



AGRICULTURAL DEVELOPMENT FOR
AFGHANISTAN PRE-DEPLOYMENT TRAINING

AGRICULTURAL REVIEW OF KUNAR PROVINCE, AFGHANISTAN



Kunar Abstract

The population is about 414,700 and approximately half the population is male. According to the national statistics, 98% of the populations are Pashtun whereas 2% of the population is Nooristani and Gujar. More than 50 percent of the population lives in dwellings in the foothills, whereas the rest of the inhabitants subsist on plains land near the Kunar River. The population of Kunar is 96% rural. The literacy rate in the province has been estimated at 30 percent, which includes a meager 7 percent of females. The province is made up of about 90% mountainous and hilly terrain. Kunar is very scenic as it is the only province across Afghanistan whose hills contain forests (referred to as 'jungles') that are mainly pine and oaks with minor amounts of other species providing for a green landscape.

Irrigation canals, water-intakes and karezes, which are vital for subsistent agriculture, have are being rehabilitated by donor agencies and the Commander's Emergency Relief Program (CERP). According to the Ministry of Agriculture, Irrigation, and Livestock (MAIL) agricultural land includes: 22,536 Hectares (Ha) is in forestry, 18,000 Ha is irrigated, 6,000 Ha is rainfed and 7,000 is fallow land.

The livelihood of the people living in Kunar depends on animal farming and forests, due to the fact that most of the area comprised of mountains, and agriculture is practiced on a very limited piece of land that extends alongside Kunar River. The major crops of the area include wheat, rice, barley, maize/corn and various vegetables. . Essentially all field crops receive fertilizer. Common crops grown in garden plots include fruit and nut trees, vegetables, grapes, and forages. Dried sugar and honey are the two small commercial agricultural enterprises in the province. Sugar is manufactured in 31 villages mostly located in Shigal Wa Sheltan from sugar cane and sugar beets. Honey is produced in 24 villages mostly located in Mara Wara, Sar Kani, and Watapoor districts.

A small Kuchi population exists with an estimated 13,000 in winter dwindling down to just over 1,000 in summer. The migration is to the provinces north and west of Kunar to gain better grazing in cooler areas.

Commercial activity in Kunar is related to trade in timber and gems products. Agriculture was a major source of revenue for 74% of households with 79% of rural households owning or managing agricultural land or garden plots. Rural areas derive 33% of income from trade and services and 28% earn income through non-farm related labor. Livestock production provides income for 50% of rural families. In 2005, 43% of households in Kunar reported taking out loans. Of these loans, a small percentage was used to invest in economic activity such as agricultural inputs (6%). This indicates that virtually all small farmers do not require credit or at least a minimal amount of credit to farm each year.

Livestock and poultry ownership is represented by 94% rural households. Commonly owned livestock are cattle, sheep, goats, oxen and poultry.¹

Soils

Alluvial sub-soils with loess top soils are common in the valley areas. These are calcareous soils with relatively high calcium carbonate (CaCO₃) contents. Consequently, soil pH is generally high ranging 8.0 – 8.5. These soils respond well to tillage and nutrients. Due to the high silt percentage, flood and furrow irrigation is possible. Upland grazing areas are likely to be very gravelly, but have the same high CaCO₃ characteristic as the alluvium soils in the valleys. These soils will sustain forages if sufficient water is available and will respond well to nitrogen applications. Deep rooted legumes will have difficulty in these soils due to limited root penetration and microbial activity. Soil surveys have been taken in Kunar and will be available at the PRT in Asadabad and the Agribusiness Development Team archive.

An excellent land cover map of Kunar depicting cultivated land, forests, grazing, and fruit production is available:

<http://www.cawater-info.net/afghanistan/maps/kunar.pdf>

Crop Production

Wheat is the predominant cultivated crop for Kunar. Wheat is grown in the winter which allows for a subsequent summer crop to be grown after the wheat is harvested (double cropping) if there is sufficient irrigation available for the summer crop. Barley is also a winter crop produced on a small basis that may be followed with a summer commodity.

Rice is a significant crop for Kunar and can provide supplemental income. Rice requires a reliable irrigation source both in timing and quantity. Corn is produced mainly for livestock feed, but there is some human consumption. Corn has a very high water requirement throughout the growing season and intermittent irrigation is unsatisfactory for adequate yields.

Wheat, barley, rice and corn all require nitrogen and phosphorus at rates of 100 kg/Ha of Diammonium Phosphate followed with 180 to 260 kg/Ha of urea. Certified seed for wheat and barley is critical for good yield potential. Hybrid corn seed is a must for acceptable production. Rice can be varietal or hybrid depending on the producer. Quality seed and nutrient management are opportunities for improvement in the Kunar agricultural system.

