SYSTEM OF RICE INTENSIFICATION

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BY

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SUMMARY REPORT OF 2015 SRI ACTIVITIES UNDER WAAPP 2A

1. Introduction

The project, "Improvement and scaling up the System of Rice Intensification (SRI)'', was launched in Ghana on 23rd April, 2015. The Savannah Agricultural Research Institute (CSIR-SARI) is the Focal Institution and, houses the Focal Person (National SRI facilitator). For effective implementation of the Project, the country is divided into two zones (Northern and Southern zones). The Northern zone, which is made up of the Northern, Upper East and Upper West regions, is coordinated by CSIR-SARI. The Southern Zone (SZ), is coordinated by the Crops Research Institute (CSIR-CRI), with project activities in the Volta, Ashanti, Greater Accra, Western, Central, Brong-Ahafo and Eastern regions. The purpose of the project is to improve food security in West Africa by enhancing rice productivity and competitiveness across the region through the strengthening of stakeholders' institutional capacities and skills for SRI implementation, developing and disseminating appropriate SRI innovations, principles and practices, identifying and serving stakeholders' needs for knowledge and decision-making related to SRI, and establishing efficient mechanisms and tools for coordination, management, monitoring and evaluation of project activities. The SZ is partnering with the Ghana Rice Inter-professional Bodies (GRIB), the Ministry of Food and Agriculture (MoFA), Ghana Irrigation Development Authority (GIDA) of MoFA, Japan International Cooperation Agency (JICA), the Rice Sector Support Project (RSSP) and Farmer-Based Organizations (FBOs) to execute its activities. In the North AMSIG Resources is the key partner and others are; AgXtension Africa Ltd, JICA, ICOUR, Quality rice development Project (QRDP), Navrongo IP, Golinga IP, MoFA, the Rice sector support project (RSSP) and Adventist Relief Agency (ADRA). Others are the SNV and Advance Projects.

2. Project Goal: To increase rice production in Ghana.

3. Specific Objective: To scale up the adoption of system of rice intensification in Ghana.

4. Achievement- Results/Outputs (Including number of Beneficiaries below)

Major achievements for the first half year included a project launch and the organization of a two day Stakeholders Planning Meeting in at Nyankpala for the Northern Zone and in Accra for the southern zone to equip partners and champions with in-depth knowledge on the principles and practices of SRI and to elaborate strategies for implementing and scaling up SRI. A directory of identified partners and champions was initiated. Five weeders types that were identified and acquired from AfricaRice by the SARD-SC project were procured for testing with SRI partners and champions for the selection of the appropriate type(s) for weed control and soil aeration in the system of rice intensification. Arrangements were then made with local mechanics to fabricate selected weeder(s) for distribution to partners and champions.

Establishment and management of SRI demos and monitoring and evaluation characterized the second half of the year. Field days were organized to showcase the performance of rice under SRI and were witnessed by people of all walks of life. Local radio stations and national Tv stations (Viasat 1 and TV3), covered field days. Four reapers and four threshers were procured and was used to support harvest and post harvest activities of farmers.

- GPS of project demo sites of the SZ have been documented
- Inputs were successfully distributed to Partners and champions for implementation of demos.
- MOUs were signed and financial support paid to all participating Partners and Champions who established demos,
- 95.7% of the total demos allocated to the Southern zone were established. However, 67.4% of the allocated demos were
- Data sheet for field data collection were developed.
- Ninety (90) tillers were recorded on a hill at the Tepa Demo site in the Ashanti region.
- Two rice Innovation Platforms are being facilitated in Kumasi and at Jasikan with a third one at Weta Irrigation site being initiated. In the north the Navrongo and Savlegu rice IP's are being supported with a new one at Wa being established

Table 1: Summary of Achievements in 2015

Indicator	2015 target	Achievements		
		Southern Zone	Northern Zone	Total
No of Regions	5	6	3	9
No. of districts		28	12	40
No. of communities	50	33	77	110
No. of ecologies	3	3	3	3
Implementation partners	10	5	8	13
No of SRI champions	20	22	23	45
No of Demonstrations	50	44	46	84
Total no. of Participating farmers	2500	845	1390	2235
Potential no of adopters	10000	9650	8000	17650
Percent women involved in SRI activities	30	53	32	
No. of success stories documented	3	4	3	7
Awareness creation through radio/TV	5	3	4	7
Awareness thru video	20	-	0	0
No. of exchange visits	4	7	4	11

Table 2: Global Positioning System (GPS) of SRI Demonstration Sites in Southern zone

