

Agriculture in Afghanistan – economic sustainability and sub- sector viability

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Question

Which Agriculture sub-sector is most viable in Afghanistan and other conflict affected states?

Is agri-business providing sustainable rural jobs and income in Afghanistan and other conflict affected states?

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1. Summary

The majority of the Afghanistan population live in rural areas where agriculture is critical for livelihoods. Harnessing the potential of agriculture is important for improving labour productivity, the lives of women, and food security. The high youth population is contributing to unemployment and underemployment. Market participation is currently limited and unpaid family members constitute a large number of the workforce.

A 2014 World Bank Afghanistan Review recommends focusing on three agricultural sub-sectors in terms of economic viability: irrigated wheat, horticulture (including fruit, nuts and vegetables), and livestock (including production of milk, eggs and poultry meat). These recommendations are based on their suitability for small intensively irrigated and peri-urban areas. However, recent research highlights difficulties with irrigation for crop agriculture and price stagnation for fruits and nuts. The high potential of horticulture and livestock which is suggested in the literature is not possible to back up with data. Data collection is difficult for a number of reasons including the seasonal and informal nature of jobs in the sector.

Key findings include:

- Realisation of the potentials in particular sub-sectors requires an enabling business environment. The World Bank Afghanistan Horticulture and Livestock Productivity Project has improved systems and provides investment support. Horticultural extension has created 10,000 full-time jobs (60 per cent are long-term).
- The effects of currency depreciation on competitiveness of exports is noted in an International Labor Organization Study (ILO). The ILO assess the income per unit of land and number of people employed for a number of different crops in 2015. The most profitable per land unit are grapes and tomatoes. Wheat is the least profitable per land unit but employs the highest number of the population.
- To link farmers to markets investment in connectivity and infrastructure is needed. Agri-business potential will also be improved with capacity development of knowledge of trading and marketing practices.
- Community-based enterprises and integrated value chains have been successful in creating jobs in World Bank projects. A case study of employment in the fruit processing sector is included in section 4 of this report.

Section 5 outlines recommendations for agriculture in Afghanistan from a *Secure Livelihoods Consortium* working paper. The need to recognise commodity markets as complex systems comes through as a strong message.

A rapid search was carried out to identify information on other conflict-affected states with regards to key sub-sectors and agri-business success. Section 6 includes findings from Burundi, Democratic Republic of Congo, Burundi, Guinea-Bissau, Liberia, Myanmar, and Somalia. Section 7 reports an overview of leading sub-sectors in different conflict-affected states according to Export.gov, a market research site from the United States.

2. Agriculture in Afghanistan

Around 70 percent of the population live and work in rural areas and 61 percent of all households derive income from agriculture (Leao et al., 2018). Agriculture accounted for around one quarter of GDP according to the World Bank Agricultural Sector Review for Afghanistan 2014 (World Bank, 2014). The review discusses greater potential for jobs in agriculture. It also emphasises the importance of agriculture for raising labour productivity, improving lives for women (and other disadvantaged groups), and reducing food insecurity in rural areas.

Rural Afghanistan has high unemployment and underemployment (Leao et al., 2018). There is also low absorption. High growth in youth population, a 'youth bulge', is contributing to unemployment problems. Greater education and human capital potential leads to high competition for few jobs. More jobs are needed and better skilled jobs will help to include this age-bracket (ibid).

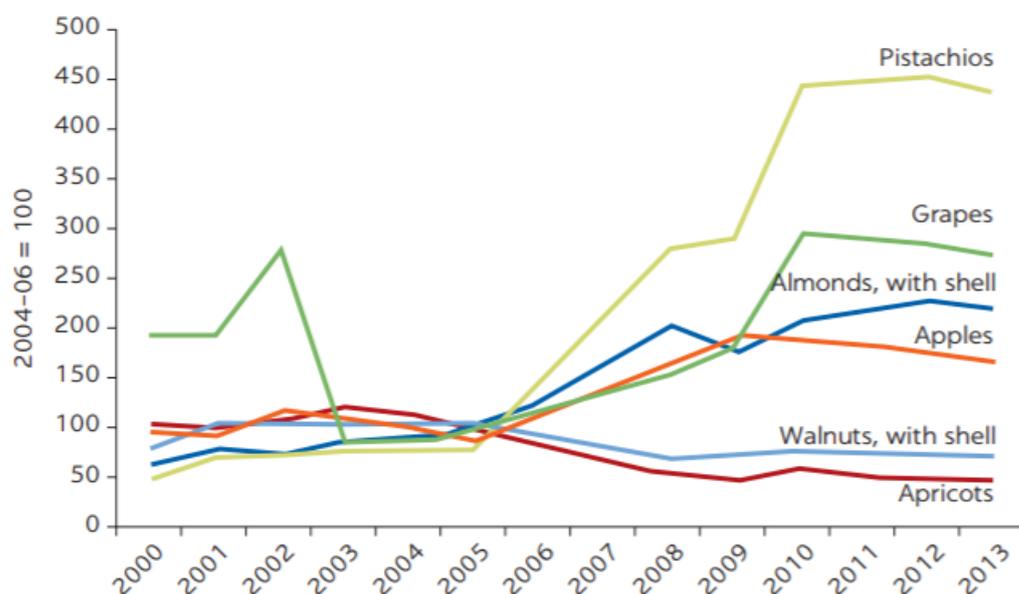
Within the agricultural employment that exists in Afghanistan there is a relatively low share of income due to the limited nature of market participation and the large number of unpaid family workers (Leao, 2018).

