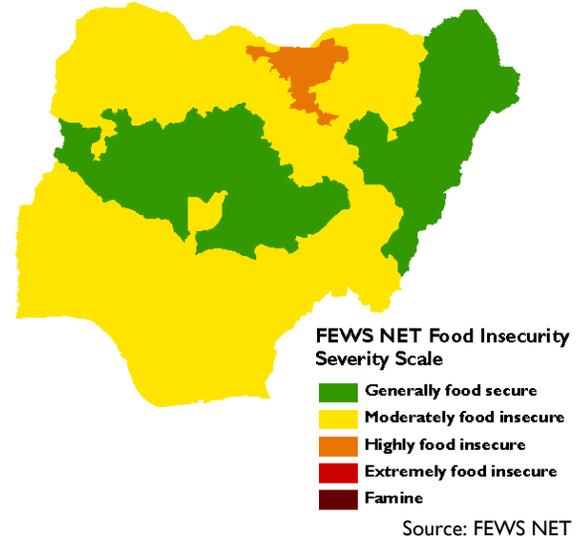


## NIGERIA Food Security Outlook

## March to September 2008

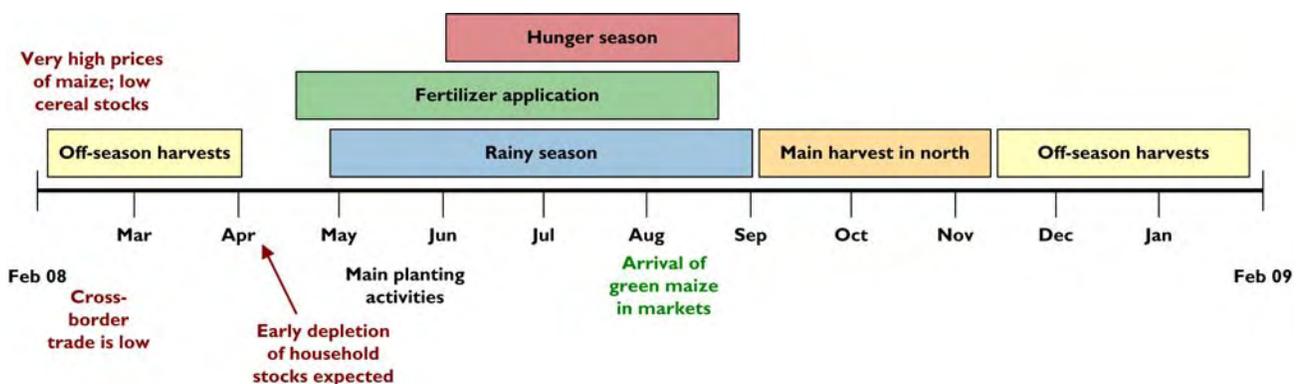
- Food security is currently constrained for many households in Nigeria. Localized production deficits in the main 2007 harvest occurred as a result of localized poor rainfall and an early end to the rainy season in mid-September. Consequently, prices started rising earlier than normal, and remain above average, especially in the north, fueled by speculative hoarding from traders and high industrial demand for grains. Many poor households have had to turn to the market earlier than normal in the season to purchase food, resulting in moderate food insecurity and localized high food insecurity in the north.
- From April to September, food prices are expected to remain high and market supplies limited, but conditions will begin to improve with the onset of the 2008 main rainy season. This season is expected to begin well in May, increasing the likelihood of a good harvest starting in September. This will cause traders to start to release stocks by June or July, relieving some pressure on prices. The government is also expected to supply markets with grain from strategic reserves, although this will likely have a limited impact. July to September is the peak hunger period in the north, however, and food insecurity will persist in those areas as a result.

