

## About the Bulletin

**DT Maize** is a quarterly publication of the DTMA (Drought Tolerant Maize for Africa) project, funded by the Bill & Melinda Gates Foundation. Its aim is to inform partners and the general public at large about developments related to drought tolerant maize in Sub-Saharan Africa. It publishes short, general articles, relevant news, and events related to DTMA. Articles and news on all aspects of maize in Africa from sister projects and other partners are also welcome. Any feedback from our readers would be appreciated.



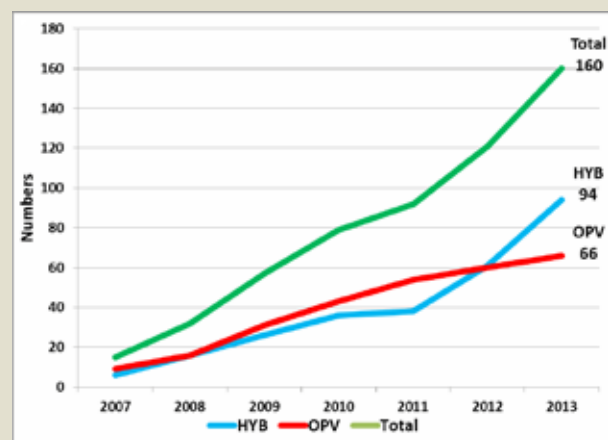
*Certified seed production of the new hybrid BH661 on a 50-ha field at El-Fora farm, near Hawassa (12 September 2014)*

## DTMA Moves to the Next Level: Welcoming DTMASS

### Background

The Drought Tolerant Maize for Africa (DTMA) project, funded by the Bill and Melinda Gates Foundation (B&MGF), was launched in 2007, with two main objectives: to develop drought tolerant maize varieties and facilitate the production and delivery of seed of those varieties. The project was jointly implemented by the International Maize and Wheat Improvement Center (CIMMYT) and the International Institute of Tropical Agriculture (IITA), in collaboration with 13 countries in eastern and southern Africa (Ethiopia, Kenya, Tanzania, Uganda, Angola, Malawi, Mozambique, Zambia, and Zimbabwe) and West Africa (Benin, Ghana, Mali, and Nigeria).

The project has developed a total of 160 varieties (Figure 1) during the course of seven years (2007-13). In addition to being drought tolerant, many of these varieties possess other desirable traits such as resistance to major diseases (e.g. maize streak virus, turicum leaf blight, common leaf rust, grey leaf spot, and ear rot), resistance to the parasitic weed *Striga hermonthica* (also known as witch weed), improved nitrogen use efficiency, and improved nutrition (quality protein maize). It has been demonstrated that the DTMA varieties give superior yields (with 25% or more yield advantage) to the currently grown commercial varieties.



*Figure 1: Cumulative numbers of drought tolerant maize varieties released under the DTMA project between 2007 and 2013 (source: DTMA database)<sup>1</sup>*

Working in partnership with public and private seed companies, the project has also facilitated the production and delivery of the improved varieties. A total of more than 33,000 MT of seed was produced in 2013 alone (Table 1). This amount is enough to plant an estimated area of over 1.3 million ha for the 2014 crop season, benefiting more than 3.3 million households, or close to 24 million people.

<sup>1</sup> HYB = hybrid; OPV = open pollinated variety.

Table 1: Drought tolerant maize seed produced in 2013 and estimates of area to be planted and beneficiaries