No.	REGION	DISTRICT/ MUNICIPAL Assembly	TOWN/PLOT NAME	GPS		
				NORTH	WEST OR EAST	ELEVATION
1	Brong-Ahafo 1	Kintampo North	Dawadawa No. 2	N 08^0 21.599$'$	W 001^0 34.055$'$	
2	Brong-Ahafo 2	Kintampo North	Chiranda	N 08^0 15.291$'$	W 001^0 36.15$'$	
3	Brong-Ahafo 3	Tano North	Tanokrom	N 07 ^{0} 02.63$'$	W 002^0 10.810$'$	201m
4	Brong-Ahafo 4	-	Bitre Sekyere-(Plot 3)	N 06^0 59.352$'$	W 002^0 44.616$'$	233m
5	Ashanti 1	Atwima Nwabiagya	Afari	N 06^0 41.388$'$	W 001^{0}47.094$'$	205m
6	Ashanti 2	Atwima Mponua	Nyinahin	N 06^0 36.420$'$	W 002^0 05.564$'$	184
7	Ashanti 3	Ahafo Ano North	Tepa	N 07^0 01.000$'$	W 002^0 09.605$'$	231m
8	Ashanti 4	Adansi South	Nsata-Subriso	N 06^0 01.624$'$	W 001^0 14.873$'$	106m
9	Ashanti 5	Ejisu-Juaben	Nobewam/Plot 1	N 06^0 37.401$'$	W 001^0 17.201$'$	183m
10	Ashanti 6	Ejisu-Juaben	Nobewam/Plot 2	N 06^0 37.681$'$	W 001^0 17.227$'$	189
11	Ashanti 7	Ejisu-Juaben	Nobewam/Plot 3	N 06^0 37.429$'$	W 001^0 17.023$'$	185
12	Ashanti 8	Asante-Akim South	Krofa	N 06^0 40. 877$'$	W 001^{0}06.305$'$	257
13	Ashanti 9	Asante-Akim North	Wuraponso	N 06^0 49.007$'$	W 001^0 15.050$'$	240m
14	Western 1	Asafo	Sefwi Asafo- Plot 1	N 06^0 23.146$'$	W 002^0 39.291$'$	166m
15	Western 2	Asafo	Sefwi Asafo- Plot 2	N 06^0 23. 100$'$	W 002^0 39.206$'$	176
16	Western 3	Bia West	New Agogo	N 06^0 29.726$'$	W 002^0 57.769$'$	150
17	Western 4	Juaboso	Afere	N 06^0 18.783$'$	W 002^0 48.010$'$	151
18	Western 5	Tarkwa Nsuaem Municipal	Simpa	N 05^0 06. 017$'$	W 002^0 06.653$'$	60m
19	Western 6	Shama Ahanta	Ohiamadwen	N 05^0 05.663$'$	W 001^0 39.314$'$	12m
20	Central 1	Assin North	Esonoso Gangan	N 05^0 45.904$'$	W 001^0 26.357$'$	129m