**Figure I.** Current estimated food security conditions, March 2008



- In the worst-case scenario, food insecurity increases to high and extreme levels through September. If the main rainy season is poor, expectations for a below-normal harvest would increase, and traders would continue to hold onto stocks, causing prices to increase even further during the peak hunger season, especially in northern areas. Low resources and poor coordination would cause government interventions using the strategic grain reserve to have no positive impact, and continued border closures between Nigeria and its neighbors would further limit the flow of grains. A poor harvest starting in September would then cause food insecurity to increase further in 2009.

### Seasonal calendar and critical events



## Current food security conditions, March 2008

Food security is currently constrained for many households in Nigeria. Localized production deficits in the main 2007 harvest in October and November occurred as a result of localized poor rainfall and an early end to the rainy season in mid-September. Consequently, prices started rising earlier than normal, and remain above average, especially in the north, fueled by speculative hoarding from traders and high industrial demand for grains. Many poor households have had to turn to the market earlier than normal in the season to purchase food, resulting in moderate food insecurity and localized high food insecurity in the north (Figure 1).

### Outcome of the 2007 growing season

The 2007 growing season from May through September ended abruptly in mid-September after several droughts during the season. The early cessation of rainfall resulted in crop failures, especially of non-drought-resistant crops such as maize, sorghum, rice, and cowpea. Maize was the most affected by the combined impacts of drought and the early end of rainfall, and millet was the least affected. Production shortages are expected to be more pronounced in the far northern states such as Yobe, Jigawa, Bauchi, Kano, Katsina, and Kebbi.

After the main harvest, off-season harvests occur from December through March, which can supplement production during the main harvest. However, in localized areas of the far north that were affected by poor rainfall and the early end of the season, water shortages have led to poor off-season harvests of irrigated crops as a result of the low water table and insufficient water in rivers and ponds. As a result, the irrigated harvest is not expected to compensate for the localized production shortages in main crops.

### Markets and trade

Following the main harvest, sharp increases in the prices of sorghum and maize were reported by a joint CILSS/FAO/FEWS NET regional mission to northern Nigeria in October 2007. Prices have since then continued to rise as a result of expected shortages of maize and sorghum as well as high levels of demand for cereals from industry and national and foreign traders, including Chinese who have started industrial companies in Nigeria. As a result, especially in northern Nigeria, market and trade conditions have been constrained by unseasonably high prices and low stocks of major staple foods.

Demand from the private sector for the most traded cereals, mainly maize and sorghum, was very high between October and November. In January, however, both demand and supply decreased due to low stocks and high prices. Faced with high prices of both sorghum and maize, households and private companies resorted to millet as an alternative source of food and industrial purposes. Many private processing companies such as breweries have been testing millet to see if it can replace maize and sorghum as an input into the production of poultry feeds and beverages.

The tensions observed in October in northern markets persisted in March, with continued low stocks and higher prices in those areas. The prices of foodstuffs in major northern Nigerian markets (Dawanu in Kano, Dandune in Katsina, and Saminaka in Kaduna) are higher than their four-year average and their prices at the same period last year, with cowpea and sorghum exceeding their prices at this time in 2005 in some of the markets. The prices of maize, sorghum, and millet were 5,800, 5,200 and 5,400 naira per 100 kg bag respectively in Dawanu market in March, which represent increases of 54, 48, and 49 percent respectively over the four-year March average prices. These prices remain lower than prices during March 2005 in this market. However, the prices of the same commodities were slightly lower and stocks more available in other major cereal markets in north-central parts of the country such as Kaduna. As of March, the price of cowpea in Dawanu market was 80,600 naira per MT. This price is 72 percent higher than the four-year average. One ton of local rice is sold at 109,000 in Dawanu market. Although international rice prices are high and many rice farms were adversely affected by flooding in northern Nigeria, rice stocks remain relatively high across northern markets.

The lack of information on production figures for the 2008 harvest from the government continues to fuel speculative behavior. Many traders continue to withhold their stocks, hoping to sell them later during the lean period from June through August. Significant stocks of cowpea are being withheld by traders that have significant storage capacity, for example, and consequently the price of cowpea has been rising since the first week of January. The high prices and low market stocks are not unusual in Nigeria, which has recurrent price instability, variability, and rapid shifts in production.

