



## Scientific Talk

### Raising cotton seedlings in the nursery for transplantation in the field - an innovative technique

Dr. Sunil S. Mahajan, Senior Scientist, CICR, Nagpur delivered a scientific talk on 5th March 2016 through a documentary film on the technique of raising cotton seedlings in the nursery for transplantation in the field - an innovative technique developed by Dr. Shankara Narayanan, Principal Scientist, ICAR- Central Institute for Cotton Research, Regional Station, Coimbatore. He practically demonstrated advantages of transplanting over direct seeding as sowing can be conducted at the precise time in the nursery by adjusting soil temperature and humidity; can be used for gap filling of same age seedling as direct sown plant; seedlings raised in paper tubes can also reduce the quantity of planting seeds consumed, as well as the incidence of diseases and/or insect pests on cotton seedlings; the seedlings in paper tube can easily be transported manually to the field; improvement of water and nutrient uptake as a result of promoted lateral root growth; improvement of stand establishment by seedling transplantation when non-saline media used as nursery substrate to mitigate field affected with salinity stress; seed cotton yield and quality parameters improved as a result of the increased number of bolls per square meter and earlier blooming. Traditional cultivation of seedling nurseries for later transplanting is labour intensive, however, simplified transplantation of seedlings would decrease labour costs and increase efficiency. He also briefed that the seedling transplanting process consists essentially of three steps: 1) Raising of seedlings in paper tubes in the nursery, 2) Transplanting seedlings to the fields and 3) Field management after transplantation



Cotton seedlings transplanted in the main field



Cotton seedlings raised in paper tube in the nursery.

He pointed out that the practice of transplanting cotton seedlings is not new as it was being practiced in China since the 1950s, but was not widely adopted until the 1980s, especially in the Yangtze River Valley and the Yellow River Valley regions. China has developed mold soil blocks of sizes 46 cm wide and 8-12 cm long filled with soil and organic fertilizers at a ratio of 9:1 (by weight). The soil blocks, together with the seedlings, is being transplanted to the fields manually. Contrarily, CICR, Nagpur has used paper tubes of size, 2 cm in diameter and 20 cm long (commercially available in the market), filled with media mixture (Soil, Sand, Vermicompost, Coco peat in 1:1:1:0.5 ratio). The seedlings can be raised in any plastic tub, in trays or thermocol tray of required sizes in the nursery which can easily be transported to the main field. The seedlings are allowed to grow in the nursery until they

are ready to be transplanted in the field. The seedlings thus emerged in paper tubes are being transplanted in the main field by making a 20 cm hole made by crowbar. Soon after transplanting, each transplanted plot/plant is been watered to enable the seedlings recover their normal growth quickly for better establishment. Inter-tillage and irrigation are conducted in a timely manner after transplanting as usual crop management.

In another scientific talk delivered by Dr. Anuradha on “Government Schemes for Farmers” on 5th March 2016 only, briefed about both Central and State government schemes of Maharashtra broadly categorised into Crop specific (agriculture and Horticulture,) Credit & Insurance, Integrated Nutrient Management & Sustainable agriculture, Cooperation, Agricultural Marketing, Extension, ICT, Bank specific schemes, Apps for farmers and also Special Provisions for Women under Different Schemes/Mission. She highlighted the new schemes and discussed in detail the new schemes such as *Pradhan Mantri Fasal Bima Yojana* (PMFBY) which provides insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases and to stabilise the income of farmers to ensure their continuance in farming. Soil Health card scheme- under the scheme, the government plans to issue soil cards to farmers which will carry crop-wise recommendations of nutrients and fertilisers required for the individual farms to help farmers to improve productivity through judicious use of inputs. The government plans to issue the cards to 14 crore farmers in three years. National Agriculture Market (NAM) through Agri-Tech Infrastructure Fund (ATIF) scheme for setting up of National Agriculture Market (NAM) through Agri-Tech Infrastructure Fund (ATIF) was approved by Cabinet Committee on Economic Affairs (CCEA) on 01.07.2015 with a budget of Rs.200 crore and to be implemented during 2015-16 to 2017-18. She also outlined and envisages implementation of the National Agriculture Market (NAM) by setting up of an appropriate common e-market platform that would be deployable in selected 585 regulated wholesale markets in States/UTs desirous of joining the e-platform.

**NDA Govt launches a Pioneering Crop Insurance Scheme**  
 Minimum Premium, Maximum Insurance for Farmer Welfare  
**Pradhan Mantri Fasal Bima Yojana**

- Farmers' contribution to premium reduced significantly.
- Use of simple & smart technology through phones & remote sensing for quick estimation and early settlement of claims.
- Multiple Localized risks and post harvest losses taken into account to ensure that no farmer is alone in times of distress.
- New scheme removes the previous capping on premium so that farmers get full sum insured.



### Meetings Attended

Dr. Satish Kumar Sain, Senior Scientist (Plant Pathology) participated and presented the paper entitled Low Cost farmers friendly technology can make the difference: A case study. In 6th International Conference “Plant, Pathogens and People” February 23-27, 2016, at NASC New Delhi and discussed with the scientists working on pest management of cotton.

Dr.. Rishi Kumar, Principal Scientist, CICR, RS, Sirsa attended the Annual Review Meeting of Online Pest Monitoring and Advisory Services (NFSM-OPMAS) at NCIPM, New Delhi on 2nd March,2016 at 3.0 pm and presented the annual progress report of CICR ,Regional Station, Sirsa



