girish Chandra Bose and Agricultural Journalism

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Abstract

Girish Bose felt that agriculture was a subject for dissemination among the cultivators, literate and semi-literate. He launched two journals on agriculture, *Agricultural Gazette* in English and *Krishi Gazette* in vernacular. In these two journals he propagated this combined wisdom of the East and West. It contained articles from soil, water seed plant and implements for optimum agriculture production and even agricultural marketing and protection against pestilence. The two papers show his in-depth research in all the available books and magazines and analysis of their contents. The driving force was agricultural development of the country and improvement of the standard of living of the poor masses. The article reveals both these concerns in ample degree.

Key words: *Agricultural Gazette*, Agricultural marketing, Agricultural production, Crop diseases, Crop failure, Cultivator soil, Irrigation, *Krishi Gazette*, Plant, Seed, Water.

1. AGRICULTURE FOR THE ELITES

Girish Chandra Bose used to edit the English journal the *Agricultural Gazette*¹ which started from 1885. In its various numbers we have many technical articles on improvement of agriculture. In No. 2 we have an article on fish and their culture written by him. In it he tried to show the complementary nature of pisciculture to agriculture. In this number there is another article on agriculture implements titled 'Plough Primitive and Modern'. In it the western innovations on the primitive plough were described which could revolutionize cultivation. There is another article on the advantages of knowledge of veterinary science to an agriculturist. It is well known that agriculture and animal husbandry goes hand in hand, particularly cattle wealth provides capital to agriculture. There are regular features on weather and crop report and price current of staple food grains. There are also valuable inputs for agricultural improvement.

In number 3 we have a valuable article on Sugar Refining at Nasirganj, Bihar and Rabi cultivation rice which offer new technology for improvements of traditional crops. We also have articles on sterility of soil experiment with a steam thresher for wheat and fiber producing plants. It is evident that the journal aimed at technological support for modernization of agriculture. On searching the contents of vol. 1 ending 31st March 1886 we have the valuable article of the past, present and future of famines and cattle disease.

In number 2 we have an elaborate article on the wheat trade in India. We have two unusual articles on preservation of timber and fish curing apart from the regular market and crop and weather report.

In vol. 4, no. 38 May, 1888, we have one major article on the Indian wheat and rice weevil or pestilence and another on dentition in domesticated animal. Both are on diseases and contained their remedies. There is a curious article

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¹ All information of section 1 is drawn from the *Agricultural Gazette* by Girish Chandra Bose, Calcutta, 1885

n the mango weevil and another on the development of the art of candle making. It is significant to note that there is a definite emphasis on the back up to traditional agriculture.

In the July No. 4, 1888, there are several articles such as agricultural improvement, demonstration farms, untried products besides sugar making, paper making and agricultural implements.

Sifting to No. 5 of 1888, we have a special article on sugarcane cultivation in Bengal and appeal for agriculture education in India. In the news section the cultivation of ground nut is noticed. There is a joint no. 6 and 7 in which we have a special article on onion. G. C. Bose continues his and their culture. Burrows writes on Sugarcane cultivation in Bengal and T. N. Mukharji makes his appeal for the revival of Indian art manufactures supporting to agriculture. No.8 also contains the report on Bengal forest administration and wheat cultivation in Bhagalpur district. In no.9 there is more on wheat trade in India and preservation of timber besides remarks on the foot and mouth diseases of animals. No. 10 contains a note on improvement on agricultural plants and new oil mill and cotton mill machinery. In no.12 we have information on Belgian agriculture and experiment in wheat hybridization. It is interesting to note that the journal is trying to present a comprehensive rural economy by writing on fisheries, forests, animal husbandry and technological innovation.

Vol. IV, 1888, a lengthy article on well-water contents in comparison to rain water by one R. Warrington is printed in this no. showing that chemical contents like nitrate and chlorine were much less in rain water than drainage water in an average of nine years. This information was valuable for water retention in the soil. The proportion of chemicals in the soil was vital to know to regulate it for agriculture. As well-water was essential for irrigation, this analysis could help

to retain the desirable limit of chemicals in the water. In countries like England where no major rivers are seen, well-water has become part and parcel of irrigation for agriculture. Though had mighty rivers still it was victim of frequent water scarcity and drought. Well irrigation with water treatment could be a good solution to such natural crisis. Wells after all were domestic properties and could be easily accessed and like river water.

The efforts of the Gazette were very much appreciated by the English press in India. Some instances can be cited from the *Englishman* and the *Pioneer*.