21	Central 2	Gomoa East	Okyereko	N 05^0 24.584$'$	W 000^0 36.526$'$	18m
22	Volta 1	Hohoe Municipal	Akpafu Mempeasem	N 07^0 14.700$'$	E 000^0 28.15$'$	211m
23	Volta 2	Jasikan	Kudje	N 07^0 28.988$'$	E 000^0 23.821$'$	160m
24	Volta 3	Jasikan	Nsuta – Jasikan	N 07^0 29.674$'$	E 000^0 27.544$'$	178m
25	Volta 4	Kadjebi	Kadjebi	N 07^0 32.181$'$	E 000^0 27.884$'$	193m
26	Volta 5	Hohoe Municipal	Hlorma/ Dogbadzi	N 07^0 06.439$'$	E 000^0 33.810$'$	231m
27	Volta 6	Afadjato South	Koloenu Avekpo	N 07^0 01.341$'$	E 000^0 26.505$'$	149m
28	Volta 7	Afadjato South	Ve-Andokope	N 07^0 03.443$'$	E 000^0 24.283$'$	133m
29	Volta 8	Ho Municipal	Akrofu	N 06^0 37.566$'$	E 000^0 22.956$'$	117m
30	Volta 9	Ketu North	Weta 1-Session 9	N 06^0 05.234$'$	E 000^0 57.107$'$	10m
31	Volta 10	Ketu North	Weta 2-Session 6	N 06^0 06.104$'$	E 000^0 57.066$'$	14m
32	Volta 11	Ketu North	Weta – Section 9	N 06^{0}05.138$'$	E 000^0 57.018$'$	10m
33	Volta 12	Ketu North	Weta – Section 7	N 06^0 05.733$'$	E 000^0 57.233$'$	14m
34	Volta 13	North Tongu	Tordzinu	N 06^0 05.767$'$	E 000^0 44.401$'$	20m
35	Volta 14	South Tongu	Aveyime	N 06^0 02.363$'$	E 000^0 23.320$'$	17m
36	Gt. Accra 1	Shai Osudoku	Asutsuare 1 (Section 'A' C5)	N 06^0 04.634$'$	E 000^0 10.417$'$	13m
37	Gt. Accra 2	Shai Osudoku	Asutsuare 2 (Section 'B')	N 06^0 05.081$'$	E 000^0 13.156$'$	20m
38	Gt. Accra 3	Shai Osudoku	Asutsuare 3 (Section 'A' C3)	N 06^0 05.332$'$	E 000^0 08.109$'$	22m
39	Gt. Accra 4	Shai Osudoku	Asutsuare 4 (Regina)	N 06^0 05.700$'$	E 000^0 07.806$'$	14m
40	Gt. Accra 5	Tema	Ashaiman 1 (Lateral 12)	N 05^0 41.129$'$	W 000^0 02.752$'$	20m
41	Gt. Accra 6	Tema	Ashaiman 2 (Lateral 4, left back)	N 05^0 41.625$'$	W 000^0 03.049$'$	21m
42	Gt. Accra 7	Tema	Ashaiman 3 (Lateral 3)	05^0 41.696$'$	W 000^0 03.131$'$	18m
43	Gt. Accra 8	Tema	Ashaiman 4 (Lateral 3)	N 05^0 41. 669$'$	W 000^0 03.111$'$	15m
44	Gt. Accra 9	Ningo-Prampram	Dawenya 1 (C3)	N 05^0 46.967$'$	E 000^0 04.117$'$	18m
45	Gt. Accra 10	Ningo-Prampram	Dawenya 2 (C2)	N 05^0 47.199$'$	E 000^0 04.017$'$	25m
46	Gt. Accra 11	Ningo-Prampram	Dawenya 3 (C12)	N 06^0 47.234$'$	E 000^0 04.302$'$	19m

GPS COORDINATES OF PROJECT SITES IN NORTHERN ZONE 2015

No	Region	District	Community	Host partner	GPS coordinate		
					Elev.	N	W
1	Northern Region	Yendi	Yingsala	RSSP	131m	09°28'35.2''	E000°04'44.2
2		Yendi	Kpatia	MoFA	196m	09°31'51.6''	000°01'41.4''
3		Mion	Puriya	JICA	191	09°25'34.4''	000°11'26.5''
4		Tolon	Gbanjon	MoFA	158	09°27'19.2''	001°06'44.9
5		Tolon	Woribogu-kukuo	Champion	172	09°24'40.9''	001°01'35.3
6		Savelugu	Libga	Savelugu MSP	144	09°35'52.6''	000°51'11.2''
7		West Mamprusi	Bugya Pale	ADRA	138	10°16'55.9''	000°45'22.5''
8		West Mamprusi	Kata-Banawa	MoFA-Walewaale	147	10°21'13.6	w000°45'57.8
9		Tolon	Gollinga	Golinga IP	141	09°21'05.1''	000°27'05.2''
10		Tolon	Golinga	Golinga IP	139	09°21'06.0''	000°57'01.0''
11		Tolon	Golinga	Golinga IP	139	09°21'06.1''	000°57'01.6''
12		Tolon	Golinga	Golinga IP	139	09°21'00.9''	000°56'59.4
13		Tolon	Nyankpala	Jesus-Inn	147	09°24'17.4''	000°58'25.0
14		Tolon	Nyankpala	DMC-SARI/RSSP	147	09°24'20.5''	000°57'48.2
15		East Gonja	Kpalbe	JICA	122	09°07'07.7''	000°57'48.2
16		Tamale	Gbangayili	JICA	163	09°33'12.7''	000°50'28.5
17		Karaga	Tulinga	RSSP	166	09°59'21.1''	000°21'26.2''
18		Bolgatanga	Gambigo	RSP	173	10°44'42.8''	000°49'48.7''
19		Bolgatanga	Kalbeo	UE-MoFA	165	10°43'56''	000°53'04.6''
20		Navrongo	Tono (zone K), Korania	Navron. IP	173	10°49'57.1''	001°05'41.2''

