The Contribution of Regional Markets to Afghan Wheat Supplies
May 2007

Food security in Afghanistan is dependent on the availability of wheat. Although domestic production makes an important contribution, it is increasingly recognized that the wheat supply in Afghanistan is determined to a great extent on wheat production and trade within the broader Central Asia region, especially on production from Pakistan and Kazakhstan, and to a lesser extent on Iran (Figure 1). However, limited information on regional wheat markets and trade flows constrains the depth of market and food security analysis and, consequently, the provision of critical information to support the design of appropriate policy and program responses in Afghanistan.

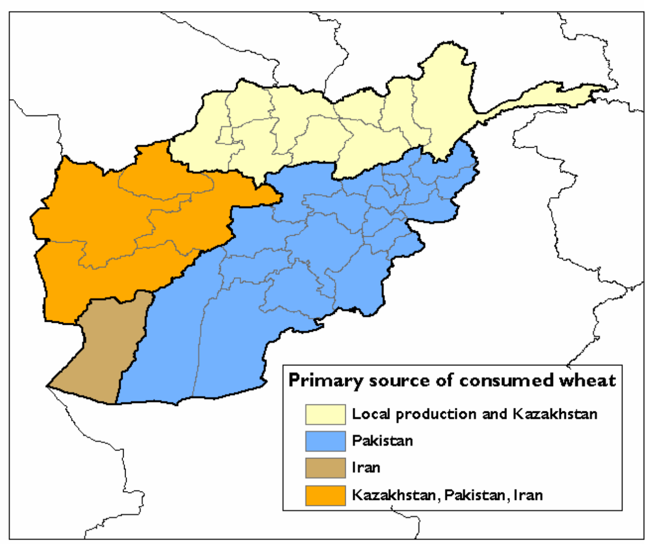
FEWS NET recently began a Regional Wheat Markets and Afghan Food Security Initiative in an effort to reduce the existing information gaps and strengthen the understanding of regional wheat markets and food security in Afghanistan, and thereby enhance FEWS NET's ability to provide useful food security and early warning analysis. The initiative is comprised of a set of separate but complementary market and trade assessment activities, implemented in a staged approach. Although the work is on-going and expected to conclude in June 2007, this brief provides decision makers with the findings to date, recognizing the timeliness of this information given that crop estimates will be available shortly and the summer harvest begins in June.

Overview and main findings

Wheat is the staple food in Afghanistan. Annual per capita wheat consumption is about 160 kg, one of the highest rates in wheat-consuming countries around the world. Almost all wheat is consumed as *naan*, the local unleavened bread. In 1978, Afghanistan was self-sufficient in food production for its own population of 14 million people, but nearly two decades of war damaged or destroyed irrigation canals and storage and market infrastructure, severely decreasing the productive capacity of the wheat sub-sector. Consecutive years of drought further constrained agricultural production.

Agricultural production increased substantially in the 2003 production year, following significant precipitation and improvements in civil security (see Figure 2 below). However, efficient and affordable input supplies and food market and storage infrastructure are still lacking. Large-scale grain silos were previously operated by the government, but all but a few have been destroyed or are inoperable.

Figure 1. Primary sources of wheat consumed in Afghanistan, by market region



Source: FEWS NET

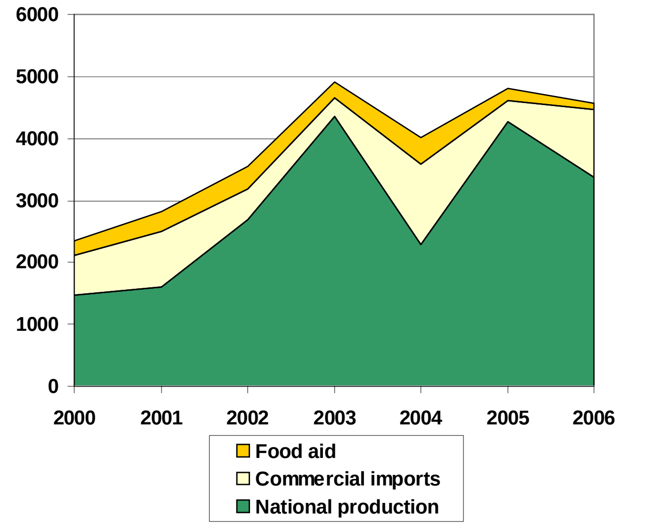
Traders – who traditionally purchase about 90 percent of marketable wheat surpluses – have to rely on temporary storage facilities that can only store wheat for a few weeks. Flour milling capacity is also limited. Nine medium-sized commercial mills are in operation, but power shortages and a lack of quality wheat prevent full utilization of mill capacity. As a result, a