| Country    | Total volume (MT) | Enough to plant (000 ha) | *Beneficiaries (000) |        |
|------------|-------------------|--------------------------|----------------------|--------|
|            |                   |                          | Households           | People |
| Nigeria    | 7,266             | 291                      | 727                  | 7,992  |
| Malawi     | 5,205             | 208                      | 521                  | 2,707  |
| Zambia     | 4,187             | 167                      | 419                  | 2,680  |
| Zimbabwe   | 5,398             | 216                      | 540                  | 2,537  |
| Tanzania   | 2,804             | 112                      | 280                  | 2,047  |
| Kenya      | 2,714             | 109                      | 271                  | 1,818  |
| Ethiopia   | 2,065             | 83                       | 206                  | 1,569  |
| Uganda     | 1,745             | 70                       | 174                  | 1,082  |
| Mozambique | 1,024             | 41                       | 102                  | 635    |
| Angola     | 413               | 17                       | 41                   | 274    |
| Benin      | 150               | 6                        | 15                   | 195    |
| Mali       | 210               | 8                        | 21                   | 189    |
| Ghana      | 133               | 5                        | 13                   | 146    |
| Total      | 33,312            | 1,332                    | 3,331                | 23,870 |

\*Assuming each household plants 10 kg seed

## DTMASS

A new project, Drought Tolerant Maize for Africa Seed Scaling (DTMASS), was born out of the progress made by DTMA and other CIMMYT-Africa maize projects between 2007 and 2014. Over 80 stakeholder representatives gathered for the official project launch on 17-18 November 2014 in Addis Ababa. Funded by the United States Agency for International Development (USAID), the project is implemented in seven countries in eastern (Ethiopia, Kenya, Tanzania, and Uganda) and southern (Malawi, Mozambique, and Zambia) Africa. These countries account for about 41% of the maize

area and production of Sub-Saharan Africa (SSA) and more than 252 million people (over 25 percent of the total SSA population).

The launch meeting was opened by Ato Wondyrad Mandefro, State Minister of Agriculture of Ethiopia, who greatly appreciated the “Feed the Future” initiative of USAID for funding the project and CIMMYT for taking the lead to implement it. Participating in the launch were officials and technical staff representing public and private seed companies, national extension and research systems, other development agencies, NGOs, USAID, and CIMMYT. The purpose of DTMASS is to improve access to, availability of, and demand for quality and affordable improved drought tolerant maize seed varieties for small scale farmers.

DTMASS aims to produce close to 12,000 MT of certified seed of drought tolerant maize varieties in the seven countries by end of the fifth year from the start of the project, benefiting approximately 400,000 households or 2.5 million people through increased production and productivity of maize and increased adoption of improved seed. The project has established strong partnerships with private and public seed companies, community-based organizations, NGOs and national extension systems to achieve its mission; a total of 53 seed companies have signed up to scale up 71 drought tolerant varieties.

DTMASS is already laying the ground work for a rigorous monitoring and evaluation system in order to ensure successful implementation of the proposed project activities and to demonstrate impact of the project’s investments.

*Tsedeke Abate, Nick Davis, Mosisa Regasa (CIMMYT-Nairobi); Dagne Wegary (CIMMYT-Addis Ababa); Peter Setimela, Cosmos Magorokosho (CIMMYT-Harare).*



DTMASS launch, 17 November 2014, Addis Ababa, Ethiopia



## News and Events



*B&MGF team posing with CIMMYT and Ethiopian maize team in front of a 400-ha BH661 grain production field at El-Fora farm (9 October 2014)*

### **B&MGF officials visit DTMA work in Ethiopia**

A team of officials and a gender consultant from the foundation in Seattle paid field visits to public and private farms dealing with drought tolerant maize seed production under the auspices of DTMA in the central rift valley of Ethiopia on 9 October 2014 after participating in the Seed Systems meeting in Addis Ababa the previous day. The team included Dr. Tony Cavalieri, MS Vicki Wilde, Drs. Gary Atlin, Christian Witte and Deborah Rubin.