Commodity	Irrigated		Rainfed		Total	
	Area (Ha)	Yield (mtons)	Area (Ha)	Yield (mtons)	Area (Ha)	Yield (mtons)
Wheat	15,000	38,000	6,000	3,000	21,000	41,000
Total Farm Value			1.21 billion Afs			

MAIL

Commodity	Area (Ha)	Yield (mtons)	Farm Value (Afs)
Barley	1,178	2,379	65.4 million
Rice	8,320	19,240	923.5 million
Maize (corn)	9,289	14,490	167.2 million

MAIL

Industrial crops are usually oilseed crops such as cotton, peanuts and soybeans. These are also high protein commodities which would supplement human nutrition as well as enhance livestock and poultry production. Unfortunately, these crops have not been emphasized in Kunar. The soils are certainly capable of sustaining these crops. A bonus is realized with peanuts and soybeans because they are legumes which fix their own nitrogen. By creating nitrogen, these crops are excellent rotation crops providing some nitrogen for the following winter grain crop and eliminate the requirement for urea for the crops own use.

Vegetable Production

Vegetables are grown almost exclusively for subsistence in compound gardens.

Fruit Production

Commercial fruit production is very limited in Kunar according to the MAIL. Most compounds will produce fruit and nuts for family consumption with very little surplus available for sale.

Commercial Fruit Production in Kunar									
Peaches		Almond		Pomegranate		Apple		Grape	
mtons	Ha	mtons	Ha	mtons	Ha	mtons	Ha	mtons	Ha
72	9	0	0	60	5	0	0	0	0

MAIL

Coops and Associations

Kunar has a history of service type cooperatives. These coops are organized to realize advantages on input purchases with some marketing of commodities when surpluses are attained. Associations are normally more business oriented with focus on supply and value chain enhancement. Associations are usually commodity specific and coops more general.

Cooperatives in Kunar					
Number of Members			Number of Cooperatives		
2010-11	2009-10	2008-09	2010-11	2009-10	2008-09
3374	3449	2710	33	31	26

MAIL

Agricultural Cooperatives Sales, Shares, and Area in Kunar								
Surplus Sales in 1,000 mtons			Members' Share in 1,000 Afs			Total Hectares in Coops		
2010-11	2009-10	2008-09	2010-11	2009-10	2008-09	2010-11	2009-10	2008-09
1	8	19	1052	2718	2523	2432	2542	2220

MAIL

Fertilizer Distributed by Agricultural Services Cooperatives in Kunar	
Urea in metric tons	DAP (diammonium phosphate) in metric tons
459	242

MAIL

Livestock and Poultry

Kunar has a variety of livestock and virtually every compound owns poultry. The availability of grazing and production of wheat and corn supports livestock and poultry better than most provinces. However, lack of protein is a limiting factor in providing nutrition capable of better productivity.

	Household ownership (%)
Cattle	88
Oxen	50
Horses	1
Donkey	34
Camel	1
Goats	63
Sheep	51
Poultry	92

Source: NRVA 2005

Animal health is recognized as a critical component in all aspects of animal production. Kunar has enjoyed major attention from NGOs and the government in providing animal health care providers and facilities. Veterinary Field Units are privately operated clinics that are staffed by trained professionals and/or para professionals. The support of the current units and the creation of new clinics is an ongoing priority for the government. ADTs have provided training and supplies for the field units in the past.

Kunar Veterinary Field Units (VFUs):

Asadabad	Muhammad Ghalib	DVM
Asadabad	Said Noroddin	Paravet
Kunar Khas	Muhammad Khetab	Paravet
Kunar Khas	Bahader	DVM
Narang Lamatak	Manawar Khan	Paravet
Noorgal	Muhammad Rahim	Paravet
Noorgal	Said Hanif	Paravet
Noorgal (Lod Lam)	Wahdatullah	Paravet
Noorgal	Muhammad Amin	DVM
Sarkani	Abdul Hadi	Paravet
WataPur Sematam	Abdul Ghani	Paravet
Marawara	Abdul Ghani	Asst. Vet

(Afghan Veterinary Association)

Dairy

Milk production is prevalent throughout Kunar. Cattle, sheep and goats are milked for human consumption through various dairy products. An excellent survey and assessment of the potential for enhancement of dairy production and marketing was conducted by the Agriculture Development Association for Afghanistan (ADAA) in 2008. A document was produced providing all the survey numbers of animals and production by district. Recommendations for increased production and marketing opportunities are discussed. The document may be downloaded here: http://asmedproject.info/joomla/images/Assessments/need_assessment.pdf

The shortage of protein feeds will limit productivity of dairy animals and should be recognized as a parallel initiative. Producing soybeans, peanuts, and cotton would substantially increase the available proteins for animal nutrition.

Organizations Supporting Kunar

DAI-Development Alternatives, Inc.
Chemonics
Relief International

Peace Dividend Trust
Afghan Aid

ARD-Agriculture Research for Development
Mercy Corps
MADERA - Mission d'Aide au Développement des
Economies Rurales
IRD- International Relief and Development
IFHope-Interational Foundation of Hope

Kunar Provincial Development Plan

The *Kunar Provincial Development Plan* provides a good base of fundamental assessments by the Afghan citizens, their government and the supporting donor countries that were present. The plan is useful to supporting organizations because it identifies the areas that the Afghans have identified through their own assessment process that are critical to capacity building. Incorporating the Plan in the development strategic initiatives will insure that the Afghan people will be supportive of the efforts and that they can be credited for the identification of the activity. Agricultural and Rural development policy should be driven from the ground up. This approach will also bridge gaps within villages and tribal alliances.

