

FUTURE OF THE INDIAN MANGO INDUSTRY

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[This is the first of a series of articles attempting a critical review of the present status of the fruit industry in India and its future possibilities. In this series an attempt is made to deal with each of the major fruits under cultivation and to discuss the peculiar problems with particular reference to the economic interests of the grower and consumer alike. Fruit industry is a national asset and a long range view is called for in any scheme for its development, and this again must be based on a correct evaluation of its present condition. The articles are primarily intended to focus the attention of those interested in the resuscitation of the rural side and at the same time in the betterment of the national health that is bound to follow an increased consumption of fruits by all classes of people. The interests of the prospective fruit growers and of those who intend extending their commercial orchards are kept in the fore-front in formulating the suggestions.]

It will be hard to think of a fruit which has appealed to the people of this country in a greater measure than the mango. From the point of view of acreage and production, mango is easily the most outstanding of all Indian fruits. The adaptability of this fruit to a very wide range of climatic and soil conditions, the relatively hardy nature of the tree, the low cost of its culture and maintenance, and above all, its healthful dietetic qualities and its universal popularity as one of the choicest of the table fruits have contributed to accord the premier place to the mango practically in every nook and corner of this country.

At present mangoes are cultivated in every Province of India, almost in every district excepting on higher elevations exceeding about 4,000 ft. above sea level. In tracts subject to severe winter conditions and to frequent frosts and hail storms or to extreme water scarcity, the mango is not of any great commercial importance. In other areas mango thrives provided the soil is not water-logged, saline, alkaline, rocky, extremely shallow or otherwise too poor for any cultivation.

A very large proportion of the mangoes produced in this country at present is from trees raised from seed. With the exception of a few stray trees and of a few varieties like *Olour* on the West Coast of South India, the fruits from such seedling trees are of no economic value, being of poor or indifferent quality. Among the grafted plantations, the usual practice is to stock the orchards with numerous varieties, in some cases numbering even over 100 in each garden. These veritable museums of variety collections detract the economic value of the mango industry, and must give place to a limited number of varieties in every commercial garden. Till this is achieved and the seedling orchards are made things of the past, the Indian mango industry cannot hope to rise to its full stature as a remunerative national industry. An immediate step in this direction is a practical

possibility, but a planned programme for the future is both necessary and feasible. Propaganda backed by suitable state measures such as imposition of a higher tax on the ill-planned new plantations appear to be called for. A new orientation is to be given to this industry, which forms admittedly a valuable monopoly of this country even in its present disorganised condition.

Partly because of the environmental variations and mainly because of the varietal differences, there is often considerable variation in the mango bearing season in the various tracts of the same Province. The season opens with Olour, Alfonso and Pairi fruits in the Malabar Coast towards the end of February and lasts up to the commencement of the South-west monsoon in about the month of June all along the Arabian Coast from Travancore to the Northern parts of the Bombay Presidency. April to June is the main bearing season in the Northern Circars, while in Ceded Districts of South India where the second cropping varieties like *Neelum*, *Rumani* and *Bangalora* predominate, the season extends up to September. The early varieties like Bombay Green and Yellow start the mango season in the Western United Provinces and parts of Behar, followed by *Tangra*, *Dasehri* and *Safeda* in the mid-season, while Fazli tapers off the mango season in the Indo-Gangetic Plains till about the beginning of August. The absence of any regular winter weather in the south of India renders it possible to produce a valuable regular off-season crop of mangoes from September to January in this part of the country. These various factors denote that if a systematic attempt is made in every Province to grow only a few choice commercial varieties, the bearing season of which will not overlap with that in other Provinces or tracts, it will result in stabilising the prices of mangoes and prevent the gluts and consequent low returns to growers that unfortunately form an unpleasant feature of our present-day culture and marketing of the Indian mangoes.

Regulated orcharding, however, is a work that must be preceded by collection of accurate data on a variety of subjects, such as the acreage under each variety of fruits in every tract, the extent and cost of production, cost of transport and distribution and the quantity that is and can be absorbed in local, extra-Provincial and foreign markets. Thanks to the efforts of the Imperial Council of Agricultural Research, we are well on the way of obtaining up-to-date information on most of these items in a short period of time. The question of zoning of varieties with due difference to the suitability of the tract, and the existing or potential demand, the extension or restriction of the acreage in a given tract with special reference to the regulation of the quantity produced, to the season of bearing, cost of production transport and distribution facilities, etc.—need to be tackled as the next important item in the programme of development. At present, there are several areas which produce crops in abundance in certain seasons, while there is scarcity in the greater part of the year. In a number of places like the Punjab, the cost of production is considerably higher and the risks are greater than in the Southern parts of the country. There is clearly a great deal of

scope for extension of the acreage under early, late, and off-season bearing varieties of Indian mangoes. Even among the varieties that bear in a particular season, there is vast scope for elimination of poor crossers and selection of a few remunerative types for extensive plantings.

