Trip report to Tajikistan and Uzbekistan

Inception meeting and field site selection for the implementation of the livestock productivity component of the CRP DS Dryland System (May 19-26, 2014)

DSIPS Participating Scientists

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Workshop progress

The inception and planning workshop for the livestock productivity component of the CRP DS in Central Asia took place on the 19th and 20th of May 2014 in Dushanbe. The full program of the workshop is attached to the present report. The presentations focused on:

- Introduction to the Dryland System Program in Central Asia which redefined the main production systems across the transects and these are: Agro-pastoral system which is the dominating system in both the Rasht Valley and the Aral Sea; Mountainous system mainly encountered in the Rasht Valley; Tree-based system in Fergana and Rasht Valley; Irrigated cotton/wheat/rice system in the Aral Sea Basin and finally the vegetable system mainly in the Rasht Valley.
- Introduction to the livestock component
- Understanding of the challenges to small ruminant production in the action sites (Rasht valley and Aral Sea basin in respectively Tajikistan and Uzbekistan). Cross cutting challenges relate to: inexistence of organized breeding systems, degradation in winter rangelands as a result of less herd mobility, low quantity and quality of winter feeding, low productivity of saline rangelands, prevalence of animal diseases and poor marketing strategies and market channels.
- Potential research axis and methodologies encompassing rangeland monitoring and productivity, flock reproductive effectiveness and the adoption of value chain analysis as a basic methodology to identify major working axis for the small ruminants' component. In the specific case of the action sites in Central Asia, the proposed outputs are (i) Analysis of the production systems in the selected communities/field sites, (ii) a qualitative value chain analysis for 400 households and (iii) a set of interventions to increase farm productivity. Gender-related activities, important for CRP DS implementation, will be more clearly defined at a later stage.

Organization of the working groups

The plenary sessions led to the working groups. Two working groups were formed consecutively addressing the Rasht Valley in Tajikistan and the Aral Sea Basin in the Republic of Karakalpakstan in Uzbekistan. The terms of references for the working groups included 7 points and these are: Criteria for target site selection, Challenges for small ruminants' productivity, Main potential interventions including novels ideas/adapting interventions/demonstrations of best-bet practices, Major activities and partners,

integration of gender, outputs and deliverables for the next 2 years, Required/expected linkages with other activities and projects.

Both groups agreed to focus on agropastoral systems considering linkages to mixed systems and fodder production opportunities

Outcome of the working groups

Summary of the proposed main interventions, some of which can be country-specific or site specific are summarized in what follows:

- Characterization of SR production systems in the target communities - Such activity needs to be aligned with baseline survey and earlier studies
- VC Analysis for main animal production systems/sheep and goat meat
- Design of effective flock recording system at the community level to be basis for later interventions to increase flock productivity
- Design of integrated package for improving productivity (Develop and apply the schedule for veterinary preventive activities , improve animal health and productivity through better feeding; selection of best breeding SR (animals) for reproduction)
- Pasture improvement (reseeding, assessment and monitoring, characterization of indigenous species, management)
- Winter feed production (introduction of alley cropping, intercropping and double purpose crops; Seed production of primary forage species) – to be linked to IFAD CACL, CRP DS Seed Systems and ICBA project
- Empower/support woman groups (access to market) - to be linked to CRP DS gender research
- Strengthen woman participation in meetings, trainings, etc
- Demonstrations of best bet, organizational development - to be linked to Innovation Platform

It is also important to keep a conductive line between countries and accross the sites. It is proposed that rangeland issues related to monitoring, assessment and use be this conductive line.