3. Sub-sector viability in Afghanistan

The World Bank Agricultural Sector Review for Afghanistan (World Bank 2014) recommends three subsectors to focus on for viability: 1) irrigated wheat, 2) horticulture (in this case fruits, nuts and vegetables), and 3) intensive livestock production (milk, eggs and poultry meat). These three are suited to small intensively irrigated and peri-urban areas; they can achieve good value addition and employment; and, are concentrated where the poor are. They also accounted for two-thirds of agricultural GDP at the time of the Review.

Crop agriculture still accounts for the greatest share of agricultural income, but profitability has declined with the price in recent years according to a World Bank report (Leao, 2018). Crop agriculture is also constrained by poor irrigation, which affects sub-sector viability. Irrigated land is particularly low in the north of the country. The crop agriculture sub-sector is not diversified and is overly concentrated on wheat. Lack of diversification makes households vulnerable. Fruit and nuts are said to be in great demand but prices remained stagnant in the early 2010s (See figure 1). Viability could be improved by providing technical and financial support to rural households using garden plots for their own consumption where they could be producing commercially.

Figure 1: Producer price indices



Source: Leao, Izabela; Ahmed, Mansur and Kar, Anuja. 2018. *Jobs from Agriculture in Afghanistan*. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29312>. License: [Creative Commons Attribution license \(CC BY 3.0 IGO\)](https://creativecommons.org/licenses/by/3.0/)

A 2015 International Labor Organization (ILO) study investigates the value chains of grape, wheat, rice, tomato and potato in Afghanistan (ILO Office for Afghanistan, 2015). It also compares these with the country's regional trading partners, Iran and Pakistan. Literature and statistics were reviewed alongside primary qualitative evidence: input suppliers, farmers, processors to wholesalers, retailers, importers/exporters and the providers of support services were interviewed. Severe depreciation of currencies in neighbouring countries created uncertainty and negatively affected the price of key production factors, particularly energy, fertilizers and labour. The study found competitiveness loss in all sectors apart from raisins between 2007 and 2012.

Grapes and tomatoes reportedly receive the highest income per land unit according to the ILO study. The regional grape market is highly competitive and cold chain establishment is important to realise potential growth in this sector. Wheat is the most commonly cultivated and supports the income of around 47 per cent of households in Afghanistan. It provides the lowest income per unit of land of the five crops investigated (see table 1).

Table 1: Income per land unit and employment in different sub-sectors

Crop	Income per unit of land (USD/jerib ¹)	Number of people employed
Grape	806	1.3 million
Wheat	148	8.9 million
Rice	307	502,000
Tomato	800	214,000
Potato	406	1 million

Source: derived from ILO, 2015.

4. Agri-business jobs and income in Afghanistan

The World Bank sector review (World Bank, 2014) projects that wheat, livestock, and horticultural production could provide an additional 260,200 people with full-time employment by 2024. Realisation of these gains would need an enabling business environment to attract private investment.

The World Bank Afghanistan Horticulture and Livestock Productivity Project (2013-2020) promotes the adoption of improved production practices (World Bank, 2018). The aim is to improve productive capacity with agricultural services systems and investment support. Support has been provided to improve technology uptake for horticultural production and animal production and health. The Status Report in 2018 (ibid.) states the project has reached out to 613,809 farmers (including 227,597 women). The project has created direct employment and generated many indirect jobs by expanding production and through technical and financial assistance. Horticultural extension has created around 10,000 full-time equivalent (FTE) jobs, 60 per cent of which are long-term (Leao et al., 2018). Data on the impact of livestock extension on job creation is not available.

