Highlights

• The Compact reached 83,620 direct beneficiaries
• The dissemination of improved high-yielding varieties accompanied with good agronomic practices, Integrated Pest Management (IPM) technologies and small-scale machines has contributed to increased sorghum yield from 1.25 to 3 t/ha and millet yield from 0.75 to 1.75 t/ha in most of the target countries
• The Compact leveraged resources from partners in addition to own resources covering deployment of 1,627,927 ha of sorghum and 283,523 ha of millet
• Working in close collaboration with the country partners, the Compact took to scale 32 technologies with differing level of implementation in the target countries

What is the problem?

The semi-Arid area in Africa is 5.5 million Km² and has a population of 239 million people with 3% per annum population growth. Sorghum and Pearl millet are the main staple food crops especially in Sahelian countries with 80% of cultivated area and more than 49% of food consumption needs. However, productivity of both crops is very low which leads to recurrent food insecurity (insufficient production), Nutrition deficit (diet quantity and quality). This low productivity is due to poor access to improved seeds (use of low yielding cultivars), fertilizer and other farm inputs, inappropriate agronomic practices, widespread of plant parasitism by Striga, poor soil fertility, extremely fragile zone subject to over-grazing, land degradation, pest and diseases and desertification, lack of commercialization (subsistence agriculture), extreme weather events (drought, dry spells, flooding, heat). Despite the numerous challenges, there are technologies available if adopted at scale, can address most of those constraints. At farm level, the Compact focuses on accelerating technology deployment by improving the input supply system and the role of the extension services. At market level, the Compact focuses on championing market linkages, seeds and other input markets through sensitization, capacity building, Innovation platforms (IPs) and linkages with the private sector, especially the youth. It is working towards a demand-driven and holistic value chain approach to enhance efficient seed distribution, efficient marketing and reduce post-harvest losses.

Compact description

In collaboration with National Research and Extension Systems (NARES), the Sorghum and Millet Compact targets approximately 40 - 50% of African dryland farmers with technologies relevant to boosting agricultural productivity and self-sufficiency by 2025. The Compact engages with an ecosystem of NARES partners in target countries. The target countries for mass deployment of selected proven
technologies to address the problem of food security with the objective of turning the Sahel region into a food basket are Burkina Faso, Chad, Mali, Niger, Nigeria, Senegal and Sudan.

What are the TAAT Sorghum and Millet Objectives?

- Improve food and nutrition security of smallholder families, especially of women and children
- Increase sustainable use of improved varieties and good agronomic practices
- Increase smallholder farmers' income, and create jobs for youth in the rural areas
- Increase value chain efficiency through the reduction of post-harvest losses, increase produce quality, aggregation, traceability and transformation in sorghum and millet value chains
- Enhance crop-livestock integration through the increased production and consumption of sorghum and millet stover

What are the TAAT Sorghum and Millet Technologies?

- High yielding, nutrient-dense improved sorghum and millet varieties with resistance or tolerant to biotic stresses
- Improved dual-purpose sorghum and millet varieties with good quality flour and high biomass production
- Improved sorghum and millet varieties with high micronutrient content or excellent grain quality for brewing, and early or medium maturing varieties to cope with climate change
- Water harvesting technologies for water conservation and erosion control
- Mineral and organic fertilizer micro-dosing for yield increase through fertilizer use efficiency
- Parasitoid wasp release for biocontrol of Head Miner and Fall Army Worm
- Mobile stover choppers to process animal feed for more efficient and optimum utilization by livestock of the stovers
- Small scale machines to promote income generating activities for women and reduce drudgery on women and farmers in general

What have we achieved?

The TAAT Sorghum & Millet Compact reached 83,620 direct beneficiaries. The Compact team catalyzed and engaged 108 groups of partners including private sector, seed companies, government agencies, UN agency, CGIAR centers, NARES, CBOs, NGOs and Farmer Associations in the operational implementation of the program. Overall, three thousand and thirty-seven (3,037) people were trained with improved skills in agriculture and enterprises development of which 1,233 are females. Seventeen (17) functional Innovation Platforms (IP) for learning, knowledge generation and technology dissemination were initiated or supported. Working in close collaboration with the country partners 32 technologies are being taken to scale.

In each of the target countries, the Compact has trained seed producers. The Compact has also produced and contributed to produce all the categories of seeds required for seed system development. More than 4.1 tons of sorghum and 0.83 ton of millet breeder seeds produced; more than 153.8 tons of sorghum and 79 tons of millet foundation seeds produced. Through the Compact activities 850 tons of sorghum and 540 tons of millet certified seeds was produced and distributed 7,454 of sorghum and 5,263 of millet. The compact also distributed some small seed packs to enhance/ increase awareness of the potential of existing improved varieties.

Were there any key challenges or lessons learned?

- Good information flow provides for coherent and effective planning of activities
- Activities carried out in close collaboration with extension institutions leads to successful implementation
- The use of Innovation Platform approach facilitates linkages between key actors (farmers, research, extension, private sector, etc.)
- The use of mini-packs (seed + fertilizer) helps accelerate technology deployment

Mr Amadou Diarra, a beneficiary of the TAAT’s Sorghum and Millet Compact in his Tiandougou-coura Sorghum variety production field in Missirila, Beleko, Mali. Photo. B. Cisse, ICRISAT.

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