

Success Story of Sweet Corn Production in the state under RKVY Madhya Pradesh

1. **Title:-** Sweet Corn Production- An Alternate for Income Generation.
2. **Category:-** Agriculture
3. **Back ground & Challenges:-** Madhya Pradesh is one of the biggest state as far as geographical area is concerned. The total geographical area is 308 thousand sq.km, out of which 152.23 lakh ha. is cultivable area. Maize is one of the major crop in the state covers approximately 9.02 lakh ha. area. Sweet corn is a variety of maize predominantly grown in Neemuch, Mandla, Ratlam, Indore, Ujjain, Khandwa, Chhindwara, Jabalpur and Katni districts.

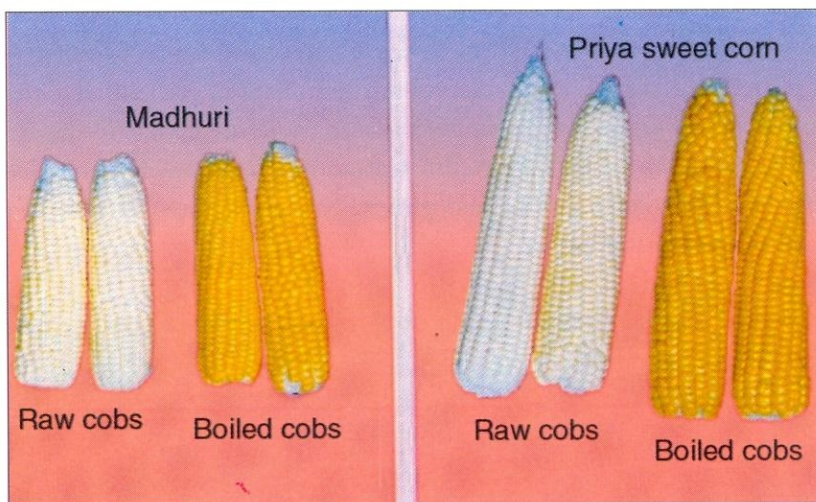
Sweet corn has highly nutritional value, according to a study per 100 gram of sweet corn contains 19.02 gram carbohydrates, 2.70 gram Dietary fiber, 1.18 gram fat and 3.2 gram protein. The commercial value & its demand are increasing day by day in the states.

Exploitation of maize for particular purpose is rare. Main reasons behind this are unavailability of high yielding varieties, lesser attention to applicable production technologies and lack of awareness among the growers, traders and consumers. Among the various specialty corns, sweet corn has a very huge market potential especially if the processing and packing needs from large scale production are taken care of. This has potentiality not only in national market but in global market as well. Sweet corn is the type of corn with a thin pericarp layer, translucent, horny appearance of kernels when matured and wrinkled when it dries, and consumed at immature grain stages of endosperm at twenty days after fertilization. Total sugar content in sweet corn at milky stage ranges 25 to 30% as compared to 2 to 5% of normal corn. Fresh and new sweet corn ears are consumed after cooking as well as in roasted form. Fresh sweet corn is increasingly in high demand in the hotels for the preparations of delicious sweet corn soup. Sweet corns are green as highly valued fresh products like baby corn; immature are parboiled and/or dried to produce candy. Mature kernels are crushed to produce the confection pinhole as a fermentable source for the production of an alcoholic beverage, chichi. It is also served as a raw material for deriving large number of industrial products such as starch syrup, dextrose and dextrin etc. Thus sweet corn with varied use has a great potential in export as well as domestic market. Sweet corn matures early and green ears can be harvested in 75-80 days after planting. The left over stalk can serve as useful fodder for the livestock. Thus it can fit easily in multiple or inter cropping systems.

There is an emphasis on the diversification of cultivated crops and finding of alternative crops as a suitable strategy for the problem faced by Indian farmers. In view of this, maize represents a good opportunity as well as unparalleled prospects, compared to other important cereals, considering its suitability for divers' uses, as elaborated earlier. As maize consumption at green ear stage is a prevalent and popular practice, immediate importance and prospects of sweet corn for this purpose is apparent. This can give much needed impetus and better option

for the maize growers in general and better option for the maize growers in general and for those in peri-urban regions in particular. With the progressive increase in the demand for the consequent cultivation of sweet corn, the necessary requirements for processing and packaging need to be addressed for transporting to distant markets as well as longer storage. Such scenario would be triggering a chain reaction of demand, investment and higher utility for the maize at green ear stage and maize products.