FEWS NET Afghanistan
fnajimi@fews.net

FEWS NET Washington
1717 H St NW
Washington DC 20006
info@fews.net

few hundred small mills, or *asiabs*, process more than 90 percent of wheat produced in Afghanistan, but these mills lack the cleaning, purification, and separation systems necessary to produce quality flour. Furthermore, numerous wheat policies and programs within the region create significant obstacles and disincentives to investment in the subsector. For example, the few mills that have been established in Afghanistan with the help of foreign assistance have difficulty competing with Pakistani mills that receive subsidized credit and other forms of assistance.

Figure 2. Total wheat availability in Afghanistan, by source, in thousands of metric tons



Note: Production figures indicate harvest from the referenced calendar year
Sources: FAO/WFP; Afghanistan FAAHM, MAAHF; Chabot and Dorosh, 'Wheat Markets, Food Aid and Food Security in Afghanistan,' Dec 2006

As a result, Afghanistan imports a significant amount of wheat and wheat flour from the region. Official commercial imports were more than a million metric tons in 2004. Informal imports are also significant, and although they are difficult to monitor, they have been estimated to be even more than official imports. Despite large fluctuations in domestic production, wheat prices have remained relatively stable, and private-sector wheat imports appear to have been the major stabilizing factor in Afghan markets. About 80 percent of imports are from Pakistan, and the rest is supplied by Kazakhstan (via Uzbekistan and Turkmenistan) and Iran. The specific composition of wheat imports, and the importance of local production in the determination of food security, varies across sub-regions and provinces. The results of this initiative suggest that there are four distinct zones of wheat supply and markets (see Figure 1 above), which are presented in depth in the next four sections.

There are three main findings from this initiative to date. The first is that significant amounts of wheat from the region are being imported to Afghanistan through neighboring countries, including Pakistan, Uzbekistan, Iran and Turkmenistan. The latter two were previously considered insignificant or non-existent pathways. The second main finding is that significant amounts of imported grain are penetrating into different regions within Afghanistan; for example, Iranian wheat that is imported through Nimroz Province flows as far north as Hirat Province and east to Helmand Province. Thirdly, these flows seem to be closely linked with seasonal price changes and production levels in Afghanistan. While more research is necessary to track the inter- and intra-provincial flows of wheat, these findings suggest that wheat markets are able to function relatively well and that trade flows are compensating for production losses.

Figure 3. Wheat flows into the southern wheat market region of Afghanistan

Source: FEWS NET

Wheat supply in the southern region

The southern wheat market region stretches between Helmand and Kunar provinces, including Kabul, and comprises most of the border between Afghanistan and Pakistan (Figure 3). The region is a deficit producing area, but is the frontier for wheat imports from Pakistan. Eighty percent of wheat flour consumed in Afghanistan is imported from Pakistan, and Pakistani wheat is generally preferred for flour by bakers and other consumers. The trade routes through the southern market region are thus vital for Afghan food security.

Sources

Two main flows of Pakistani wheat enter Afghanistan through the southern market region (Figure 3). In the south, wheat is imported from Quetta via Chaman in the Baluchistan Province of Pakistan through the border at Spin Buldak to Kandahar in Afghanistan. The second main trade flow is farther north, from Peshawar in the North-west Frontier Province (NWFP) through the Khyber Pass and on to Jalalabad and Kabul in Afghanistan.

Baluchistan and NWFP are both deficit production areas, and about 70 percent of wheat imported from Pakistan is grown in other provinces. The wheat imported through Baluchistan is generally produced farther south in Sindh Province of Pakistan, and the wheat imported from NWFP is mainly grown in Punjab Province. Punjab is also the home of many Pakistani mills that produce flour that is imported to Jalalabad and Kabul. The quality of Pakistani wheat flour is significantly better than the quality of Afghan flour due to the milling capacity and quality control in Pakistan. Competition from Pakistani flour has played a significant role in preventing the development of commercial wheat mills in Afghanistan.