21	Upper East Region	Navrongo	Tono (zone V), Biu	Navron. IP	155	10°44'55.4''	001°07'43.06''
22		Bolgatanga	Vea	QRDP	175	10°50'24.8	000°52'26.9''
23		Navrongo	Tono; zone B, Bonia	QRDP	171	10°51'40.5	000°08'16.8''
24		Navrongo	Tono (zone H), Korania	Navron. IP	163	10°50'44.9	000°06'23.5
25	Upper West Region	Wa	Biihee	MoFA	294	09°59'20.3''	002°24'28.5
26		Wa	Dondoli	RSSP	300	10°04'33.8''	002°27'58.7''

5. Effect of SRI on the productivity of rice

To assess the effect of SRI on farmers paddy yield, yield cuts were made from both SRI demo fields and farmers non SRI fields. Results across the regions and across ecologies are presented in the graphs below. Irrespective of the variety SRI increased yield significantly over the farmers practice (Fig 1). Average SRI yield of SRI plots across the zone was 5259kg for AGRA and 4301 for Gbewaa (Jasmine 85) compared to 1167kg for the farmers practice.

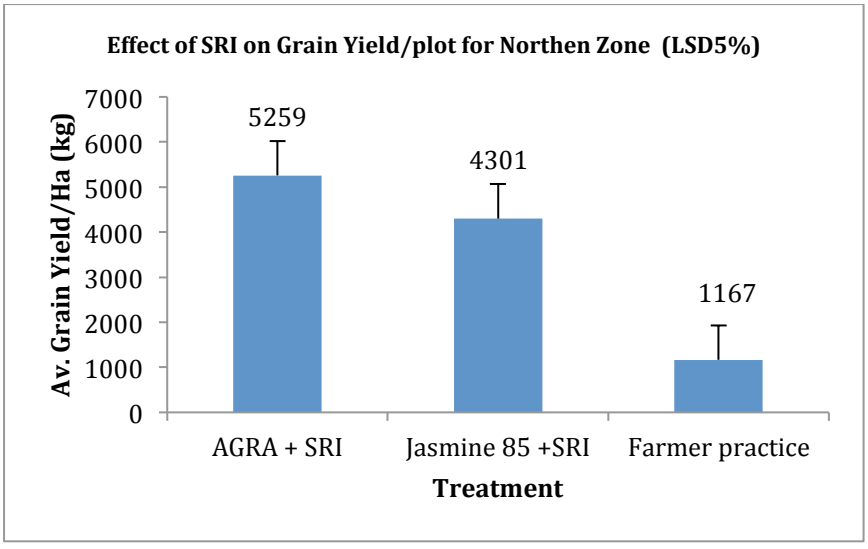


Fig 1: **Average grain yield of SRI demos in the Northern Zone**

Figs 2 and 3 show the regional effects of SRI on paddy yield. In both Upper east and Northern regions, SRI plots yielded significantly higher than the farmers practice. The effect was however higher in Upper east region compared to Northern region.