A 2018 World Bank report investigated agricultural employment and income using the National Risk and Vulnerability Assessment Survey 2011–12² and the Afghanistan Living Condition Survey 2013–14³ (Leao et al., 2018). It assessed employment support and creation in agriculture. Job creation is noted as difficult to measure with some jobs being informal and/or seasonal. Agricultural employment has historically had low returns due to the low level of market participation and high numbers of unpaid family workers (particularly youth). Data from 2013/14

¹ 10,000 square yards

² <http://ghdx.healthdata.org/record/afghanistan-national-risk-and-vulnerability-assessment-2011-2012> [retrieved 5/5/19]

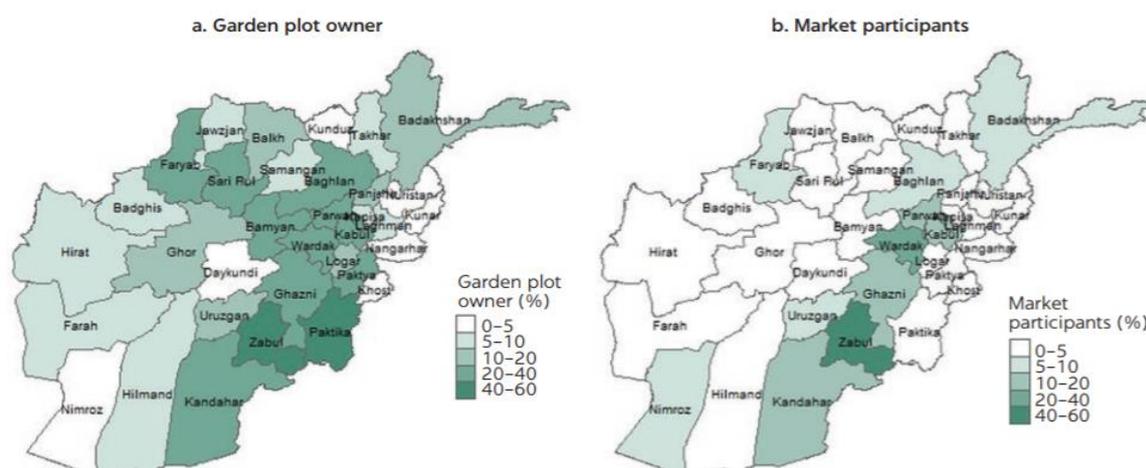
³ <http://cso.gov.af/Content/files/ALCS/ALCS%20ENGLISH%20REPORT%202014.pdf> [retrieved 5/5/19]

shows that 2.5 million people were recorded as employed in agriculture and a further 1.3 million were classed as unpaid family workers.

The report states the livestock subsector generates around 40 per cent of agricultural employment but a large proportion of this is unpaid. Actions to increase the productivity of small-scale producers, promote commercial production, provide extension services, and strengthen market linkages will help to generate employment. The weakness in employment return in this sub-sector is that youth workers join their family due to lack of other employment opportunities and also because of low market participation. In most areas in Afghanistan livestock's income share is much lower than its employment share suggesting unrealised potential income. Connection to national value chains is key to remedying this.

The report goes on to describe fruit and nuts to be in high demand and have potential for providing jobs, however data is difficult to collect to estimate current employment figures. Supporting those growing fruit for their own use with access to markets, could improve jobs in this area, particularly for young workers (Leao et al., 2018). Figure 2 shows the potential expanding in this area with a comparison of garden plot owners and market participants.

Figure 2: Percent of rural households that own garden plots and receive orchard income



Source: Leao, Izabela; Ahmed, Mansur and Kar, Anuja. 2018. *Jobs from Agriculture in Afghanistan*. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29312>. License: [Creative Commons Attribution license \(CC BY 3.0 IGO\)](https://creativecommons.org/licenses/by/3.0/)

World Bank projects have found positive results for job creation with the development of community-based enterprises and integrated value chains (Leao et al., 2018). Job creation may not be the initial aim but, for example, improving water efficiency and agricultural productivity also creates many short-term jobs in rural areas and is expected to support better and sustainable jobs by reducing underemployment among beneficiary farmers.