Both official and unofficial smuggled wheat flour are imported from Pakistan. Although unofficial trade has decreased significantly due to improved surveillance along the Pakistan and Afghanistan border, unofficial trade is still estimated to be significantly more than official trade. Food aid from the World Food Program is also shipped through these two trade routes.

Seasonality of supplies and prices

Pakistan is the main source of wheat in the southern wheat market region throughout the year. Demand for wheat imports does fluctuate somewhat, reaching its peak during the winter months of January and February when domestic wheat availability is at its lowest level. The supply of wheat is also affected by the cross-border political climate, as increased presence of soldiers along borders or deteriorating political relations between Afghanistan and Pakistan can cause wheat and wheat flour trade flows to decline or the costs to increase.

The price of wheat in this region largely depends on the availability of Pakistani wheat and price stabilization mechanisms in Pakistan, where the government plays a significant role in subsidizing and marketing wheat. The wheat flows from Pakistan have had a stabilizing impact on prices in Afghanistan, as private sector imports have helped maintain relatively stable prices despite significant fluctuations in Afghan wheat production due to periodic droughts.

Wheat supply in the southwestern region (Nimroz Province)

The southwestern wheat market region (Figure 4) is primarily comprised of Nimroz Province, and borders Iran to the west and Pakistan to the south. The semiarid region produces wheat, barley, maize and poppy, but recurrent droughts have reduced agricultural production in the region by roughly 80 percent, and the region is currently considered a deficit producing area.

Figure 4. Wheat flows into the southwestern wheat market region of Afghanistan

Source: FEWS NET

Because of its extensive border between with Iran, Nimroz Province is a main trading province. Traders in this region include Afghan, Iranian and Pakistani citizens, and many have dual or triple citizenship, enabling them to move freely between the countries in the region. Although Nimroz borders Pakistan in the south, the high mountains restrict trade to primarily the smuggling of high-value narcotics. About 20 percent of the trade with Iran is legal, most of which passes through the Silk Bridge that connects Iran and Afghanistan near Zarange, the provincial capital of Nimroz. The remainder of trade is unofficial, and 70 percent of the local population currently participates in smuggling activities as a result of a decrease in licit employment opportunities, as agricultural activity declined during the war and with the past several years of severe drought.

Sources

Iran is the main source of wheat in this region. Most Iranian wheat flows into Afghanistan through Nimroz, primarily through the provincial center, Zarange, or through Kang District, which has numerous common borders with Iran that are stable throughout the year and do not vary significantly with climatic or political changes. The main border point in Kang is Shand-e-Masoom Khan, and others include Guder-e Deh Raies, Nahia-e-Koroki, Guder-e-Telaie, Nawahi-e-Drushak, Guder-e-Mir Allauddin and Guder-e Kliki. Pakistani wheat is also consumed in this region, imported through the southern wheat market region. However, it is consumed to a much lesser extent than Iranian wheat, and consumed primarily by wealthy households.

The sources of wheat and wheat flour in the southwestern market region have not varied substantially over the last several years, but several factors do affect wheat sourcing. One major factor is regional production. Farah, Nimroz, Helmand and Kandahar provinces all trade with each other, and a decrease or increase in local wheat production affects trade flows: when one province has surplus production, wheat imports may decline as traders and households rely more on local wheat. The cross-border political climate also affects trade flows. When political relations between Afghanistan and Iran deteriorate, or when the presence of soldiers along border areas is increased, trade flows of wheat and wheat flour decline.

Seasonality of supplies and prices

The price and supply of wheat varies in the southern market region throughout the year. In general, the wheat supply increases and prices decrease during the summer months of June, July, and August, and supply decreases and prices increase during the winter season of December, January and February.

Wheat is harvested during the summer months of June, July and August in the southern marketing region, as well as in Iran. As the harvest enters the market, supply increases and prices decrease. Increased imports from Iran also occur, putting additional downward pressure on prices, as Iranian traders look to sell production surpluses and get rid of old stocks. The Iranian government is also less likely to restrict wheat exports during this time to enable Iranian traders to sell off surpluses of old stock. Dry climatic conditions also facilitate easy wheat and flour transportation during these months. The high summer temperatures cause the quality of wheat to deteriorate, which discourages traders from hoarding stocks during this period. Consumers are also less likely to purchase substantial amounts of wheat at this time to avoid the wheat quality deteriorating.

