Rashtriya Krishi Vikas Yojna

Training Programme for Entrepreneurship and Skill development in Plant Tissue Culture

Project Tittle:

Entrepreneurship and Skill development through trainings for farmers, rural women and youth in plant tissue culture.

Training modules

- *Tissue Culture Seedling Production,*
- *Primary & secondary hardening,*
- *Technical aspects of post planting care of TC plantlets,*
- *Basics of business planning,*
- *Record keeping and marketing.*

Implementing Agency

Plant Tissue Culture Laboratory
Biotechnology Centre
Dr. Panjabrao Deshmukh Krishi Vidyapeeth , Krishinagar , Akola 444104 (M. S.)

Background and objectives:

Plant tissue culture technology has been globally accepted as one of the important tools for direct application in agriculture. It has a strong and positive influence on the agricultural sector worldwide. The technique of PTC is well translated from 'concept' to 'commercialization'. Micropropagation is one of the key tools of plant biotechnology that has been extensively exploited to meet the growing demands for elite planting material in the current century. The main advantage of tissue culture technology lies in the production of high quality and uniform planting material that can be multiplied on a

year-round basis under disease-free conditions, and supplied anywhere irrespective of the season and weather. However, the industry is technology driven. This technology is the amalgamation of triple alliance: capital, labor and energy. Although, labor is cheap in many developing countries, the resources of trained personnel and equipment are often not readily available. In addition, energy, particularly electricity, and clean water are expensive. Skilled persons handling and monitoring acclimatization of tissue culture grown plantlets is also another integral part of the industry wherein sophisticated greenhouses are essential to generate suitable end products. The most important aspect of plant tissue culture industry is to handle the technology very carefully. The technology in the wrong hands or the wrong use of the technology leads to unproductive results.

Objective:

1. Imparting training for capacity building and generating human resources for production, hardening and post care of plant tissue culture derived seedlings.

Intervention:

The Vidarbha region of Maharashtra is having great potential for Banana cultivation and establishment of training centre for production and hardening of plant tissue culture derived seedling will facilitate mass propagation of proven elite material for Vidharbha region which will lead to genetic up-gradation at population level resulting in increased productivity for poor and small scale farmers of Vidharbha.

The demand for micropropagated plants in agriculture, horticulture and in social forestry is growing by the day, since the traditional methods of propagation do not yield sufficient quantity and in some crops they are cumbersome. It can be noted that there is growing awareness of superiority of tissue cultured plants, and demand for crops like banana, grapes, papaya, ginger, turmeric, cardamom, vanilla, potato, Jatropha is increasing. When it comes to the international demand, the foliages and ornamentals have a great potential and the products have an unending elongated list. It may be pointed out that tissue culture laboratory can also be used to produce biofertilisers like rhizobium, azotobacter, azospirillum, phosphate solubilising bacteria culture as well as mushroom spawn culture that indirectly contribute to the agricultural sector.

There is a large gap between the demand and supply. This clearly indicates a need for boosting the youths in setting up additional units and training manpower and supply plants with more competitive prices for improving the agricultural productivity, and enhancing the social status of the farmers.

Representative Photographs of Entrepreneurship programme under implementation

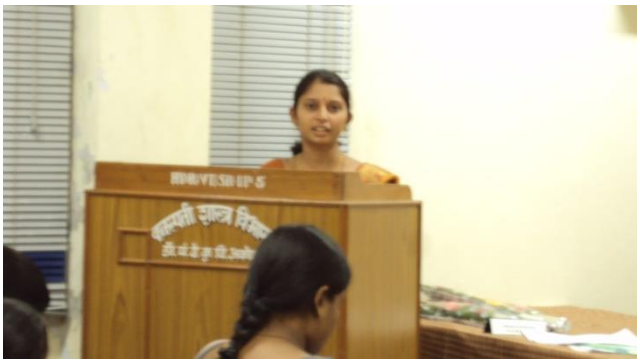
Registration and labrotory introduction to the participants




Hon'ble Vice Chancellor and Respected Director of Research and other degnitories interacting with the participants of Trainings.




Participants of Trainings expressing their views and expectatins from training.



Participants attending expert lectures during training

Participants and facilitators demonstrating and practicing various techniques during practical sessions.








Concluding of training and Certificate Disrtibution

Outcomes:

The Plant tissue culture technology has large potential to create several employment opportunities and opened up many entrepreneurial fields. **At present in all 91 trainees had successfully completed training under short term and long term modules of training which has resulted in 935 trainee days (No. of Trainees X Period of training in days). Considering the present registration, at the end of March 2015 it is expected to complete around 2000 trainee days which will be 125% against the mandate of 1620 trainee days for year 2014-15.**

To encourage the tissue culture industry, various central and state government departments had implemented several schemes. A concerted effort of training is encouraging the establishment of tissue culture industry by the public sectors, which in turn will improve the demand for tissue culture generated quality planting material and will focus on following future outcomes.

1) Training to Farmers groups, Women's organization, Potential rural youth, Diploma or Degree students, Banana Growers, Entrepreneurs, Extension workers interested in setting a small scale/ commercial Tissue Culture Units or Primary and Secondary Hardening Centers will going to reflect **to increase public investment in Agriculture through small scale industries.**
2) Training to Farmers/growers for record keeping, effective management of the tissue culture obtained seedling grown orchards will reflect **to achieve the goal of reducing the yield gap in important crops like banana, pomegranate, sugarcane, citrus etc.**

3) Training to Small / Marginal farmers, Women in Agriculture, Unemployed rural youth for developing specific skill needed by large private and public tissue culture industry to ensure higher return to their work will **encourage entrepreneurship development through group organization to alleviate the poverty.**
4) The capacity building in plant tissue culture and hardening of plant tissue culture derived seedlings will increase employment opportunity
5) As result of training setting up of small plant tissue culture unit, primary or secondary hardening centers at taluka places will facilitate the transportation. The ease of transportation from a commercial tissue culture unit in the potential growing area will make the planting material available to all the interested farmers including small scale farmers.

A successful economic development strategy must focus on improving the skills of the area's workforce, reducing the cost of doing business and making available the resources business needs to compete and thrive in today's global economy.

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