



## Yield can double!

The Sesame Business Network (SBN) Support Programme, in collaboration with partners, is scaling out locally adapted and improved sesame production technologies across eight *woredas* and 92 *kebeles* in North-West Ethiopia. More than 20 partners, over 1000 development agents (DAs) and model farmers are working together in creating awareness of and access to sesame production technologies that are proven to double yields. More than 75,000 farmers across 500,000 hectares in the North Gondar and West Tigray zones are within reach of obtaining these improvements. Field days at farmer training centres (FTCs) and model farmer demonstration plots in this season are generating the awareness that yields can double, when applying the optimal sesame production technologies and practices.

### A massive yield gap exists

During the 2013 production year, the SBN Support Programme conducted sesame yield measurements in 93 farmers' fields. The average yield of sesame was found to be lower than 450 kg per hectare. This is much lower than what is possible. Existing research and previous years' results on demonstration plots show that the application of improved production technologies can easily obtain yields of 800 kg per hectare under farmer plots and up to 1500 kg under controlled research conditions. This massive yield gap is largely due to pre- and post-harvest management deficiencies. If all farmers had 800 kg instead of 450 kg, they would get an additional 14,000 ETB/ha (average ECX in 2013/2014 being 4000 ETB/quintal). With the total acreage of approximately 500,000 hectare, the additional production could have reached 1,750,000 quintal which is equivalent to more than 7 billion ETB (280 million Euro)!

### Best practices for sesame production

During the formulation of sesame business cluster action plans in 2013, farmers' clearly indicated that they wanted to improve agricultural practices and increase yields and quality of sesame. In an attempt to respond to this demand, the SBN Support Programme, in collaboration with the Ethiopian Institute of Agricultural Research (EIAR) and the Regional Agricultural Research Institutes of Amhara and Tigray, have developed a sesame production guide entitled "20 Important Steps to Double Yields and Improve Quality of Sesame". The guide have been distributed to farmers, DAs and others in northwest Ethiopia.



100,000 sesame production guided published and distributed for farmers in northwest Ethiopia

### Assembling the package and coordination

In collaboration with Humera and Gondar Agricultural Research Centres and regional, zonal and *woreda* offices of agriculture, quality seed of improved varieties, fertiliser, rope for row planting, and other equipment and materials have been mobilised. Local core groups and specific focal persons for the coordination of the roll-out of best practices have been established in eight *woredas*. This is an important stepping- stone towards *woreda* and regional coordination.

### Training of Trainers

Training of trainers (ToT) was organised in two steps. First-off, a core team, 44 experts drawn from different organisations such as agricultural research centres, zone and *woreda* Offices of Agriculture and farmers' cooperative unions, were intensively trained. Subsequently, these main trainers in-turn trained model farmers and DAs on the correct application of the recommended sesame production package. Knowledge-able on the improved sesame technologies package and guides, exactly 793 model farmers and 291 DAs are further generating awareness, sharing knowledge and improving skills for a targeted number of 75,000 farmers under the coordination of Bureaus of Agriculture and very importantly, using informal communication channels as well.

### Demonstrations at FTCs and model farmer fields

To scale out the use of improved sesame production technologies, demonstrations were undertaken on 916 plots in 2014, each ranging from 0.25 to 1 hectare in size, across 92 *kebeles* in eight *woredas* of northwest Ethiopia. Of these demonstrations, 823 have been executed on model farmers' fields and the remaining 92 are at Farmer Training Centers (FTCs). At the FTCs, the demonstration included tests of important rotation crops (sorghum, soya bean, mung bean and cotton). The farmer trainers participating in demonstration activities were selected by respective *woreda* Offices of Agriculture, taking into account their past experience and exemplarity. On average there are 8-10 farmer resource persons in cooperatives. This is an important asset for further rolling-out of the '20 steps' in 2015.



A modern farmer in May-waynie, thinning his plot

### Farmer field days

With the objective of demonstrating the effectiveness of the recommended sesame technologies and practices, in average two farmers' field days have been organised in each demonstration site. The field days have revealed to farmers the actual impacts of using improved sesame production technologies. It is as the idiom goes; "seeing is believing". Apart from facilitating a learning visit to the field, field days have also been used as important platforms for farmers, *woreda* administrators' and experts to discuss their impressions about the changes they observe through applying new practices. Field days organised at *woreda* level have given farmers from many *kebeles* the chance to talk to one another and to share their success and failure stories.

The feedback gained thus far from farmers is overwhelmingly positive. Farmers compare the sesame in the demonstration plots with other sesame fields, including their own, and are convinced of the benefits of applying improved technologies such as application of fertilisers, row planting, thinning etc. They also raised some of the constraints such as high labour cost, agricultural credit, inaccessibility of modern row planter.

### Monitoring and evaluation for learning and impact

The coaches of the SBN Support Programme, together with *woreda* Offices of Agriculture, have been providing field level support and technical backstopping to model farmers. Model farmers have been recording all costs related to production at their demonstration plots in logbooks, for the purpose of conducting cost-benefit analyses and/or marginal rate of return on different recommended practices. These economic analyses are meant to enhance farmers entrepreneurial capacities.

The SBN Support Programme and its partners, farmers and

### Quick facts

- ◆ Roll-out of improved sesame production practices in 3 *woredas* of West Tigray (Kafta Humera, Welkayiet, and Tsegedie,) and 5 *woredas* of North Gondar: (Metema, Quara, Tach Armachiho, Mirab Armachiho and Tegedie)
- ◆ 100,000 copies of the "20 Important Steps to Double Yields and Improve Quality of Sesame" guide have been published and distributed to farmers and others
- ◆ 793 model farmers & 291 Das (1084 in total) have been trained as trainers of the application of improved sesame production technologies
- ◆ Improved sesame technologies were demonstrated on 916 plots in northwest Ethiopia; 502 in West Tigray and 414 in North Gondar
- ◆ 823 demo plots were conducted in the fields of model farmers and 93 were at Farmer Training Centres
- ◆ Over 75,000 farmers were targeted; most farmers have received the manual and at least 50,000 have visited field days
- ◆ Throughout the season, an average of two field days were organised in each demo plot during different stages in the maturation and management of sesame

other stakeholders will evaluate the experiences of 2014 for further improvement of sesame production in northwest Ethiopia. Lessons need to be learnt for the specific purpose of sustaining future access to these technologies. Key points of attention are certainly access to inputs, credit and machinery (especially row planters).

### A joint effort

The SBN Support Programme is playing an important role in improving the production of sesame in Ethiopia, which in turn boosts the income of farmers, their organisations, labourers, companies and the sector as a whole. The total operational costs of the technology scaling out process is 12.5 million ETB, of which the Support Programme contributes 5,8 million ETB (46%). The SBN support is only for new activities.

### Strategic issues

Further adoption of the '20 steps to improve yields and quality' are the following:

- ◆ Financial system innovation for improving farmers' access to input credit
- ◆ Improved organisation of the supply of quality seeds, fertiliser and pesticides, if possible via local chain supporters
- ◆ Promotion of sustainable sesame-based farming systems (rotation crops, legumes)
- ◆ Integrated soil fertility management (ISFM)
- ◆ Integrated pest management (IPM)

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