By December, the supply of wheat in Nimroz Province from the previous summer’s harvest has decreased, and supplies remain limited throughout the winter months of January, February and March. Consumer demand increases in the region as household stocks are depleted, and, at the same time, traders are more likely to hoard stocks because wheat stocks deteriorate less in the cool temperatures. Prices increase as a result, and, at the same time, the increased demand for imported Iranian wheat pushes prices higher. Less wheat is exported from Iran at this time, though, as traders in Iran face the same seasonal shortages, cooler temperatures and high prices that prevail in Afghanistan.

Wheat supply in the western region

The western market region is comprised of Hirat, Farah, Ghor and Badghis provinces, which border Iran to the west and Turkmenistan to the north (Figure 5). The region produces wheat, but is dependant on imported wheat for consumption.

Sources

The sources of wheat and wheat flour in the western market region are Pakistan, Kazakhstan, Iran and local production. The Pakistani and Iranian wheat is brought into the region from the southern and southwestern wheat market regions – no wheat is thought to be traded through this region's border with Iran.

Kazakh wheat and wheat flour is imported to Afghanistan through the western region via its border with Turkmenistan. Turghondai in Hirat Province is the main transit point for the wheat trade, and most of the wheat imported from Turkmenistan is imported legally. Wheat from Kazakhstan is generally preferred by bakers and consumers in the region.

Seasonality and prices

Figure 5. Wheat flows into the western wheat market region of Afghanistan

Source: FEWS NET

The composition of sources of wheat in this market region varies seasonally. During the winter months, almost all wheat is imported. In January 2007 in Hirat Province, wheat available in markets was 50 percent Pakistani, 20 percent Kazakh, 15 percent Iranian and 15 percent local production. During the summer months of June, July and August, a higher proportion of wheat is sourced locally. In poor agricultural years, more wheat flour is imported from Kazakhstan and Pakistan.

Wheat prices also vary seasonally. Prices are at their lowest during the harvest time of June and July, and increase to their highest levels during the winter months of November, December, and January. These price trends are particularly true for local wheat. The price of imported wheat is more influenced by global factors, such as fuel and transportation costs, international wheat demand and government policies influencing trade. In January 2007 in Hirat Province, the price of one metric ton of Kazakh wheat flour was US$300, Pakistani wheat flour $270 and Iranian wheat flour $250.

Wheat supply in the northern region

The northern wheat market region stretches from Faryab Province in the west to Badakshan Province in the east (see Figure 6 below). The region is a surplus wheat producing area, with the exception of Badakshan. It usually exports wheat to neighboring provinces and to Kabul. Relatively high costs of agricultural inputs, machinery and fuel are restricting the ability of producers to compete with imported wheat, as producers in neighboring countries have access to less expensive or subsidized inputs.

The main sources of wheat in this region are local production and Kazakh wheat. Imported wheat from Kazakhstan flows through Turkmenistan and Uzbekistan. No wheat is believed to be imported from Tajikistan. The specific trade flows and composition of wheat supply in this northern market region have not yet been established, and a survey of wheat traders is necessary and currently planned in order to increase the knowledge of trader decisions and the sources and flows of wheat in this area.

Figure 6. Wheat flows into the northern wheat market region of Afghanistan

Source: FEWS NET

Conclusions and next steps

Regional wheat trade clearly plays an important role in determining the wheat supply of Afghanistan. Significant amounts of wheat enter through Afghanistan's borders with its neighbors. Once imported, significant amounts of wheat are then transshipped between provinces. These trade flows appear to be closely linked to the availability of locally produced wheat and local prices, suggesting that the wheat market is able to respond to production shortfalls. The role of regional wheat markets in food availability is thus important to Afghan food security, and trader expectations of wheat subsector conditions and regional wheat trade flows will need to be integrated into ongoing and future food security monitoring and analysis.

As noted above, the origin of supplies, trade flows, and trader conduct in the northern market region remain somewhat unclear. As part of this initiative, FEWS NET plans to conduct a trader survey in the northern provinces, and results from this survey will help develop a stronger understanding of the links between imported wheat and local food security. Additionally, the domestic inter- and intra-provincial wheat flows are not well understood, and more research in this area is needed to complete the understanding of wheat markets in Afghanistan.