The working groups also agreed on the next steps:

1. Completion of site selection within CRP DS action sites. This step needs urgent action-taking involving Tashkent office, ICARDA activity leaders, other CG and non-CG centers.
2. Consolidation of cluster of activities across sites but also keeping site-specific activities
3. Identifying the partners for each cluster/work package in the two countries

4. Follow-up with the partners on detailed activity plans and budgets
5. Research collaboration agreements (Memorandum of Agreements) with partners

Field visits and potential field sites

Rasht Valley, Tajikistan

Fayzabad site

The proposed site was visited by all participants to the workshop and was intended to be a site for the implementation of integrated research in CRP DS. The site consists of a livestock-based farm (cattle – sheep – goats) of over 200 ha where other activities related to vegetable, trees and other crops are also practiced. For the livestock team, this choice is not consistent with a major CRP DS requirement where activities need to be implemented at a community level where vulnerable households are dominant. It is also anticipated that whatever success is going to be achieved at the level of this farm to raise productivity through integrated research activities, this may not confirm to CRP DS approach and requirements.

Jirgatal site

This site was not visited and we present herein some compiled primary characteristics. The Jirgatal site is part of the Rasht Valley with an average annual rainfall between 400 and 450 mm and has an altitude of 2000 m above the sea level. The site is about 300 km far from Dushanbe, has a population of 90000 inhabitants with a very difficult access by roads. The population depends much on Dushanbe for its nutrition and the farmers experience difficulties in accessing credits. The land is mostly flat but the landscape also includes foothills and mountains. Over a 100,000 ha of natural rangeland are inventoried across the site. Formerly the land was mainly under state property; currently, nearly 95% of the land has been privatized and assigned to private holders. The production system is agro-pastoral based on: potato, orchards, fodder crops and livestock production. Recent statistics of livestock population (2012) report 140000 heads of small ruminants (of which 60% are sheep and 40% goats) mainly for meat production. An important population of cattle of over 20000 heads is also present at the site. The main issues raised with regards agricultural productivity are: seed provision for potato, nurseries for fruit trees (apricots, cherries, walnuts), alternative fodder species, livestock winter feeding, rangeland degradation, low productivity of the livestock (reduced lambing rates, regressed growth rates and high mortality rates). The International Potato Centre and ICARDA, through CLCA project, are already implementing research activities at the site. As part of CLCA project, a survey has been carried out and the data is being processed. We recommend this site to be targeted for the implementation of CRP DS and this view is shared by the Tajik Academy of Agricultural Sciences.

Republic of Karakalpakstan, Uzbekistan

Chimbay site

Short of time, our visit to the district of Chimbay was limited to meetings with the officials (the governor, the minister of agriculture for the republic of Karakalpakstan and the representative of the prime minister for the republic of Karakalpakstan) and with a group of farmers. The farmers were all large land and flock owners. The issues they raised were all around increasing their productive capacity looking for more productive breeds and access to more rewarding markets. Livestock, wheat and cotton production are the 3 main crops of the agricultural production systems. Because of salinization, large areas are now considered as abandoned and hardly support some grazing. To large extent, Land use is still highly governed by the authorities. The livestock production in the district is based on cattle production (46000 heads) and sheep (72000 heads). Dual purpose cattle breed from Ukraine are being introduced in the district in an attempt to boost milk production. However, the district has no network for milk collection or a milk processing unit. Fresh or pasteurized milk is sold and interesting marketing opportunities are sought in the main town Nukus. With GIZ, there is also a plan to introduce high yielding dairy goats from Europe. The project has no solid foundation and its outcome will probably be not different from all the failures that accompanied introduction of European goat breeds to hot, dry, harsh environments. We clearly expressed this view to the persons in charge of agricultural development and instead, we suggested that screening local goats for high performances is a more attractive alternative and ensures that animals are kept in a difficult environment to which they are highly adapted. The local goat is meat producing but has also small quantities of cashmere that generate more income. ICARDA has the methodologies, staff and experience to support such a scheme. As part of CRP DS, more than 200 varieties of wheat are being tested for cold and salt tolerance. The program is led by ICARDA and is so far restricted to on-station trials. No activities within CRP DS are undertaken with the farmers.

Qorao'zak site

Qorao'zak is a highly saline area at the edge of the Aral sea. In the site, there are 500000 ha of pasture, 72000 heads of sheep and goats and 29000 heads of cattle. Farmers, especially those of the small households (Dekhan) are growing more and more goats. The governor tended to explain this by the good foraging ability of the goats especially under more saline conditions. Increase of the livestock population, winter feeding, lack of forage seeds, pasture use, high mortalities are the main challenges raised. As part of CRP DS, the International Vegetable Center has already initiated activities, there are also studies on the water table level of variation and also ICBA has been active in the district for some time working on salt tolerant forage species and other halophyte rangeland species, intercropping and potential for a second crop. There is a prospect for a common work between ICARDA and ICBA by establishing NIRS equations for halophytes; such initiative can be extended to determine bioactive compounds.