Agro-processing adds value to agricultural products through backward and forward linkages in the economy (Leao et al., 2018). Backward linkages with input suppliers and service providers create jobs and provide income. Forward linkages with distributors, wholesalers, and retailers also create economic spillovers. Analysis of the fruit processing sector in the World Bank rural employment report (Leao et al., 2018) profiles suppliers, transporters, processors, distributors, and wholesalers. Table 2 shows they survey results. More than half of the jobs support processing activities: 17 per cent are in distribution, 14 per cent in wholesale, and 9 per cent of

jobs were with suppliers. There was a 36 per cent increase in jobs overall from 2012 to 2016. A large percentage of all jobs are with one large company in Kabul, Omaid Bahar. Assessing the distribution of jobs through backward and forward linkages⁴ within this company found the supply firm to be the main provider of employment supporting 85 per cent of jobs.

Table 2: Permanent and temporary jobs in the fruit-processing supply chain, 5-year average

SUPPLY CHAIN SEGMENT	PERMANENT	PERCENT	TEMPORARY	PERCENT	ROW TOTAL	PERCENT
Input supplier	25	6.2	57	11.8	82	9.3
Service provider	3	0.7	0	0.0	3	0.3
Transporter	32	8.0	10	2.0	42	4.7
Lead firm	137	34.3	342	71.0	479	54.4
Distributor	106	26.6	43	9.0	149	17.0
Wholesaler	96	24.1	30	6.2	126	14.3
Total	399	100.0	482	100.0	881	100.0

Source: Leao, Izabela; Ahmed, Mansur and Kar, Anuja. 2018. *Jobs from Agriculture in Afghanistan*. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29312>. License: [Creative Commons Attribution license \(CC BY 3.0 IGO\)](https://creativecommons.org/licenses/by/3.0/)

Investment in connectivity and infrastructure to link farmers to markets is crucial (Leao et al., 2018). The authors recommend improving the capacity of farmers regarding marketing and trading knowledge as important for sustainability. And analytic rigour is needed for designing effective job creation policies. There are difficulties in measuring the effects of proposed interventions which would be helpful to overcome. Improvement in administrative data would support this.

Competitiveness is being eroded in Afghanistan due to high production costs. Depreciation of the currencies of Pakistan and Iran widens the trade gap. A 2015 ILO report recommends accelerating customs and phytosanitary procedures, establishing cold chains, supporting certification, assisting participation at trade fairs, helping firms comply with international regulations, promote proven productivity gains, explore low-cost delivery of agricultural extension services and improve the financial literacy of farmers (ILO, 2015).

5. Recommendations for improving agri-business in Afghanistan

Market engagement is needed to stimulate growth in the rural economy. A *Secure Livelihoods Consortium* working paper reviews commodity and rural labour markets in Afghanistan with a focus on social regulations (Minoia & Pain, 2017). A number of recommendations are made including:

⁴ Backward linkages are with input suppliers (ie. family farms, aggregators, and cooperatives) and service providers (ie. transporters). Forward linkages are with distributors, wholesalers, and retailers.

- Stimulating demand: Infrastructure projects in urban areas can generate employment to targeted areas and increase domestic demand. Targeted social protection programmes can also create demand, as can imposing import tariffs on agricultural cash crops.
- Promoting export value-chain development for high-value cash crops.
- Recognise commodity markets as complex systems. Agricultural systems need growth but there must also be an emphasis on how that growth is distributed. Value-chain models need to move beyond focus on competitive conditions, price formation, and performance to improve understanding of markets in Afghanistan and formulate policy.
- Models must account for power structures in the market place and distributional outcomes. Market context and market power⁵ are also important.
- Learning from the opium poppy market. Technical change and labour absorption that has widespread benefits. It fits well in the cropping system as requiring intensive management and harvest labour and good storage qualities.
- Understand that the free market model does not work under conditions of uncertainty and power. Acknowledging that social protection policies are good for growth (creating demand).

A blog post⁶ describes limited awareness of the long-term benefits of agri-business among Afghan youth. The World Bank rural development and labour specialist recommends targeted initiatives to facilitate funds for machinery and technologies and improving land laws and policies to improve agriculture for business.

6. Agriculture in other conflict affected states

A selection of research findings:

Burundi

Burundi have had some success in the coffee subsector following adoption of processing technologies by coffee washing stations (Bro & Clay, 2017). Research found increased quality of coffee and improved trade relationships with international buyers.

Democratic Republic of Congo (DRC)

An analytical paper looks at the commodity structure in the DRC (Lubanda at al., 2016). Competitiveness analysis identifies the most important commodities for DRC to be: rice, maize and cassava. Also competitive are sugar, coffee, tea, and cocoa. The weakest commodities are wheat, poultry meat, and vegetable oils.