What is unique this year is the parallel sharp increases in the prices of all three major staple foods as early as the month of January.

In terms of cross-border trade, flows of cereals, cash crops, and tubers were high from October to December immediately following the main harvest, as demand from Nigerian traders and some neighboring countries such as Niger Republic for maize, sorghum, millet, rice, and cassava was relatively high. National and foreign traders were buying millet, maize, and cassava from several markets, including Dawanau market in Dawakin Tofa of Kano State and Giwa, Saminaka and Panbegwa in Kaduna State from October to December 2007. Buyers from the Republic of Mali and the Republic of Burkina Faso were purchasing chili pepper, tamarind, cassava chips/gari (farina), and cowpea from Dawanau market, and Cameroun traders were buying millet, red hibiscus, and tamarind during the same period.

However, the high prices of all major foods in Nigeria resulted in the reversal of trade flows in January. Faced with unfavorable import parity prices, foreign traders were not buying from Nigerian markets. However, traders from Dawanu market imported in January a substantial quantity of millet, which was then stored in their warehouses. As of March 2008, cross-border trade between Nigeria and neighboring countries has become unseasonably low. This trend is likely to persist until food prices decrease significantly in Nigeria and make price differential attractive to Sahelian traders. This is unlikely to occur at least until July if the performance of the new May to September growing season is perceived by market stakeholders to be good or August when the newly harvested crops begin to reach markets.

If the prices of maize and other cereals continue to rise, so too will the price of poultry and eggs, while profits among companies that rely on maize (such as breweries) will decrease. Poultry and poultry feed companies may face losses, which will slow even further the recovery of the ailing poultry industry that was devastated by the impacts of avian influenza.

#### **Livestock**

The early end to the 2007 rainy season has also affected livestock. Water resources dried out earlier than usual in the far north, leading to poor animal body conditions and livestock prices in localized areas of that zone. Furthermore, poor households were not able to bring their animals to market due to scarce availability and high prices of fuel in the far north. The combined impact of the water shortages and high prices of fuel contributed to the erosion of those households' sources of food and cash. In response, herders in those areas moved their animals southward in search of pasture and water as early as January, instead of as normal in March. These movements have resulted in localized and limited conflicts between herders and farmers.

In the north-central and southern parts of the country, however, livestock conditions have remained good. The prices of livestock have been high since the 2007 harvest, owing to high demand for meat from southern Nigeria. This has translated into increased income for pastoral households. Additionally, cross-border trade of livestock remains high in March as Nigerian traders are buying small and large animals from the Republic of Niger and Chad.

#### **Household impacts and response**

As a result of the parallel increases in the prices of all essential staple foods, food access for poor households in both urban and rural areas has diminished and the risk of food insecurity has increased, especially in the dry savannah areas of northern Nigeria in the states bordering the Republic of Niger and Chad. In response, the federal government began intervening in the market in March to stabilize market prices. In February, Nigeria established a federal strategic grain reserve of about 72,000 MT. The federal government has since sold 65,000 MT, including to the 36 states (46,000 MT), the poultry industry (3,000 MT), and individual households (1,158 MT). The remaining stocks have been recently reinforced to a level of 24,000 MT, which will be kept in warehouse as an emergency stock.

The current level of the federal strategic grain reserve is insufficient to have a significant impact on markets. The subsidized sale of federal stocks could only have an impact on prices and stocks if additional stocks are provided by the states and if traders decide to release some of their stocks following the government operation. The exact quantity of stocks held by the states as buffer stocks is presently not known to the federal reserve agency. Many of the states do not have any buffer stocks, as they mainly depend on the federal government for market or emergency interventions. The three states that are believed to have been building up buffer stocks over time are Kano, Zamfara, and Bauchi. Last year, the states of Kaduna, Katsina, and Yobe also indicated some seriousness about building up their stocks.