‘One of the signs of the times is the growing attention that is being paid to the subject of agriculture. An evidence of this is the publication of the *‘Indian Agricultural Gazette’* a monthly periodical, which has now reached its third number. The ‘Gazette’ is published in English and Bengali, the subscription for the Bengali edition being the paltry sum of three rupees a year. The June number is certainly very creditable, and shows a great improvement upon the preceding numbers. Its contents, which occupy over twenty pages, are varied and interesting. Mr. Sen’s short paper on sugar-refining in Behar we republish in another column. Mr. Mukharji succeeds in throwing a good deal of freshness into his comments on the wares of Delhi, Lucknow, Benaras, and Moradabad. Enough has been said of the contents of the ‘Gazette’ to show that the fare which it is offering to the people almost free of charge, is both wholesome and attractive’ – *Englishman*.

‘...a journal as the *Indian Agricultural Gazette’* published in English and Bengali, is one worthy effort to break down the barriers of centuries of ignorance, and to place before Indian cultivators the knowledge, the experience, and appliances which may avail to banish the misery of famine from the millions of homes which now are darkened always by its near presence. – *Pioneer*.

To popularize his journal he took out frequent advertisement of the Gazette in his own paper. It had no commercial angle. He only wanted dissemination of vital knowledge for agricultural development of a rural country. This is evident from the Bengali version that he brought out for the common people.

He often carried advertisement of allied journals for the same purpose. The government, English educated Indians would be informed by the English version for policy making and choice of techniques while the Bengali version would similarly inform the lay public and lettered cultivators themselves.

Girish Bose covers all aspects of modern agriculture including the use of insecticides to protect crop. The editorials that appeared in the gazette (vol. 4 no 39) shows his vast knowledge in this field. Crops can be attacked by insects of various kinds which may result in crop failure. To prevent that he suggests the chief and most generally applicable widely used in America and would be equally useful in India. These are

1. Arsenical compounds
2. Kerosene emulsions
3. Pyrethrum

Then he goes into the properties and efficacy of these compounds. All these are relevant event today. His grip of agricultural chemistry is remarkable and is understandable from the next editorial in vol. 4 no. 40 on the source of nitrogen in plants. He utilizes his knowledge of botany in the field of agriculture.

Another interesting aspect of the gazette is Bose's study of the latest agricultural implements of the west. He particularly compared the ploughs primitive and modern and draws attention to the final features of the modern plough. It is well known that the heavy plough is good for

breaking the hard soil and furrowing through it. The light plough with sharp blades has a cutting edge suitable for sifting soil and preparing the ground for planting seeds.

All said, the knowledge of scientific agriculture found in the agricultural gazette is valuable for administrators and its vernacular version is easy enough for a novice farmer. The two papers together express the wisdom of Bose in modernizing agriculture in India and it remains valid and valuable even today.

2. AGRICULTURE FOR THE MASSES

In the preface to the first number, Bose hits upon the contradiction in the field of Indian Agriculture. Indian peasants were admittedly most hard working and persevering work force in the World, who also displayed some amount of technical skill in agricultural pursues. Yet they were the poorest on earth having not even the minimum food and clothing to put their body and soul together. This is a subject worth investigation. The Gazette² wanted to explore this sordid state of affairs and find its remedies. It intends to improve agricultural production by combining indigenous and foreign agricultural knowhow as agrarian relations were difficult to alter under colonial rule, agricultural development from below can be an alternative to redressed the situation. This involved a careful study of classification of land and soil according to its productivity. It may vary from place to place depending on local soil and climate. Strategies must be found to maximize production with minimum cost, cheapest and easily available natural manures, pesticides, and diverse ways of small irrigation and colonization of agricultural implements at minimum cost, improvement of cattle health by providing healthy product. All these aspects of the enquiry could be assembled by tapping indigenous and foreign practices.

² All information of section 2 is drawn from the vernacular journal *Krishi Gazette* by Girish Chandra Bose, Calcutta, 1885

Animal husbandry is a neglected field in our country. Special care must be taken for raising cattle population and taking good care for their food and health. It can be harnessed to the market by producing more lambs and goats for meat and wool, even horses could be utilized for agricultural work instead of confining them to only carriage. In this way animal husbandry could be profitable and self sustained. The improvement of agriculture should not be an end in itself. More emphasis should be laid on the symbiotic growth of agro-industry. Thus sugarcane cultivation as commercial agriculture can lead to sugar refineries and meals for domestic and foreign markets. Similarly there should be special emphasis on production of jute and cotton for gunny bags and textiles. Even earthen vessels and porcelain and glasses could be manufactured as agro-industrial products. Matches and soap comes in the same category. All these would lead to creation of wealth which could be diverted to improvement of agriculture. On the other hand this would reduce scramble for land and land litigation. The pressure on land will also be reduced as many people will switch to agro-industries as labour force. It will then not be difficult to provide to square meals for peasants who are wallowing in abject poverty.