⁵ See DFIDs 'Making Markets Work for the Poor' Approach
https://beamexchange.org/uploads/filer_public/2e/42/2e42508e-4397-4c1a-a258-ccead4af23e0/synthesis2009_compressed.pdf [retrieved 9/5/19]

⁶ <https://blogs.worldbank.org/endpovertyinsouthasia/agriculture-opportunity-better-jobs-afghanistan-s-youth> [retrieved 5/5/19]

Guinea-Bissau

Cashew production is highly dominant in Guinea-Bissau, accounting for more than 90 per cent of exports (Asogwa et al., 2011). In 2015, they were the second largest producer of this product in the world (Rabany et al., 2015). This strong dependence on a single cash crop increases the likelihood of pests and diseases and is not advised for sustainability of livelihoods (Monteiro et al., 2017). In Guinea-Bissau and other countries in the West African region biodiversity preservation is important alongside maintenance of other ecosystem services.

Myanmar

Rice is Myanmar's main crop but they have expanded into bean and pulses (ADB, 2013). Hampering production are low producer prices, high costs of farm inputs, inadequate market access, weak irrigation, lack of a land ownership system, and an appreciating exchange rate. Public-private partnership may help but increased public investment is needed over the long-term (Raitzer et al., 2015). Poultry, dairy and fertiliser production are identified as promising agri-business sectors (CEPA, 2016). To promote decent rural employment⁷ requires institutional change, integration of the concept into support programmes, implementation of market-orientated training, and incorporation into the design of social protection programmes (FAO, 2016).

Somalia

Livestock is Somalia's largest export sector. There are concerns over the health and welfare of animals (FAO & World Bank, 2018). Milk production could be expanded with improved hygiene standards, processing systems and efficient marketing channels. Production of fresh meat is below potential. Sesame is the second largest export. Dried lemon is the only sizeable export among vegetables and fruits. Water shortage is problematic and livestock survival during droughts has become dependent on costly privately owned water tankers. The expansion of mobile phone services has improved communication with urban markets. Technical schools offering degree programmes in livestock, crops and fishery science have been established but remain inadequate. Performance of the crop sector is weak and has higher potential. The fisheries sub-sector also has growth potential.

7. Leading sub-sectors in conflict-affected states according to United States Export.gov

Burma⁸: top exports are rice, maize, black gram, green gram, pigeon pea, chick pea, sesame, onion, tamarind, raw rubber, vegetables, and fruits.

⁷ Decent rural employment refers to any activity, occupation, work, business or service performed for pay or profit by women and men, adults and youth, in rural areas that respects core labour standards, provides an adequate income, entails security and stability, adopts health and safety measures, avoids excessive work hours, and promotes access to training. <http://www.fao.org/3/a-bc270e.pdf>

⁸ <https://www.export.gov/article?id=Burma-Agriculture>

Chad⁹: leading sub-sectors are farm tractors; fertilizers; seeds; farming implements; irrigation systems; harvesting equipment; gumarabic; cotton; livestock and livestock products; sesame seeds; peanuts, cashews, dates, and dried fruit; and shea butter, moringa, spirulina, and other natural products.

Republic of Congo¹⁰: leading sub-sector is corn.

Democratic Republic of Congo¹¹: leading sub-sectors are crop planting; cultivation; fishery, land and wildlife conservation; fertilizer, herbicides, pesticides, and fungicides; and farm equipment (leasing and financing).

Haiti¹²: has high potential for organic production as its soil is less impacted by fertilisers and its climate is suitable for cultivating tropical fruits. Currently leading sub-sectors are: coffee, cacao, and essential oils.

Liberia¹³: leading sub-sectors are oil palm, cocoa, rice and cassava. There is strong potential for storage and preservation of vegetables and fruits including: peppers, okra, grains, tomatoes, banana, mangoes, oranges, and pineapples.

Mali¹⁴: dominant sub-sectors are cotton and cereals. Cereals consisting of rice, millet, sorghum, and wheat. Shea butter, mangos, peanuts, cashews, and biofuels are suggested to have untapped potential.

⁹ <https://www.export.gov/article?id=Chad-Agricultural-Sectors> [retrieved 7/5/19]

¹⁰ <https://www.export.gov/article?id=Republic-of-Congo-Agricultural-Sector> [retrieved 7/5/19]

¹¹ <https://www.export.gov/article?id=Congo-Democratic-Republic-Agricultural-Services-AGS> [retrieved 7/5/19]

¹² <https://www.export.gov/article?id=Haiti-Agricultural-Sector> [retrieved 7/5/19]

¹³ <https://www.export.gov/article?id=Liberia-Agricultural-Sectors> [retrieved 7/5/19]

¹⁴ <https://www.export.gov/article?id=Mali-Agricultural-Sector>

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