

Supplementary materials

Table S1 Description of technological package applied to various demonstration, adoption and production plots

Demonstration plots	Description	Genetic material	Fertilizer management	Water management	Monitoring
Community demonstration plots (CDPs)	Sasakawa Africa Association set up solution-based demonstrations using technological packages to address genuine farmer needs identified through the need assessments. The appropriate technologies are sourced out from the research service providers or the private sector	Use of high yielding cultivars	Point or deep placement of fertilizers applied at recommended rates, types and times	Use of soil and water conservation measures when and wherever required such as contour lining, banding use of stone rows, half moon, zai, and basins.	Very close
Technology adoption plots (TAPs) and model adoption plots (MAPs)	TAPs and MAPs are put up by adopters who apply elements of technological packages relevant to their enterprises	Use of high yielding cultivars but mostly with poor purity or degraded seed quality (TAPs)	Highly dependent on the type of adopters, point, deep placement or broadcasting of fertilizers applied at recommended rates, types and times	Highly dependent on the type of adopters. Use of soil and water conservation measures when and wherever required such as contour lining, banding use of stone rows, half moon, zai and basins.	Occasionally and yield data collection
Community plots (CPs)	CPs illustrate communities' ways of cropping and are set up side-by-side with CDPs for comparison	Use of recycled seeds of traditional or outdated low yielding crop cultivars with poor purity or degraded seed quality	Highly community-based, but mainly broadcasting of fertilizers and the quantities depend on purchasing power and availability	No or hardly any use of soil and water conservation measures	No monitoring, except yield data collection

Climate smart technologies (CSTs)	CSTs are set up by Sasakawa Africa Association in communities with fragile agricultural ecological cropping systems vulnerable to climate change. The main objective is to illustrate adaptation and mitigation technologies while building farmer resilience to climate change	Use of drought tolerant genetic materials	Use of K-based fertilizers to improve crop tolerance to dry spells and drought	Use of soil and water conservation measures such as contour lining, banding use of stone rows, half moon, zai, basin etc.	Very close
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Table S2 Current statistics on supervised enterprise projects implemented in Sasakawa Africa Association/Sasakawa Africa Fund for Extension Education partner countries by universities and agricultural colleges

Universities/Colleges and countries	Number of SEPs		Total
	Completed	Ongoing	
1. Ghana			
University of Cape Coast, Ghana	587	20	607
Kawadaso Agricultural College, Ghana	589	–	589
Sub Total	1176	20	1196
2. Ethiopia			
Haramaya, Ethiopia	599	95	694
Hawasa, Ethiopia	272	87	359
Bahir Dar University, Ethiopia	155	125	280
Mekele, Ethiopia	186	138	324
Wollo, Ethiopia	93	58	151
Jimma, Ethiopia	66	61	127
Arba Minch University, Ethiopia	–	70	70
Samara University, Ethiopia	–	32	32
Jijiga University, Ethiopia	16	35	51
Sub Total	1387	701	2088
3. Uganda			
Makerere, Uganda	602	–	602
Sub Total	602	–	602
4. Tanzania			
Sokoine, Tanzania	969	178	1147
Sub Total	969	178	1147
5. Mali			
IPR/IFRA, Mali	270	83	353
Samanko Centre, Mali	361	70	431
University of Segou, Mali	34	50	84
Sub Total	665	203	868
6. Nigeria			
Ahmadu Bello, Nigeria	216	27	243
Bayero University, Nigeria	195	46	241
Adamawa State University, Nigeria	53	60	113
Illorin University, Nigeria	57	18	75
Usmanu Danfodiyo University, Nigeria	–	44	44
University of Dutsin-Ma, Nigeria	–	80	80
Michael Opara University Umudike	–	16	16
Obafemi Awolowo, Nigeria	–	–	–
Sub Total	521	291	812
7. Benin			
Abomey-Calavi, Benin	196	27	223

<i>Sub Total</i>	196	27	223
8. Burkina Faso			
Bobo-Dioulasso, Burkina Faso	143	10	153
<i>Sub Total</i>	143	10	153
9. Malawi			
Lilongwe University, Malawi	125	96	221
<i>Sub Total</i>	125	96	221
10. Sierra Leone			
Njala University, Sierra Leone	-	-	-
<i>Sub Total</i>	-	-	-
11. Mozambique			
Catholic University, Mozambique	-	-	-
<i>Sub Total</i>	-	-	-
Total	5784	1526	7310