

## Farmers' Participatory Evaluation of lower seeding rates on teff in Wolaita Zone, South Ethiopia

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Farmers' participatory evaluation of teff productivity under farmers' condition with lower seeding rates using seed spreaders in Wolaita Zone, South Ethiopia was conducted during the main cropping season of 2010. The experiment had the following specific objectives:

- To evaluate productivity of teff (var. DZ-Cr-37) in response to lower seed rates mixed with seed spreader.
- To identify the most suitable seed rate for the study area.
- To promote participatory technology generation together with farmers and to enhance their skills.

Six treatments, 5, 10, 15 and 20 kg/ha mixed with dry sand at seed:sand ratio of 1:4, respectively; recommended seed rate (30kg/ha) and average farmers practice (35kg/ha) were used. The experiment was laid out in Randomized Complete Block Design with four replications. Treatments in the 1st replication were arranged in an easy to grasp way for the farmers, i.e. according to the increasing order of the seeding rates. The remaining replications were assigned using randomization technique. For the experiment, established Farmers Research Group (FRG) members were used. Before commencing the investigation, an in-depth awareness creation and on-the-job trainings were given to ensure their full participation. Evaluation was performed based on agronomic data, economic analysis and farmers' preferences.



FRG members with researchers, 2010

Significant influence of seeding rate on plant height, panicle length, total and fertile number of tillers per plant, days to maturity and lodging % were noticed. On contrary, it had no significant influence on biomass, straw and grain yield of teff, and harvest indices. The economic analysis, however, depicted positive marginal rate of return (added benefit) only for (10 and 15 kg/ha with sand) and 30 kg/ha rates; with superior return at 10kg/ha with sand. Furthermore, with the expectation of better grain and straw yield with lower lodging intensity, FRG member farmers during field evaluation preferred 5, 10 and 15 kg/ha, rates as 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>, respectively.

Generally, the finding suggested the importance of

lower seeding rates mixed with sand than higher seeding rates. This is evidenced by the fact that raising the seed rate did not bring corresponding significant increment in grain yield of teff. In addition, the economic analysis and farmers preference justified that the lower seeding rates (10 and 15 kg/ha mixed with sand) could be economically and technically feasible since it save seeds, adequate area coverage through uniform distribution, efficient utilization of improved seed; and addresses seed demand of resource poor farmers. Moreover, weed, which is a common problem in other teff growing areas from lower seeding rates, is not a concern for the participating farmers in the study area. The practice of multiple and continuous cropping due to small land holding size in the study area might have resulted in less weed problem. While this seeding rate study only represents a single site in 2010, the researchers' warrant further investigation before drawing sound seeding rate recommendations. Nevertheless, lower seed rates (10 and 15 kg/ha mixed with sand) are technically and economically feasible for the study area.

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## Joint Coordination Committee

Representatives of agricultural research and extension from all the regions of the countries together with representatives of the FRG participating farmers gathered at EIAR on the December 25<sup>th</sup>, 2010 to discuss how participatory technology generation to be scale up to all the research institutions. It was the farmer representative from East Shewa who made the meeting participants impressed by confidently presenting how they took part of technology improvement in vegetable and dairy farming.

The meeting was a launching workshop and the first Joint Coordination Committee (JCC) meeting for the FRG II project. After the project's activities since April 2010 was presented, JCC and Executive Committees were formally established and their members were approved. The participants acknowledged that Participatory Research had been delivering desirable impacts at many parts of the country through the FRG Project (previous phase) and RCBP, and confirmed that further effort to scale it up to cover wider subjects under different agro-ecologies. Next JCC meeting will be in April to discuss annual action plan for 2011/12.

### OTHER INFORMATION RELATED TO THE PROJECT

- FRG approach TOT training will be organised for participants from 16 research institutions at Melkassa Agricultural Research Centre at the beginning of February 2011.
- The forth Rice Research Seminar will be held in February 21-23, 2011.
- The second Seed for Farmers Seminar will be held in March 21, 2011.
- If you have been forwarded this newsletter and would like to receive it in future, please send e-mail to <research4farmers@gmail.com>
- Your comments and suggestions are very important to us.
- We are waiting for information from other institutions and individuals who work on the similar fields.