Following a very rich discussion to which private farmers took place, it was suggested that potential activities within CRP DS in Qorao'zak can target:

- Accompaniment of promoting goat production in the households targeting 7 villages
- Improvement of sheep productivity in large farms
- Seed multiplication of promising forage species, activity to be linked to the seed system platform within CRP DS in Central Asia.

To'rtko'l site (The 4-lakes governorate)

In comparison to previous sites in the republic of Karakalpakstan (namely Chimbay and Qorao'zak), To'rtko'l has a much more favorable natural context for more intensified agro-pastoral production. Indeed, there is no abandoned land in To'rtko'l as a result of soil salinization and irrigation is widely spread. During the visit, a meeting was organized with the governor, the staff in charge of agricultural development and a panel of farmers. The livestock population in Torktol counts 100000 heads of cattle (30000 cows) and 160000 heads between sheep and goats. One of the main concerns of the governor was related to the Karakul sheep Shirkat farm in the district kept for pelt production. The flock composed of 15000 heads has not the status of an elite flock and there is pressure to upgrade the flock to such a status. Such an issue will be handled by the Karakul research institute (its representative was present in the meeting) who have the process for such an upgrading and are technically well competent in the field of pelt production.

Most of the present farmers were large cattle producers and mainly focusing on meat production. Sheep and goats seem to be secondary species in this district and the discussion was not too much oriented towards these 2 species. It is visible that the main picture we had from those around the table that the beef meat market is very important and cattle dairying is expanding. Most of the farmers are now looking to increase productivity of their cattle herd through cross breeding with high yielding breeds like Angus or Simmental. Obviously, the farmers present in the meeting were more of entrepreneurs in their field and their challenges are certainly not within the scope of CRP DS. Obviously, they have a number of technical issues (probably as a result of the total absence of a public extension service) and this was clear when we visited one of the farms with a 350 heads of cattle kept for meat production. The animals were of the local breed with a relatively good format (prospects for selection seem enormous). The farm employs over 100 persons and seems to be self-autonomous in terms of feed production. However, rationing the animals seems to be a weak point and there is much that can be done to improve the feeding efficiency of such a highly intensive farm for meat production. The visit was too short to address other aspects of the management (reproduction, selection, housing…).

TABLE 1- Traffic light assessment of site suitability for implementation of CRP DS in Central Asia

Site	Annual crops and/or ICARDA mandate livestock species as main activity	Sizeable arable land and rangeland	Arid ecology and serious natural resources issues	Medium or high poor livelihood population	Existence of former/on-going projects/ - Active CG and non CG centers	Gender mainstream
Tajikistan (Rasht Valley)						
Fayzabad						
Jirgatal						
Tajikistan (Fergana Valley)						
Sogd province						
Uzbekistan (Republic of Karakalpakstan)						
Chimbay						
Karayuzak						
To'rtko'l						

Legend: From dark to dull green, the site characteristics fully to partially meet the requirements for the implementation of CRP DS; from orange to yellow, compliance between the site characteristics and the CRP DS characteristics is poor to inexistent.

Appendix

Appendix 1. Program of the Planning Workshop Livestock Productivity component of the CGIAR Research Program on Dryland Systems, 19-20 May 2014, Dushanbe, Tajikistan

19 May 2014

Welcome and opening remarks

Chairperson: Prof. Izzatullo Sattori, President of Tajik Academy of Agricultural Sciences

09:00-09:30	Welcome by Prof. Izzatullo Sattori Welcome by Dr. Jozef Turok Participants introduce themselves
09:30-10:00	Introduction to the Dryland Systems Program, Outcomes, Activities, Livelihood Systems, Action Sites, Innovation Platforms in Central Asia Dr. Botir Dosov
10:00-10:30	Introduction to the livestock component Dr. Barbara Rischkowsky
10:30-11:00	Group photo and tea/coffee break

