CRP Dryland Systems

Activity Cluster:

(CA) 4.5 Establish a seed systems platform compatible with existing agro-ecological environments to supply farmers with high quality seed and planting materials so as to improve livelihoods, food security and incomes of smallholders

Action Site: Aral Sea Region, Fergana Valley

Year: 2014

Reporting Center: ICARDA, AVRDC

Outputs:

1. Seed production completed of 6 new varieties of winter wheat on 66 ha by 8 farmers in Uzbekistan for 2013-2014(Table 1).
2. Seed production of 2 new varieties of winter wheat on 14.8 ha on 10 farms, one variety of barley on 1.6 ha on 11 farms, and 2 varieties of chickpea on 1.1 on 10 farms for 2013-2014 (Table 2).
3. Seed production planted with two new varieties of wheat on 62 ha, and one new variety of barley on 6 ha for 2014-2015 (Table 3).
4. Seed production of 2 varieties of mungbean on 62.5 ha (Annex I)

Outcomes:

1. 404 ton quality seed of winter wheat produced in Uzbekistan.
2. 47 ton quality winter wheat seed produced in Tajikistan.
3. 4 ton quality seed barley produced in Tajikistan.
4. 1.7 ton quality seed of chickpea produced in Tajikistan.
5. 81 ton quality seed of mungbean produced in Tajikistan.

Table 1. List of farmers involved in producing wheat seed in CRP-DS Action Sites in Uzbekistan in collaboration with ICARDA in 2013-2014

Action Site	Province	District	Farm	Variety	Area (ha)	Seed produced (t)
Aral Sea Region	Karakalpakstan	Nukus	Seid	Yaksart	1	5.1
		Chimbay	Abduvali Mahsum	Hazrati Bashir	5	21.5
	Khorezm	Urgench	Uruglik	Yaksart	7	39.2
		Urgench	Darchalar	Yaksart	10	59.0
Fergana Valley	Andijan	Kurgan Tepa	Ok Soy	Elomon	2	14.2
				Jayhun	8	49.6
				Hisorak	2	13.6
				Yaksart	7	50.4
	Fergana	Uch Kuprik	Farovat hayet sari	Elomon	2	13.6
				Bunyodkor	2	14.2
				Yaksart	8	55.2
		Bogdad	Zoomin bugday hayet gunchalari	Yaksart	6	31.2
		Rishton	Qalb gunchasi	Yaksart	6	37.2
				Total	66	404

Table 2. List of farmers involved in producing wheat, barley and chickpea seed in CRP-DS Action Sites in Tajikistan in collaboration with ICARDA in 2013-2014

Crop	Farm	Variety	Area (ha)	Yield (t/ha)	Total yield (t)
Wheat	Sugd Branch of Tajik Farming Institute	Alex	8	3.02	24.16
		Ormon	5	3.51	17.55
Wheat	"Karimboy Mahkam"	Alex	0.1	2.72	0.27
		Ormon	0.1	3.1	0.31
Wheat	"Khoshimboy Vokhidov"	Alex	0.1	2.94	0.29
		Ormon	0.1	3.47	0.35
Wheat	Scientific and Production Association named by R. Nabiev	Alex	0.1	2.53	0.25
		Ormon	0.1	2.97	0.30
Wheat	Experimental Station "Somgar" of Tajik SRI of Horticulture and Vegetable	Alex	0.1	2.36	0.24
		Ormon	0.1	2.84	0.28
Wheat	"Rokhbar Kosimov"	Alex	0.1	3.12	0.31
		Ormon	0.1	3.4	0.34
Wheat	"Rokhbar Kosimov-2"	Alex	0.1	2.2	0.22
		Ormon	0.1	1.95	0.20
Wheat	"Tailonov"	Alex	0.1	4.2	0.42
		Ormon	0.1	4.45	0.45
Wheat	"Kholdor – Kipchok"	Alex	0.1	2.12	0.21
		Ormon,	0.1	2.05	0.21
Wheat	"Nakipkhon Tugral"	Alex	0.1	3.3	0.33
		Ormon	0.1	3.45	0.35
	Total: 10 Farms		**14.8**	**2.99**	**47.03**
Barley	Sugd Branch of Tajik Farming Institute	Pulodi	0.7	2.85	2.00
Barley	"Karimboy Mahkam" B.Gafurov district	Pulodi	0.1	2.17	0.22
Barley	"Khoshimboy Vokhidov"	Pulodi	0.1	2.75	0.28
Barley	Scientific and Production Association named R. Nabiev	Pulodi	0.1	2.28	0.23
Barley	Experimental Station "Somgar" of Tajik SRI of Horticulture and Vegetable	Pulodi	0.1	1.98	0.20
Barley	"Rokhbar Kosimov"	Pulodi	0.1	2	0.20
Barley	"Rokhbar Kosimov-2"	Pulodi	0.1	1.43	0.14