The following is a summary of some of the key areas they identified in the plan that are will remain relevant for the foreseeable future:

Kunar Agriculture and Rural Developmentⁱⁱ

Work towards eliminating illicit agricultural production and reducing the level of poverty. Assist farmers with their capabilities to increase yields and profits. Maintain and improve the natural resources of agricultural lands. Construct new irrigation control devices and improve existing canals and karezes. Larger infrastructure projects such a major dams would create electricity and improved water supply. Good management of water distributions is very important as well as the maintenance of the water systems. Shortage of drinking water and irrigation water was identified as a major priority.

Ministry of Agriculture, Irrigation, and Livestock (MAIL) is not adequately represented at some districts and improved production will be difficult to achieve without leadership from Ministry. With very little resources, signs of improvement have been slow in the agriculture and administrations sectors. Women have not received enough support from the MAIL.

Priority Issues:

- Constructing walls, to prevent floods from hitting the agricultural zone
- Healthy drinking water
- Asphaltting the roads so agricultural produce comes to market easily
- Constructing large and small dams to capture water
- Improve irrigation system for agricultural lands
- Livestock development and increased forage production
- Expand cooperatives/associations under Director of Cooperatives
- Education of farmers in production and literacy
- Continue improvement of veterinarian support
- Provide better access to artificial insemination for improved animal production
- Revitalizing forests and redevelopment
- Create system to market dairy products with processing
- Continue to evaluate possible fish farm production
- Create more opportunities for rural jobs that are not farm labor

Agribusiness Development

National Guard Agribusiness Development Teams from California, Iowa, and Illinois have served in Kunar province since late 2009 with great accomplishment. The teams have provided training for MAIL personnel as well as farmers in crop production, livestock care, fruit and vegetable marketing, female agricultural entrepreneurship, and many other initiatives.

Future ADTs will benefit from the work already accomplished in Kunar. The general maturity of the agricultural system in Kunar should be realized and development programs planned accordingly. The presence of the Afghan government is relatively robust in Kunar and all efforts must incorporate the government in planning and implementing programs. Using the Kunar Provincial Development Plan as a benchmark, continued assessment activity must occur to justify new projects and programs. Resource management of watersheds must be a fundamental goal of the people and supporting organizations to provide for sustainability.

Assisting the government in forming commodity associations that address the supply and value chains of different commodities is a proven method of developing agricultural systems. A critical component of the agricultural economy that is overlooked many times is the businesses that support the system. Creating agribusiness councils to identify weaknesses and strengths in the supply chain is a proven concept in most developed countries. These councils are also fertile grounds for training the shop owners on how to assist their customers on deciding the best inputs for their crops and how to better care for their animals.

Improving marketing opportunities of perishable commodities is a huge challenge in Kunar. The lack of electricity precludes cold storage facilities and poor road infrastructure restricts movement of produce to local bazaars. However, working with the MAIL to create educational events training farmers on grading and packing the produce can begin the process of improving the chain. MAIL should be encouraged to support the formation of a produce association that can provide a sufficient supply of the produce to meet identified demand with a good product. This is the first of many steps that must be made for development to evolve. Applying good Extension programming, as just described, will accomplish many of the goals development teams will generate.

Population: Kunar - 1389

District	Total Population Urban and Rural (Urban Population in Red) 1,000s		
	All	Male	Female
Total	414.7 12.4	212.2 6.4	202.5 6.0
Kunarha Center (Asad Abad)	31.1 12.4	16.0 6.4	15.1 6.0
Mara wara	19.2	9.7	9.5
Watapoor	25.8	13.2	12.6
Narang Wa Badil	28.4	14.5	13.9
Sar Kani	25.6	13.0	12.6
Shigal Wa Sheltan	27.5	14.0	13.5
Dara-i - Pech	51.4	26.4	25.0
Bar Kunar	20.7	10.5	10.2
Sawkai	33.6	17.2	16.4
Khas Kunar	33.0	16.7	16.3
Ghazi Abad	17.6	9.0	8.6
Dangam	15.9	8.2	7.7
Chapa Dara	29.1	15.0	14.1
Noorgal	29.8	15.4	14.4
Nari	26.0	13.4	12.6

Central Statistics Organization 2010-11

ⁱ National Risk and Vulnerability Assessment 2007/8 Central Statistics Organization

ⁱⁱ Kunar Provincial Development Plan

https://ronna-afghan.harmonieweb.org/Lists/Submitted%20Content/Attachments/1138/18-%20Kunar%20PDP%20 Initial_IDLG.pdf

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