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## Does Producing Forages Improve Livelihoods in Dry Areas? The Case of Afghanistan (On-going Research)

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## **Does producing forages improve livelihoods in dry areas? The case of Afghanistan (on-going research)**

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### **Introduction**

Agriculture is the main livelihood and a major contributor to the Afghan economy. Livestock production contributes with almost 50% of agricultural GDP in Afghanistan where out of 75% Afghans who live in rural areas, 85% keep some livestock (AusAID and ACIAR, 2011). In particular, small ruminants (sheep and goats) provide small holder rural Afghan families with livelihoods, food and capital. However, insufficient feed is a key constraint that limits productivity, income growth and sustainability in the crop-livestock farming (GIROA, 2009). The purpose of this research was to assess and identify which forage production technologies offers high productivity and resilience to farmers to maintain productive small ruminant flocks.

### **Materials and Methods**

A total of 200 Afghan farmers were surveyed from January to March 2015 in Baghlan and Nangarhar Provinces where small ruminants are key contributors to the livelihoods of resource poor farmers. We streamlined 20 discussion questions which were grouped according to agronomic, socioeconomic, cultural (including gender) and environmental related variables. Methods for survey analysis included descriptive statistics (used to describe, analyze and summarize respondents' forage and small ruminant-related variables), and ordinary least squares regression analysis (used to examine the main driving forces behind small ruminants production).

### **Results and Discussion**

A number of socioeconomic characteristics of respondents were subjected to statistical analysis. The results indicated that sheep was the most important livestock type in both provinces. Farm herds in average include 20 local sheep, 7 local goats, 6 crossbreed goats, 5 local cattle, and 3 crossbreed cattle. However, large disparities were observed as evidenced by high standard deviations. Most farmers kept sheep and goats for selling in markets (meat and milk-byproducts) in times of capital need, while cattle was mainly kept to produce milk for home consumption. Most farmers (40%) perceived that the size of their sheep flock has decreased over the last five years due to frequent droughts, reduced grasslands areas and exposure to recurrent diseases. Most farmers produced their own seeds (wheat, maize, rice, barley, chickpea, mungbean, alfalfa, clover, and sorghum) to cultivate next season and also to provide as fodder to their animals. Only few farmers produced seeds to sell to other farmers. Seeds of annual forage legumes and cereals such as vetch and oat were not produced. Farmers do not seem to be familiar with contractual forage seed production. Initial econometric results suggest that positively related determinants of small ruminant production were prices of meat, size of flock, and availability of good quality forages.

### **Conclusion**

Small ruminants and associated high quality forage production play a key role in Baghlan and Nangarhar provinces. Livestock provide various benefits to farmers, such as cash, byproducts for home consumption, capital saving and self-employment, which are particularly relevant under condition of frequent conflict where production shortfalls or unexpected contingencies make small ruminants the only reliable source of livelihoods to farmers. This underscores the need for the Government of Afghanistan to provide an enabling environment to enhance and encourage investment in forage production and in small ruminant husbandry.

### **References**

AusAID and ACIAR, 2011. *Water-limited agriculture in Afghanistan and implications for future Australian Assistance-A Joint Desk Review* by the Australian Agency for International Development (AusAID) and the the Australian Centre for International Agricultural Research (ACIAR) 27 pp.

GIRoA, 2009. *Agricultural Production and Productivity Program*. Kabul: GIRoA.

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