Barley	“Tailonov”	Pulodi	0.1	3.1	0.31
Barley	“Kholdor – Kipchok”	Pulodi	0.1	1.5	0.15
Barley	“Nakipkhon Tugral”	Pulodi	0.1	2.16	0.22
Barley	“Pongoz”	Pulodi	0.04	1.32	0.05
	Total: 11 Farms		**1.64**	**2.14**	**3.98**
Chickpea	Sugd Branch of Tajik Farming Institute	Hisor-32	0.25	0.74	1.03
		Sino		1.16	
Chickpea	“Karimboy Mahkam”	Sino	0.05	0.89	0.04
		Hissor -32	0.05	0.6	0.03
Chickpea	“Khoshimboy Vokhidov”	Sino	0.05	0.102	0.01
		Hissor -32	0.05	0.74	0.04
Chickpea	Scientific and Production Association named R. Nabiev	Sino	0.05	1.1	0.06
		Hissor -32	0.05	1.05	0.05
Chickpea	Experimental Station "Somgar" of Tajik SRI of Horticulture and Vegetable	Sino	0.05	0.63	0.03
		Hissor -32	0.05	0.48	0.02
Chickpea	“Rokhbar Kosimov”	Sino	0.05	0.93	0.05
		Hissor -32	0.05	1.05	0.05
Chickpea	“Rokhbar Kosimov-2”	Sino	0.05	0.6	0.03
		Hissor -32	0.05	0.65	0.03
Chickpea	“Tailonov”	Sino	0.05	0.9	0.05
		Hissor -32	0.05	0.94	0.05
Chickpea	“Kholdor – Kipchok”	Sino	0.02	0.52	0.01
		Hissor -32	0.02	0.4	0.01
Chickpea	“Nakipkhon Tugral”	Sino	0.05	1.25	0.06
		Hissor -32	0.05	1.2	0.06
	Total: 10 Farms		**1.09**	**0.80**	**1.70**

Table 3. List of farms in B. Gafurov district, Tajikistan (CRP-DS Action Site – Fergana Valley) involved in seed production using super elite seed of improved varieties of wheat and barley in collaboration with ICARDA for 2014-2015

№	Farmer's Name	Gender	Farm's Name	Area (ha)	Wheat		Barley
					Ormon (kg)	Alex (kg)	Pulodi (kg)
1	Tokhirov Zoidboy	Male	Khakimboisarkor	1.5		300	
2	Khaidarov Lukhmon	Male	U.Khaidarov	1.0		200	
3	Kiikboev Ali	Male	Kushatov	1.0		200	
4	Meliboev Sanam	Male	Dugonik	1.0		200	
5	Shukurov Akhmadjon	Male	Kosimov	1.0		200	
6	Dushaboev Ashur	Male	Kushatov	2.0	100	300	
7	Sultonkhudjaev Islom	Male	Islom	2.0		200	150
8	Komilov Tolib	Male	Urunkhudjaev	2.0		250	100
9	Tilloev Mavlon	Male	N.Mavlonov	2.0	200		150
10	Alamurodov Mansur	Male	Urunkhudja	1.5	200		100
11	Oripov Furkat	Male	Orif	1.5		300	
12	Khomidov Valiboy	Male	Vali	1.5		300	
13	Oripov Farkhod	Male	Tochikiston	2.0	400		
14	Juraev Akram	Male	Rokhbar	1.0		200	
15	Ikromov Isoboy	Male	Kosim	1.0		200	
16	Juraev Komil	Male	Juraev	1.0		200	
17	Otav Mukhammad	Male	Ustodekhkonov	1.0		200	
18	Bakhovaddinov Maruf	Male	Bakhoviddin Mahsum	1.0		200	
19	Gafurov Ergashboy	Male	Khodjabakirgon	1.0		200	
20	Gafurova Sochida	Female	A. GAfurov	1.0		200	
21	Gafurov Sanginboy	Male	Gafurov	1.0		200	
22	Rakhmatov Naimchon	Male	Rakhmatboy	1.0	200		
23	Abdukhalilov Abdumanon	Male	Abdu	1.0	200		
24	Abdualiev Gafurchon	Male	Maradjab	2.0	300	100	
25	Abdujalilob Rakhim	Male	Rasulov	1.0		200	
26	Aminov Mubinjon	Male	Khodja	1.0	200		
27	Usmanov Uktamjon	Male	M.Caidov	1.0	200		
28	Akhmedov Bakhodurjon	Male	Bakhodur	1.0		200	
29	Khaidarov Khakim	Male	Ch.Khaidarov	1.0		200	
30	Khakimov Ikrom	Male	Istiklol	1.0	200		
31	Kushboev Abdulla	Male	Djabor	1.0	200		
32	Ruziev Sharifjon	Male	Ruziev	1.0	200		
33	Maysupov Rasul	Male	Ch.Rasulov	1.5	100	200	
34	Bobodjonov Abdushukur	Male	Bobodjon	1.0		200	
35	Pulatov Valijon	Male	Vali	1.0	200		
36	Makhmudov Abdukhafiz	Male	Makhmudkhudja	1.0		200	
37	Okhunov Djafar	Male	Dj.Okhunov	1.0		200	