To spread this agricultural information and intelligence a scientific journal of agriculture is the need of the hour. It will be preferable if the journal is in vernacular but no where such a journal is noticed on scientific agriculture and animal husbandry in any regional language. *Krishik Gazette* is launched to fill this gap. Initially it may be difficult to get specialists to write all the above things. Yet there are many qualified people who have domestic and foreign experience among teachers of agricultural colleges, officers of the directorate of agriculture, members of agricultural associations who can be the prospective writers for this journal. If patriotism can be aroused for nation building purpose there will be no dearth of committed writers. It will be published in both

Bengali and English and made available to the public at a nominal annual subscription of Rs. 3/- for the Bengali and Rs. 4/- for the English version.

In the first issue the paper wrote an article on the exportability on Indian wheat to England. As India is a serial producing country and many western countries do not have them adequately Indian surplus has a good market there. In fact the editor informs that export in this sector has quadrupled of late. This has benefitted not only the government but also the primary producers. In India arable land has depleted but dependence on land have increase. Therefore, new agricultural cash crops must be found for export. Wheat has a good prospect for export if this is cultivated side by side with rice. India has a better climatic condition than England for wheat production. They have to depend on exports from countries like India. Here the only serious rival of India is Russia or USA. But India has a competitive edge over them. India was exporting 1.2 maunds of wheat before; it has now increased to 12.8 maunds. Because of lower currency India can offer the cheapest price. According to British expert England has more aridity than India due to primary condition and unhygienic soil chemistry. North Indian areas like UP and Punjab can give a bumper wheat crop if proper care is taken. Its processing is also to be mechanized for shifting and cleaning of wheat's from the soil. Finest quality must be maintained at all cost. Of course steam machines are to be imported for this purpose. Packaging is very important. The expenses borne will be offset by future profit from export.

From the above it is cleared that Bose was pleading for large scale commercial agriculture and production of surplus serials to capture world market. It is notorious that India remains a producer of subsistent crop like rice and such monocrop food habits frequently lead to famines. Diversification of food crop production would not only boost export but also provide an alternative of wheat for rice. Bose's paper wanted to shake

both food production and food habits of India by emphasis on diversification and commercialization of agriculture.

Bose writes a perceptive editorial on famines in India. He observes that not a single year passes when there is no famine in India. One or the other region catches contagion. But the ruling authority does not care to contain the famine in India. As long as India depends on nature alone famine cannot be eradicated. It is a happy augury that the government had at last appointed a famine commission to enquire in to the causes of the famine. But it is not only for the government to carry out the enquiry. The public must be alert and find out the ways and means to contain famine. I would like to advise our ploughmen on its prevention. To increase the fertility of land they can consider using the dust of animal horns and bones and find out if the land has improved and yielded a rich harvest. We often observe that an old tree withers away leaving its dead leaves and trunks which rot for some time and produce excellent natural manure. This can be recycled for soil fertility. But for this the ploughman has to be agile and alert. Agriculture is basically self tort. The so called barren land can be refertilised by sprinkling one to two sears of salt. This should be done specially when there is a sunny day. One may argue that the family of a farmer does not even afford salt for his meal. This is because they suffer from abject poverty. But early suffering may lead to a bumper crop which in turn can leave them some surplus to tackle temporary infertility of the soil. What they lack is agricultural knowhow. It is the mission of our paper to spread it.

In a fascinating editorial on agricultural equipment, the editor laments that most of our landholders and cultivators have stuck to their old implements and hence production as remained static since then. Mean while cost of production has increased but agricultural income has not increased accordingly. If new and more quantity of crops could be grown the gap between cost of

production and agricultural income could be more than made up. But this problem can be intelligently tackled. Despite easy availability of all possible inputs or agriculture this could not be optimized because of the chronic poverty, ignorance and lack of initiative. If modern agricultural knowhow can be disseminated and demonstrated through agricultural farms the stalemate of production can be alleviated. The cultivator must be made aware of all factors of production like condition of the soil, air circulation and water supply and other manures for preparing soil for agriculture. Furrowing and sifting of top soil by plowing and harnessing draught animals are essential. To date optimum result modern or more effective agricultural tool have to be use. Here knowledge is the capital not money. This agricultural intelligence matched with market information can alter the stagnant situation. Bose illustrates the article by drawing pictures of bad furrowing and plowing which leaves lot of valuable tracts untouched. The western swing plough can be employed here for more penetrating land use. The top soil must cleansed all pebbles and particles by careful sifting. This would help more scientific use of cattle for farming. Efforts must be made to optimize more work, less expenditure and less time, so that improvement can be made with minimum cost.

