

PROSPECTS OF PAPRIKA TYPES IN KARNATAKA

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Paprika (*Capsicum annum* L.) a form of chilli grown mainly for marketing as value added powder for colour and oleoresins. Paprika is the form used by International spice traders for non pungent red capsicum powder. In the recent days paprika is acclaimed as one of the most sought after spices all over the world. Paprika is mainly valued for its flavouring and colouring attributes. Apart from Spain, paprika is produced in Morocco, Southern states of USA, Mexico, Chile, India, Israel, Hungary, China and South Africa.

Paprika are known for less/low pungency and bright red colour. Spice paprika, a mild variety of long fruited chilli is a basic raw material for paprika oleoresin and ground powder.

The "Byadagi" chilli dabbi (bulbous elongated) grown around Dharwad in Karnataka is one of the most important trade variety of paprika in India.

In the recent years Indian Institute of Spices Research, Calicut has taken up paprika improvement programme. Concerted efforts have been made to survey the Byadagi dabbi growing areas of Dharwad district of Karnataka, from 1996 onwards. During 1996-97, 12 accessions were collected from Yeliwal and 24 accessions from Kubihal villages in Kundgol taluk of Dharwad district. During 1998-99, collections were also made from Yeliwal and other Byadagi dabbi growing areas both in the Kundgol taluk of Dharwad district and Anthur-Benthur areas of newly formed Gadag district of Karnataka. Totally 180 collections of Byadagi dabbi types were made during 1998-99. A detailed survey was also undertaken in Dharwad, Haveri and Gadag districts of Karnataka, during November-December, 1999 to collect variants in Byadagi dabbi types covering Noolvi, Kundgol, Babihal, Hanchinal, Dyavanur, Kubihal, Bhandiwadi, Mantur, Kasugal, Shiraguppi, Yaraguppi, Nalwadi, Annigeri, Anthur, Benthur, Kurtkoti and Hulkoti areas. During 1990 more than 35 Byadagi dabbi types were collected.

The scope and prospects for cultivation of Byadagi paprika types (Dabbi) are as follows :

1. Varietal improvement of Byadagi paprika types (Dabbi)

The Byadagi dabbi grows to a height of 1 m with a spread of 90 - 100 cm. Leaves are thin lancilate and light green in colour. It is a high branching type. The

number of fruits range from 30 - 85 per plant. Length of the fruit ranges from 10 cm to 16 cm and girth 5 - 6.5 cm. The fruits are normally allowed to ripe and dry on the plant itself. Normally 2 - 3 rounds of picking are done.

Besides the Indian Institute of Spices Research, University of Agricultural Sciences, Dharwad has taken up the improvement of Byadagi paprika types in the Regional Station, Dharwad as well as the Agricultural Research Station, Ranibennur in Haveri district of Karnataka, mainly to evolve and identify less pungent types with better bright red colour and high yielding types resistant to pest and diseases.

In the course of evolution of few progressive farmers have been engaged in making their own selections and improvement on Byadagi dabbi types. Two types of intermitant ones viz, Noolvi deluxe and Annigeri deluxe may be crosses between Byadagi dabbi (Paprika bulbous type) and Kaddi (slender elongated pungent types). Both these two types have wider acceptability by large number of farmers taking into consideration the high yield and better price compared to Byadagi kaddi (slender type with more pungency).

The Byadagi types were tolerant to heavy down pours, while exotic types exhibited severe leaf shedding at Calicut, in Kerala. A few accessions had very high colour values viz, ICDB - Y - 6 (400 units), ICDB - K - 11 (400 units), ICDB - K - 17 (450 units) and ICDB - K - 24 (500 units).

There is a vast scope for further improvement in Byadagi paprika type (dabbi) with better quality, colour and yield attributes.

2. Performance of paprika Kt-PI-19 in Dharwad chilli growing areas.

Kt-PI-19 is found to perform better both at the Regional Research Station (UAS), Dharwad and in some of the farmers fields in the main Byadagi chilli growing areas like Samshi and in and around Kundgol where the Spices Board, tried to evaluate its performance in the farmers field.

Though the yield levels of Kt-PI(Katrain) is quite encouraging the farmers who took up its cultivation on a pilot demonstration basis expressed that the Kt-PI dried produce did not find preference in the local markets. In

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fact they were forced to sell the Kt-PI dried produce by mixing with the Byadagi dabbi types.

As the marketing of the dried Kt-PI (Katrain) is the major constraint in paprika, an all out effort needs to be made in creating market demands locally as well as an assured buy back system by the industries dealing with processing of paprika (Katrain) types so that farmers can come forward to cultivate Katrain (KtPI) lines even in the traditional chilli growing areas of Karnataka.

3. Need for encouraging the Byadagi paprika (Dabbi) types in Karnataka.

As marketing of the Katrain paprika types is a main constraint, cultivation of the Byadagi paprika types (Dabbi) may be encouraged, as the latter is most ideally suited to agro climatic conditions of Karnataka particularly in Dharwad, Haveri and Gadag districts. The advantages of cultivation of Byadagi paprika types is as follows.

i) Byadagi dabbi types can be and are being grown exclusively under rainfed condition in the traditional tract of Dharwad, Haveri as transplanted chilli and drill sown in Gadag district (Anthur-Benthur, Annigere areas).

ii) The Byadagi dabbi types are grown by and large by resorting to organic cultivation. It may be of interest to note that no farmer under takes any plant protection measure. Hence, Byadagi paprika types may find better market in the foreign countries as there has been a growing awareness among the importing countries for the natural (organically cultivated) food products.

iii) Byadagi Dabbi types are invariably grown as a mix crop with other compatible annual/seasonal crops like cotton, garlic, onion, coriander, hence, besides increasing the total productivity per unit area, market price fluctuations can very well be taken care. Mixed cropping of Byadagi (dabbi) chilli and cotton is very popular among the farming community in Dharwad traditional chilli growing belt of Karnataka which occupies an area of 60,000 ha.

It is also observed that the yield of chilli as a mixed crop is not going to be substantially reduced as compared to entire crop chilli so also the yield of companion crop. As a result, the mixed crops are very popular under rainfed condition. Byadagi (dabbi) chilli crop is shallow rooted compared to cotton. Moreover the peak period of growth of intercrops grown are different. As a result, there is not much competition for soil moisture as root romification of mixed crops are different or for sunlight and space as peak periods of growth of crops are also different.

In light of the wide acceptability of the Byadagi paprika (Dabbi) types by the farmers as well as processing industries, there is an urgent need to further strengthen the research, development and marketing programmes on sound systematic footing.

4. Suggestions for Byadagi paprika (Dabbi) improvement.

i) Purification of Byadagi paprika (dabbi) may be taken up in the traditional areas of dharwad, Haveri and Gadag districts to get types with better yield and quality traits.

Seed multiplication may be taken up by the Spices Board and the University of Agricultural Sciences, Dharwad.

Introducing other chilli varieties in traditional Byadagi chilli growing areas should be totally discouraged to maintain the purity of Byadagi Dabbi (Paprika) type.

ii) An assured market has to be created exclusively for Byadagi dabbi types to meet the industrial needs for processing - extraction of colour pigments and oleoresins to cope up with international demands.

iii) Farmers may be encouraged to construct separate drying yards for drying chilli. The use of tarpaulin sheets has become popular among farmers. The conventional drying of chilli on the open (mud) ground should be discouraged.

iv) Organically cultivated Byadagi paprika dabbi may be explored for international market.