Plenary Session – understanding the challenges in the action sites

Chairperson: Dr. Tolibek Bukhoriev, Vice President Tajik Academy of Agricultural Sciences

11:00-11:20	Challenges of small ruminant production in Rasht Valley Dr. Fazzlidin Ikramov
11:20-11:30	Discussion
11:30-11:50	Challenges of small ruminant production in Aral Sea Region Dr. Nasillo Bobokulov
11:50-12:10	Lessons from rehabilitation of rangelands in the Aral Sea Region Dr. Kristina Toderich
12:10-12:30	Discussion
12:30-13:30	Lunch break

Plenary Session – proposed research for improving livestock productivity

Chairperson: Dr. Kristina Toderich, ICBA

13:30-13:50	Improving rangeland productivity

Dr. Mounir Louhaichi

13:50-14:10 Improving small ruminants fertility
Dr. Mourad Rekik

14:10-14:30 Value chain analysis and development
Dr. Barbara Rischkowsky

14:30-14:45 Introduction to the working groups and budget considerations
Dr. Barbara Rischkowsky

Working Group Session on Rasht Valley and Aral Sea Action Sites

14:45-15:30 Group Work

15:30-16:00 Tea/coffee break

16:00-16:45 General discussion

19:00 Workshop dinner

Day 2, 20 May 2014

Working Group Session on Rasht Valley and Aral Sea Action Sites (cont.)

9:00-10:00 Working groups (cont.)- preparation of presentations

Plenary session – Reports from working groups

Chairperson: Dr. Jozef Turok, PFU-CGIAR, ICARDA

10:00-10:20 Report from Working group 1

10:20-10:30 Discussion

10:30-10:50 Report from Working group 2

10:50-11:00 Discussion

11:00-11:30 Tea/coffee break

11:30-11:45 Proposed workplan and next steps
Dr. Barbara Rischkowsky

11:45-12:00 Discussion

12:00-12:10 Concluding Remarks
Prof. Izzatullo Sattori, Dr. Jozef Turok

12:30-13:30 Lunch

Appendix 2. List of persons met

People met in Karakalpakistan

1	Zokhidjon Ziadullaev	Director	Uzbek Plant Quarantine Center, Uzbekistan
2	Tolib Muqimov	Head department of Rangeland	Karakul Sheep Breeding and desert Ecology
3	O'sarboy Qazaqbaev	Governour	Chimbay district, Karakapakistan Autonomous Republic
4	Sobir Khojemtov	Minister	Ministry of Agriculture, Karakapakistan Autonomous Republic
5	Bakhitbay Annaqulov	Head Department of Agriculture	Chimbay district, Karakapakistan Autonomous Republic
6	Salomattin Abdirazzaqov	Sulaymon farm	Chimbay district, Karakapakistan Autonomous Republic
7	Shaqirbay Berdimuratov	Mayqaymoq farm	Chimbay district, Karakapakistan Autonomous Republic
8	Karimbay Ayitmuratov	Alauddin farm	Chimbay district, Karakapakistan Autonomous Republic
9	Davlatbay Utemuratov	Governour	Qorao'zak district, Karakapakistan Autonomous Republic
10	Azat Abdujalilov	Azat farm	Qorao'zak district, Karakapakistan Autonomous Republic
11	Ermak	Veterinary Department	Qorao'zak district, Karakapakistan Autonomous Republic
12	Arzy	Arzy Farm	Qorao'zak district, Karakapakistan Autonomous Republic
13	Ro'zimbay Seitov	Governour	To'rtko'l Karakapakistan Autonomous Republic
14	Ataulla Sultanov	Head Livestock Department	To'rtko'l Karakapakistan Autonomous Republic
15	Bekjon	Lochin Farm	To'rtko'l Karakapakistan Autonomous Republic
16	Sharof	Sharof Farm	To'rtko'l Karakapakistan Autonomous Republic

Appendix 3. Map showing location of the potential sites.