In sweet corn, there is a high incidence of disease and pest attack and with shrunken



endosperm field emergence is low. So the emphasis should also be given to ensure better field emergence, vigor, resistance to biotic stresses in addition to enhanced productivity and sugar content. Furthermore, as most of the sweet corns are of temperate origin, systematic efforts are needed to develop sweet corn cultivars better adapted to

tropical and sub-tropical conditions. Adaptability in terms of early vigor and field emergence was studied by Malvern et al. (1997) and importance of suitable field corn was emphasized to improve sweet corn. Normal maize is one of the major crop in the tribal areas of M.P. The area covered in normal Maize and its total production in the state is as given below:-

Area-000Ha, Production-000MT, Productivity- Kg / ha

Year	Area	Production	Productivity
2013-14	862.55	1493.93	1732
2014-15	1132.00	2531.00	2236
2015-16	1098.00	3140.00	2860
2016-17	1263.00	4301.00	3405
2017-18	1317.00(Approx)	4680.00(Approx.)	3553

Source- Financial Survey 2017-18 of MP

4. **Initiative:-** To popularize the cultivation of sweet corn in the state, department has taken the initiatives by sanctioning the project on sweet corn demonstration from RKVY. The first project was sanctioned in the SLSC dated 18.05.2015 and than onwards this project has continuously sanctioned up to the year 2017-18. The total cost of the



projects was RS 3900.00 lakhs out of which Rs 224.90 Lakhs could only be spent, because of unavailability of seed and unawareness of the farmers for sweet corn cultivation process. Total 5459 demonstrations were laid in 7 to 8 districts in the state . The programme was initiated Ujjain, Neemuch, Mandsaur, Ratlam, Indore, Khandwa, Jhabua, Chhindwara, and Katni districts, as the reconnaissance survey shows that the sweet corn is being produced by the farmers of these districts in patches Sweet corn variety Madhuri

5. **Key Result/ Insight /Interesting Facts :-** Though Madhya Pradesh is not the Major Maize producing state in the country. It has maximum area covered in the state in the year 2013-14 was 11.32 lakh Ha, whereas Andhra Pradesh with 20.41% share, Karnataka with 16.34% share and Maharashtra with 12.65% share occupies 1st, 2nd and 3rd position in the country as far as production is concerned. Madhya Pradesh with average share of 6 to 7% is much below than all three states. Every attempt has been made to increase the area in Maize in the state with special emphasis to production of Sweet Corn. After the three years implementation of this project it has been observed that following are few apparent reasons which has influenced the progress of projects adversely:-
- I. Non Availability of seeds of the varieties which farmers liked most. Farmers were not ready to practice the recommended varieties for the state , as they do not have the experience of that varieties.
 - II. Secondly the adequate quantity seeds of even recommended varieties were not available in any of the government agency.
 - III. As the seed of sweet corn is very costly, and 67% farming population in the state comes under Small and Marginal category having low income level, therefore even it was demonstrated on government cost farmers does not found it economically viable looking to their paying capacity as replication.
 - IV. The last but not the least , unavailability of recognized market for the sale of sweet corn cobs.
6. **Impact:-** The sweet corn production has a great economy as its cost benefit ratio comes to 2.06 to 2.09 as per the study conducted by Adake Amol Kumar in his thesis submitted for the M.Sc. degree to MPKV, Rahuri in the year 2014. In normal case the average productivity of Maize have increased by 105% from 2013-14 to 2017-18 as shown above. Normally the average productivity of sweet corn is 66000 cobs per Ha or 3550Kgper Ha . Other than the main produce the green fodder can also be harvested by the farmers. On an average about 300 to 350Qtls green fodder can also be harvested which gives additional income to the farmers.
7. **Lesson Learnt:-** As this project was demanded in the SAP of the state for the 12th five year plan period under RKVY. Therefore initially the first project was sanctioned in the year 2015-16. Though every attempt has been made to gather all relevant information regarding

production of Sweet Corn in the state such as seed availability, districts where it is being cultivated by the farmers by their own interest, cost of cultivation etc, but when project was discussed in the SLSC the condition of purchasing seed from government agency and only for those varieties which are scientifically recommended for the state. As physical and financial targets were initially given to those districts where it has already been grown in small scale. When this project was started in the field, farmers have raised the objection for recommended varieties because it was not available in any of the government agency in required quantity. Therefore it has been learnt that before starting the project first of all seed availability has to be ensured. secondly before projectization, the actually interested farmers and varieties are to be known and project should be based on the realistic data.

8. Supporting Quotes and Images:-

9. Additional Information:- The contact address of the person concerned is as given below:-

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