



MNS-University of Agriculture

Old Shujabad Road, Multan



Business Incubation and Agriculture Entrepreneurship Center

BIAEC No.: _____

Date: _____

Subject: Minutes of Meeting held on 15.11.2023 for identifying challenges and issues of Mango STS System installation and to find out the reasons

Participants:

1.	Prof. Dr. Asif Ali T.I	Chairperson
2.	Prof. Dr. Mubashir Mehdi	Co-chairperson
3.	Major Tariq Khan	Member
4.	Rana Asif Hayat Tipu	Member
5.	Haji Zahoor Malana	Member
6.	Syed Shabbar Bhukhari	Member
7.	Naseer Ahmad	Member
8.	Syed Hassan Raza Gardezi	Member
9.	Dr. Abid Hussain	Member
10.	Dr. Kashif Razzaq	Member
11.	Team MRI	Member
12.	Team BIAEC	Member

The subject meeting was held on 15-11-2023 and commenced at 11:00 am as the chair Prof. Dr. Asif Ali welcomed the participants. The purpose of the meeting was to identify the challenges and issues of the Mango STS System on the farms. There were the following growers who participated discussed and shared experiences of their farm issues.

- Prof. Dr. Asif Ali (T.I) initiated the meeting and talked about reviewing the Mango STS System. This system varies in different areas according to climate change and the most challenging issue is frost in this system. He defines the agenda of this meeting.
- Prof. Dr. Mubashir Mehdi requested all the participants to introduce your self one by one. He requested to play the documentary video of the different growers who adopted the Mango STS System in different areas.
- Rana Asif Hayat Tipu presented the ppt and explained the journey of different growers who adopted the Mango STS System on their farms. He mentioned, different growers are present physically and also online and want to share their experience with the Mango STS System.
- Major Tariq Khan shared that a total of three (03) acres has been initially established under the STS system. He mentioned that one acre was severely affected by last year's frost ("Sufaid Chaunsa" variety) while the rest of the two acres were found to be ok. This might be a varietal response as these two acreages were under "Azeem Chanusa" cultivation that showed

resistance against frost. He emphasized planning and executing the R&D activities related to frost management, keeping in view the varietal response as well as the successful cultivation of mango under STS in the climatic condition of South Punjab especially Multan.

- Syed Mehmood Nawaz Shah shared his experience on the Mango STS System as he planted two acres of Sindhri and Chaunsa each under this system in Sindh (Tando AllahYar). He briefed that the STS system is very expensive and difficult to manage with little success (only 5% fruiting plants). He pointed out that excessive pruning under this system results in an extensive root system that forces the plant to do more vegetative rather than reproductive (flowers and fruits) growth. He emphasized the demand to give certain solutions on time and extent of pruning based on variety and location for the effectiveness of this system which was fully endorsed by the other participants of the meeting.
- Haji Zahoor share their experience with the mango STS System, he also said it is very expensive and laborious. He identified that last year's growth was better, especially after the frost, and harvested 1-1.5 tonnes of mango without any intercropping except wheat. Similarly, frost has a positive effect on mango plants at charshadda having more vegetative growth with less fruit production. He further said the frost was controlled by proper covering of plants with date palm leaves and light irrigation during the frosty nights. He requested the chair to work on frost control techniques which is the major issue in southern Punjab mango STS farms.
- Malik Zafar Hussain Mahay from Muhammad Farms (Rahim Yar Khan) showed some satisfaction on the mango farm under STS which was four years old and some varieties especially the “Shan-e-Khuda” and Rattay wala (Azeem, Chaunsa)” performed very well. However, he also pointed out the frost occurrence and damaging effects on mango plants, especially the younger ones that were managed by proper covering of mango plants with polythene sheets. Moreover, he suggested working on the production of mango under high tunnels specifically for STS.
- Prof. Dr. Mubashir Mehdi requested all the participants for open discussion who were present physically and online. He further requested the MRI Member, how these growers control the frost-related issues they face in their farms. Mr. Abdul Ghaffar Grewal told the house that the Mango STS system is very complicated and laborious when plants reach their required height but non-cooperative due to not having enough production and it is a researchable concern for the institutions. He suggested following researchable issues need to be addressed by the researchers and academicians for the success of mango STS.
 - Screening of mango varieties for STS
 - Focus on fruit quality production with certain production improvement
 - Timely pruning of mango after harvest
 - Timely initiation/differentiation of buds
 - Plenty of pruning impacts
 - Address the behavior issues of plants
 - Use of mulch in summer and clean cultivation in winter
 - Introduction of Selected Inverted Sink (SIS) technology

- Prof. Dr. Mubashir Mehdi requested Dr. Sarfaraz to explain how they manage the Mango STS system in MNSUAM. Dr. Sarfaraz explained that the SIS system controls the MPA temperature if the temperature is not reached 6 C so frost does not affect the plants. We attached a solar night wall with this system and a floppy sprinkler. It is a portable system but this is initially in the trial stage. We have taken benefit from this system.
- Prof. Dr. Mubashir Mehdi requested Dr. Muhammad Amin to share their experience. He said that there is variation in this system. He suggested that we should train the plant accordingly with the Mango STS System. Amin Malik suggested that we control these issues area-wise. He recommends that different projects should be developed to solve these first issues.
- Mr. Abdul Ghaffar Grewal suggested that we identify those orchards that face severe pruning and frost-related issues and research institutes and universities should research and work on these issues. We should plan activities to control these issues.
- Prof. Dr. Mubashir Mehdi requested that Prof. Dr. Asif Ali (T.I) end the meeting with meaningful conversation and comments. He explained Mango STS System is a smart system and also our growers are very progressive in adopting this system. The Mango STS System is modern and requires modern training but this system is growers initiative. He further recommends that to make an online portable system that connects growers to experts. In this way, they solve their orchard's problems and communicate with different experts.

Prof. Dr. Mubashir Mehdi
Director BIAEC