Systemic planning will neither be complete in itself nor comprehensive in its scope if it does not take into account the improvement of the varieties in respect to fruit quality, productivity and tree-hardiness. A number of Indian varieties, like *Jehangir* and *Himayuddin*, though bearing fruits of outstanding quality are now discountenanced in commercial orchards, either because of their shy-bearing tendencies or lack of adaptability under adverse conditions. Even so, numerous high-producing varieties exist, which would have become valuable economic assets if only fruit quality in their case had been slightly better than what it is. Breeding of mangoes in order to combine quality, productivity, hardiness, regularity of bearing, optimum and prolonged bearing season etc. is a most fruitful field that has not been attempted so far and deserves the special attention of the research workers. Such lines of work are bound to be laborious and very prolonged, but it will be a pity if they are to be shelved merely on these grounds.

A line easier to follow and capable of producing earlier benefit to the industry is the selection of individual trees of outstanding merit and popularising the progenies of the same after subjecting them to adequate tests. Selection of rootstocks of merit suited to diverse conditions of soil and climate, ascertaining the most economic methods of orchard maintenance as well as the standardisation of rootstocks, scion varieties, and methods of propagation are also a few other major problems that require to be undertaken contemporaneously with the other measures for the amelioration of the mango industry.

It is sufficiently realised that the haphazard extension of fruit-growing industry makes the marketing problem not only very acute and difficult, but also fails to provide sufficient room for effecting any material and lasting benefit to all the interests concerned. It is obvious that the best of efforts to improve the market and marketing conditions will be of no avail, if the cost of production remains high and the quality of the fruit so low as not to meet the fancy of the consumers. There are a number of consuming centres where certain fruits can be imported at cheaper rates from other provinces than those produced in the vicinity. Again, there are places where the production of low-grade fruits are so abundant that the local markets cannot absorb them and the outside markets will not have them. Similarly, the enormous production of certain varieties at one place may synchronize with the season of similar fruits in the adjacent provinces, so that extension of markets is rendered difficult, if not impossible. These show that a planned development of the industry is the *sinequanon* for its success, and must be undertaken along with, or preferably prior to, the improvements in the marketing of the produce.

mainly owing to the unsystematic development of the mango industry up to this stage, the utilisation of surplus fruits that do not find a ready sale in certain seasons is assuming a growing importance. In the case of a fruit like mango, in the production of which India is in an unique position, there is abundant scope for the exploration of outside markets for the by-products like pickles, chutney, jam, jelly, marmalade, dehydrated and crystallized fruits and beverages. These are all fruitful fields open to the Indian businessmen who have the necessary enterprise and capital.

The Indian mango industry is now reaching a turning point in the course of its development. Periodic crop failures on the one hand and localised over productions on the other have been responsible for the general instability of the industry. During the last few years the prices have sometimes reached such a low level that it was impossible for the growers even to realise the transport charges in respect of a few consignments. With an unorganised production, it is also not possible to secure favourable transport facilities, and this precludes the possibility of any large extension of market facilities. In its present condition, holding out the supplies under refrigeration do not offer much promise. Large scale development of canaries has to wait for results of applied research in this field. Despite all these factors, there is a manifest trend to increase the plantings under all sorts of varieties, even though reliable plants are not always possible to obtain. A planned programme of development is therefore urgently called for, if the industry is to effect any material progress.

It will be idle to attempt a discussion of the details of such a programme at this stage. To a certain extent, some of the persons engaged in trade have realised the complexities of the existing problem of unorganised production and have actually made attempts to make the best use of their dearly bought experience. It is not uncommon to come across some mango dealers who shift their operation centres from place to place adjusting themselves to the season of bearing. It has been stated that some of the well-informed agents carefully keep themselves out of the more important producing centres and confine their activities to those tracts where the produce though of smaller proportions and of relatively inferior quality are of greater value because of their different bearing season or the nearness of such tracts to more important consuming centres. The marketing staff of the Imperial Council of Agricultural Research are expected to release shortly more accurate information on these aspects and when these are compiled for the whole of India, they will serve a valuable basis for the horticulturists for their formulation of a rational programme of development of the mango industry in India.