The above information was obtain from a Zamindar of Ranaghat, Bipradas Pal Chowdhury.

Our rural society is not aware that pisciculture is an integral part of agriculture. They complement each other to produce edible. Fish can be bred even in tanks, canals and even water ways in paddy fields not to speak of rivers nearby. Pisciculture provides wholesome food as also good income. But this has not been realized by our cultivators, they are of one track mind. They continue to produce only paddy and seldom diversify it by rotational vegetables and never spare a thought that fish could also be cultivated with profit.

In a series of editorials Bose describes the technique of agriculture. He classifies furrowing into two types, deep furrowing goes deep into the wet soil and exposes it to the heat and wind above. It helps the plant to make its food easily. The water underneath mixes with manure and makes the land fertile for cultivation of potato, sugarcane etc. even the grass and fallen leaves can get into it. And the rotten leaves of trees make good manure. All refuses of trees would be utilized this way. Natural manures are much better than chemical fertilizers for assimilation by the plants. The bagasse of the oil presses makes top manure. This can induce production of onion, garlic, spinach, radish, cauliflower, etc. This editorial was actually based on a letter from the agricultural adviser of the Maharaja of Kashmir.

For summer Bose summaries weather forecasts and health bulletins for rotation of crops.

Bose repeats the famine theme in this number of the gazette. He gives a chronology of Bengal famines and blames the Bengal peasants for not taking lessons from them. He laments the fact that they are totally dependent on rain fall and fatalist. Rain can be harvested by digging tanks and wells which can supply water during dry seasons and droughts. He gives some causes for recurrence of famine and drought in Burdwan. First and for most is the utter dependence of the peasants on seasonal rent. Second, the ignorance of the strategy of rain harvesting, third, the choking of Damodar River and its tributaries due to natural and human silting and dumping of garbage. And finally, the backward habit of monocropping of rice. The charitable dispositions of the well to do people for digging tanks or canals and their cleaning have disappeared off late. Interstate trade has not developed despite construction of railways. Even foreign market of our food grains has not been properly tapped. This could have given incentive to produce more and to do that in to improve agriculture. Bose then draws attention to commercial agriculture and rotation of crops. The

Deccan produces cotton and silk, Bihar produces indigo and molasses, sugarcane, peas, wheat, corn and pulses could be more easily grown throughout the year and both locally consumed and exported profitably. He even suggests that viscose fiber could be produce for jacket and rope from various creepers and weeds. Though in the agriculture fair in 1884 all these ideas were discussed and floated the Indian peasant did not take heed of these possibilities. Assam has a whole range of agriculture and botanical products but they are seldom cultivated widely and exported for profit.

Bose goes far enough to even advise production of agro-industrial articles such as glass from sand iron from iron ore, coal, adhesives, fruits, honey and wax from bee cultivation and pisciculture along with subsistence agriculture.

The abject dependence on subsistence crops and negligence of the immense possibility of cash crops and Pisciculture as complementary to agriculture has been made onto a campaign by G. C. Bose.

In a significant article on mechanization of agriculture, Bose draws example from the west of use of mechanical plough harvester, thresher and binder for efficient agriculture which improves both quality and quantity. If these machines appear to be costly simpler and cheaper methods of cultivation of pulleys fitted with rope could also be used for sifting of soil and its cleansing. Both these equipments are illustrated with the article to show that both save manual labour and use of draught animals. By drawing budgets Bose shows that these systems are not very expensive and generate extra crop for profit. It is a case of more production with less labour. But the area has to be preplanned to avoid angles and create a rectangular surface so that the equipments can be fully utilized. Traditional subsistence cultivators must be motivated with this innovative measure. In subsequent articles Bose and his columnists highlight sugar cultivation, direct farming without

too much manual labour and harnessing of cattle. Bose's main thrust is to convert a primarily subsistence agriculture into a diversified commercial agriculture generating additional income and better standard of living. His drawing example from the states like Maharashtra and Andhrapradesh where such innovations are taken place. Bose shows from indigenous sources like *Shubhankar* and *Khana* to recycle old wisdom in the new situation. One gets a beautiful illustration of sugarcane cultivation in Pune which reveals the modern technique. He also emphasizes the need for technical training of cultivators. Anticipating the later idea of agricultural farms. Apart from agricultural knowhow Bose compiles information about good and bad fertilizers, cattle diseases and their cure. This section becomes a veritable manual of veterinary sciences. The last but not the least, there is a brief history of Shibpur Botanical garden in this anthology of *Krishi Gazette* long before a formal history was published by any western superintendent of the garden. In this connection even opium and tobacco are also highlighted for profitable use.

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