

Medical and Aromatic Plants (MAPs) research through FRG approach

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Wondo Genet Agricultural Research Center (W/Genet ARC) has been undertaking wide range of research activities on aromatic and medicinal plants as a center responsible nationally for the research for aromatic, medicinal and bio fuel crops. FRG II has also given due attention to collaboratively carry out participatory research activities on high value medicinal and aromatic plants (MAPs) through Farmer Research Groups (FRGs) as a means to promote the ability to respond the changing environmental and client needs with greater speed.

A research project entitled "Participatory Development of Quality Seedlings for Stevia (*Stevia rebaudiana* Bertoni L.) and Lemon Verbena (*Alloysia triphylla* L.) at Sembero Rogicha and Dawile Kebele, South Eastern Ethiopia" has been undertaken by W/Genet ARC with the support of FRG II project. The overall objective of the project was to generate quality seedling production technologies for stevia and lemon verbena, as lack of such technologies appears to have been a vivid gap in utilization and extended popularization of the aforementioned herbs.



FRG members at seedling nursery

Those natural sweetening (stevia) and flavouring (lemon verbena) plants don't produce seeds, it perpetuate asexually via stem cutting. Therefore, propagation studies aimed at identifying economical size of cutting and cutting positions required for best establishment were conducted in 2011. The activities were conducted with two FRGs at Sembero Rogicha and Dawile Kebele on farmer's nursery sites. The result of stevia studies revealed that, top cuttings with three nodes demonstrated significantly higher values of survival rate (82.5 %), number of branches/seedling (7), number of leaves/ branch (15) and number of leaves/ seedlings (56) and lowest values of those parameters were recorded for bottom cuttings for stevia. The FRG member farmers have also found consistent result that stevia cutting taken from top position containing three nodes could be recommended for the development of quality stevia seedlings under good nursery management. Similarly, the study of lemon verbena has also concluded that cutting taken from bottom position of lemon verbena having three and five nodes demonstrated significantly

higher respective values of survival rate (81.67 and 78.33%), number of branches/ seedling (6), number of leaves/ branch (25) and number of leaves/ seedling (104 and 137) and lowest values of these parameters were recorded for top cuttings and those cutting positions with the specified node numbers could be recommended for the development of quality seedlings using stem cutting under good nursery management, which was also consistent to the findings of the FRG member farmers as per their evaluation criterion.

In general, it was observed that nursery management, cutting position and number of nodes had an effect on propagation ability of stevia and lemon verbena in producing quality seedling materials of the plants. The findings obtained from the experiments as well as conclusion drawn from the two FRG members have provided best experience of vegetative propagation of the herbs and gave an empowering techniques for large scale production of quality seedlings should there exist need in any time to come. Experience sharing activity was also conducted concerning FRG research experiences to the trainees coming from Areka Agricultural Research Center, Hawassa University, Wondo Genet College of Forestry and Natural Resources, Wolayta Sodo University, Dilla University, Mizan Tepi University, Achamo University and Arbaminch University.

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Seed seminar: Seed Demand Assessment

The third seminar on seed entitled "Experiment and challenges in seed demand assessment; from the view of farmers perspective" was held on 24 February, 2012 at EIAR, jointly organized by EIAR/JICA FRG II and MoA/JICA QSPP Projects. Following the last two seminars, which have discussed the access and quality of seed (refer the back issues: 2010-09-01 and 2011-03-18), the seminar provided a forum to discuss the demand assessment of seed and tried to bring about consensus among stakeholders on what were the issues, what needed to be focused at, and what improvement are required for better assessment seed demands.

The seminar was kicked off with the presentation on the experience in Japan and other countries in seed demand assessments by Professor Yoshiaki Nishikawa of Nagoya University of Japan. Several Ethiopian officials from Agricultural Input and Marketing Directorate, Animal & Plant Health Regulatory Directorate and Regional Bureau of Agriculture reported the present situations of seed demand assessment in public sector and overview of the draft seed proclamation. Then, the experience in local seed market system was presented by Ethiopian Organic Seed Action and Local Seed Business Project. Participants shared the information and exchanged their ideas/opinion about what were the practical ways to build in farmer's seed demand in the seed system.

OTHER INFORMATION RELATED TO THE PROJECT

- Proceedings of the following seminars are available at www.eiar.gov.et/
 - "Challenges and opportunities of rice in Ethiopian Agricultural Development" held in March 2011