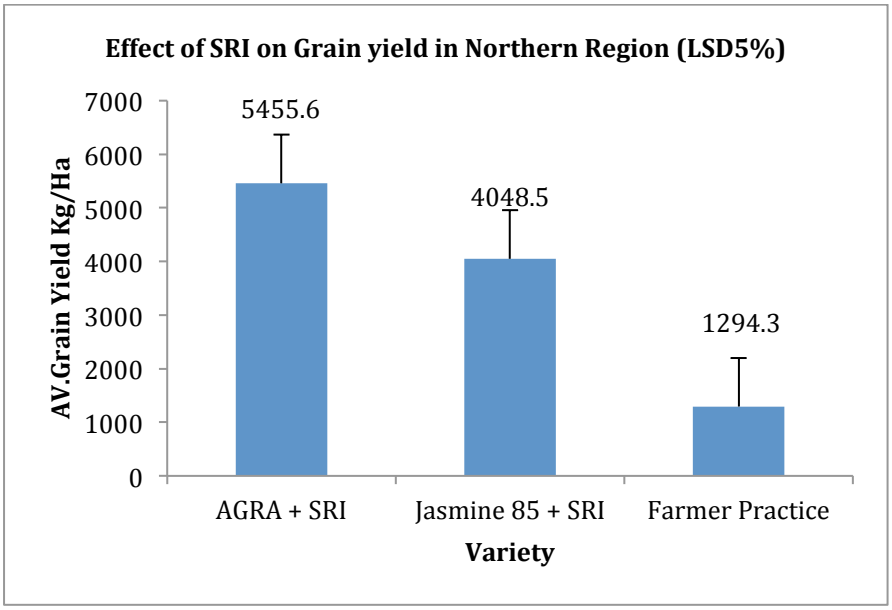


Fig 2: Average grain yield of SRI demos in the Northern

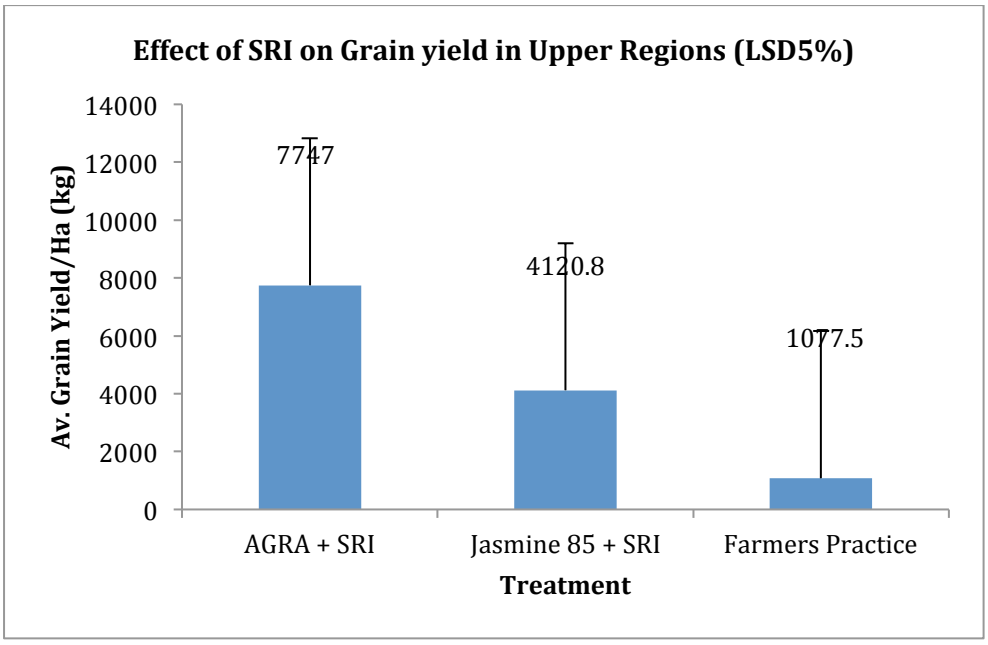
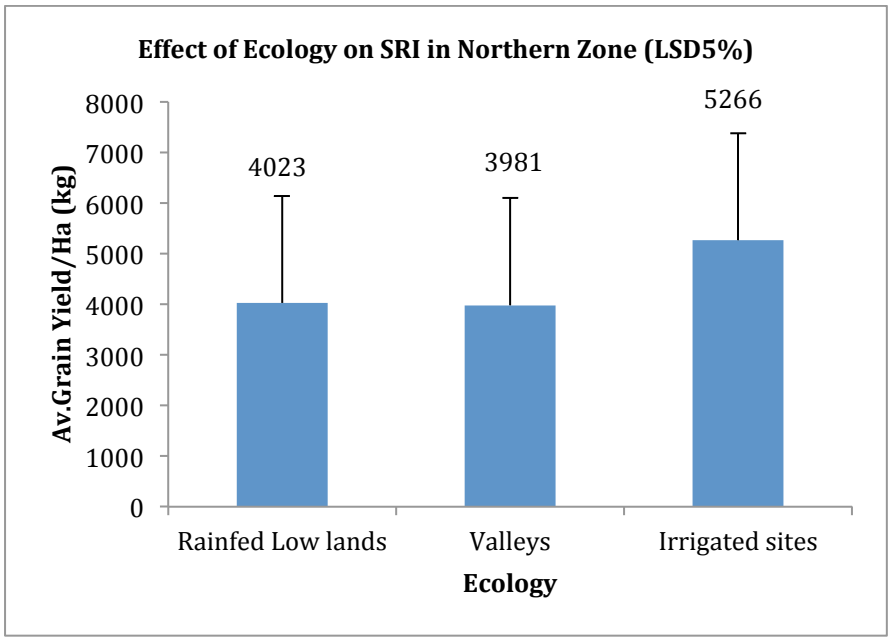


Fig 3: Average grain yield of SRI demos in the Northern

4. Ecological effect on SRI

Among the three ecologies, the irrigated ecology was the most productive followed by the rainfed lowland and the hydromorphic. Results from the three ecologies were however not significantly different among themselves.



As at the time of reporting, yield reports from the southern zone has not been receive. This will be reported in the 2016 1st quarter report.