38	Bobodjoniva Riski	Female	Bobokhudja	1.0		200	
39	Aybov Nosir	Male	Aubobo	1.0		200	
40	Saidaliev Abduaziz	Male	Ali	1.0		200	
41	Khuseinkhudjaev Mukhtor	Male	Mukhtor	1.0		200	
42	Khasanova Barno	Female	R.Kosimov	1.0		200	
43	Djumaeva Marifat	Female	Djakhongir	0.5			100
44	Umarov Mirzobokhadur	Male	S.P.A named R. Nabiev	17.0	1,000	1,633	400
	Total :			**68.0**	**3,900**	**8,183**	**1,000**
	Male	**40**					
	Female	**4**					

Annex I

Final Technical Report of the CRP 1.1. Dryland System in Sugd Province, Tajikistan (Mungbean - second crop after cereals)

In 11th June 2014 was organized the Farmer's Field Day jointly the Tajik Farming Institute and representative of ICARDA Dr. Ram Sharma and the regional coordinator of AVRDC Dr. Ravza Mavlyanova. During the event was discussed issue of recommendation the mungbean as second sowing crop after wheat and other cereal crops. Usually in Tajik Republic fields after wheat harvesting are left free or are planted with maize or sorgo as feed crop for livestock. For the reason of the insufficient quantity of the seeds and its high price, farmers requested about support in purchase the seeds of mungbean. Seeds were bought from market because mungbean seed production in Republic isn't developed. For the activity was organized Commission which tested seeds of mungbean variety "Tajiksiy 1" and "Tajiksliy 2" for germination in laboratory condition and it showed 76 - 80 % of germination. Mungbean were planted in rate 20 kg/ha and on area 62.5 ha, from them farmers rented 25 ha of the Sugd Branch of Tajik Farming Institute fields, 6 ha in the Experimental Satation "Somgar" of Institute of Horticultural and Vegetables under Tajik Academy of Agricultural Science and also on farmers' field on area 31.5 ha. Mungbean seeds were purchased totally 1,250 kg from them "Tajikskiy 1"variety 500 kg for 25 ha and "Tajikskiy 2" 750 kg for 37.5 ha, for 11,250 TJS (financial report is already provided). The commission distributed seeds for 18 farmers and farmers - renters, each of them planted mungbean on area ranges from 0.5 ha till 0.6 ha. With all farmers were agreed that after harvesting the same amount of seeds, what was received for planting, should be given back to the Branch of Tajik Farming Institute and Experimental Station "Somgar" of Institute of Horticultural and Vegetables.

During vegetation season all data of phenological observation were recorded in field books. The irrigation process during vegetation season ranged from 2 to 4 times with water use rate 500 - 600 m^3/ha. In period from 12th to 14th September 2014 was checked the mungbean biological grain yield and average range: variety «Tajiksliy 1» - from 1.5 to 1.8 t/ha, variety «Tajiksliy 2» - from 1.7 to 2.0 t/ha. Harvesting was conducted manually in each maturity stage in period from 22th September till 11th October 2014. After drying, threshing and transportation average grain yield of both varieties was 1.3 t/ha. Difference between biological yield and final grain yield was at around 200 - 250 kg/ha. Total grain yield production from all planted area 62.5 ha is 81.2 t. Additionally, I would like to inform you that farmers showed their interest in mungbean production and they would like to expand area under mung bean and to increase grain productivity in second planting after cereals.

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25 October 2014