The main areas visited included the Shallo Seed Farm of the Ethiopian Seed Enterprise and El-Fora Farm, both near Hawassa, the capital of Southern Nations Nationalities and Peoples Regional State; the team also made stopovers at the Ethio VegFru seed farm near Koka and Kuyera, near Shashemane. Speaking on the occasion, both Tony and Gary expressed their delight with what is going on with the DTMA project in Ethiopia and thanked all involved. Vicki was impressed by the success of the scale for the new variety

### **Ethiopia finds a replacement for its longstanding maize hybrids**

Ethiopia's maize agriculture has been dominated by two hybrids over the last 20 plus years. The hybrid BH660, released in 1993 for altitudes above 1600 m, accounted for more than 54% of the total seed production in the country between 2010 and 2012; this was followed by BH540, released in 1995 for altitudes between 1000-2000 m, and accounted for nearly 19% of the total seed production during the same period. Other hybrids that deserve mention included BH140 (released in 1988), BH543 (2005) and the Pioneer Hybrid Seed Ethiopia hybrid 30G19, marketed as Shone (2006) and PHB3253, marketed as Jabi (1995).

A new hybrid, BH661, was released in 2011 and promoted under the auspices of DTMA. This hybrid is drought tolerant, more widely adapted and has a yield advantage of at least 10% over BH660<sup>2</sup>. Consequently, there is very high demand by seed companies to market the new hybrid. For example, the total seed production of BH660 was more than 15,331 MT in 2012, and fell to only 2,509 in 2014. By contrast, the quantity of seed produced of BH661 was 6 MT in 2012, and grew to 2,891 MT in 2014. As a widely adapted hybrid, BH661 is also expected to replace not only BH660 but also at least some areas previously occupied by BH540.

We congratulate the Ethiopian DTMA team on this great achievement!

### **Seed Systems 2014 annual meeting held**

The annual meeting of CIMMYT's Seed Systems work in eastern and southern Africa was held in Addis Ababa, Ethiopia, on 8 October 2014. Progress made in seed systems research and development across Africa and beyond through various projects was presented and discussed. According to this report, CIMMYT facilitated the production of more than 35,000 MT of certified seed in the target countries in SSA.

It was reported that the number of seed companies across SSA has shown rapid growth between 2007 and 2013, with 98 seed companies bulking maize seed. Small national seed companies accounted for 86% of all seed companies while the balance was covered by regional, national medium, and national large companies<sup>3</sup>.

<sup>2</sup> The two hybrids share the same male parent.

<sup>3</sup> Small = those producing less than 500 MT per year; medium = 500-1000 MT; and large = >1000 MT.

Major lessons learned and challenges included:

- Companies face inadequate facilities for foundation seed;
- Demand estimates are inadequate;
- NARS suffer from limited organizational/institutional capacity; and
- Large seed companies are often slow to commercialize the new drought tolerant maize varieties.

### DTMASS country launch workshops/ meetings held

Mozambique and Zambia held their DTMA country launch meetings on 2 and 5 December 2015 in Maputo and Lusaka, respectively. The number of participants for Mozambique was 22 whereas there

were 27 participants for Zambia. Participation included representatives of seed companies and agro-dealers, seed associations, extension, research, NGOs, USAID country missions, AGRA/PASS and CIMMYT.

These meetings, organized at short notices, helped to create awareness about DTMASS and plan some activities before the planting season ends. Accordingly, several seed companies have committed to engage in seed production and capacity development starting in December. In Mozambique, five companies were starting promotion and scaling of seven varieties; in Zambia seven companies were engaging in the promotion and scaling of 12 drought tolerant maize varieties.



*Mozambique launch of DTMASS, 2 December 2014, Maputo*

### Upcoming workshops/meetings

| Event                                   | Location      | Date                             |
|---|---------------|----------------------------------|
| DTMASS Country Launch - Tanzania        | Dar es Salaam | 22-23 Jan 2015                   |
| DTMASS Country Launch - Kenya           | Nairobi       | 2 Feb 2015                       |
| DTMASS Country Launch - Uganda          | Kampala       | 4 Feb 2015                       |
| DTMA Maize Working Group meeting        | Nairobi       | 6-7 February 2015                |
| DTMA Annual Review and Planning Meeting | Addis Ababa   | February/March 2015 <sup>4</sup> |

<sup>4</sup> Exact date to be confirmed.