The combined effect of localized production deficits, localized high prices, and localized limited market supplies is adversely impacting poor households' sources of food and income. The millet/sorghum-based livelihood zones are the most affected, which are located in the far northeast in the Sahel Savannah ecological belt that stretches from Jigawa to Yobe and Borno. The area features harsh environmental conditions ranging from low soil productivity, average annual rainfall of less than 600 mm, and desertification. These unfavorable conditions are exacerbated by the lack of substantial irrigation schemes, limited diversity of cash crops, poor local economic conditions, and landholdings of poor households that limit cultivated areas to 2 ha. Poor households' food reserves can only meet their food needs for six months in normal years, and they normally turn to the market and seasonal migration to purchase the balance of food in April. This year, conditions are worse than normal, and households have already turned to the markets in early March and have to buy their food at very high prices. The increased prices of poultry and eggs will also limit household access to these foods, which are an important source of protein and nutrition for children throughout the country. The rapid and early erosion of household sources of food has brought about localized high food insecurity in the dry savannah and moderate food insecurity in many other areas of the country.

**Most-likely food security scenario**

**April to June 2008**

In the most-likely food security scenario through June, market stocks remain limited, and prices remain above average. Federal government reserve stocks remain limited and do not have a significant impact on market supply, and border closures in West Africa continue to limit cereal flows in the region. Consequently, food prices increase further in April, despite the arrival of irrigated maize in most major markets of northern Nigeria. The irrigated maize has only a marginal impact on stocks and market prices, since most households prefer dry maize to newly harvested wet maize. Prices of maize, sorghum, and millet are expected to be above the four-year average, with the cost of maize being particularly high. Market stocks are lower from April onwards when compared to previous months, and industrial and household demand for maize continues to increase.

Additionally, the 2008 growing season is expected to start normally in mid-May in the north and the north-central areas of the country and in April in the south, and in the most-likely scenario the general performance of the season is good. Localized dry spells and droughts occur in the far north and the middle belt, and localized flooding occurs in the south, but these hazards are common in those areas and are not expected to have significant impacts on the performance of the season. Traders in the far north will monitor the season, but they are not expected to take any actions with their stocks until July when they are confident about the outcome of the season.

Household access to fertilizer and seeds for planting during the main growing season is expected to be adequate, due to government interventions to support access to fertilizer. The market price of fertilizer has been very high, due to high international prices triggered by high international demand and high international fuel prices; a 50 kg bag of fertilizer that was sold at 2,800 naira in March 2007 is now sold at 5,000 naira in March 2008. However, government interventions will support household access to these inputs, facilitating a normal harvest starting in September.

The continued increase in demand for maize and sorghum results from their extensive use as raw materials for poultry industries, breweries, and food processing companies in Nigeria. The parallel sharp increase in the prices of maize and sorghum continues to threaten the profit margins of these companies. As a result, prices of processed food, poultry, and poultry products are expected to remain high, which limits access for households that purchase these goods on the market, especially in the far north.

**Table I.** Most-likely scenario assumptions and indicators

**April to June**

- Market stocks remain low and prices remain above average
- Irrigated maize harvest in April has limited impact on stocks or prices
- Border closures limit cereal flows in the region
- 2008 rainy season starts well in mid-May
- Government interventions support access to fertilizers and seeds
- Government stocks are limited

**July to September**

- Traders begin releasing more stocks with expectation of good 2008 harvest
- Prices begin to decrease, but remain high
- The 2008 main harvest begins well in August and September in northern areas
- Border closures remain

Many poor households throughout the country will have to resort to coping mechanisms as the season progresses and any stocks they had have run out. One such coping mechanism may be the start of unusual migration patterns. However, urban migrants that are already working in cities are not expected to return for land preparation and sowing; they will likely continue to work and remit money, which contributes to mitigating seasonal food insecurity. As a result, extreme food insecurity is prevented as the annual lean period begins in June, including in the far north due to the impacts of remittances, income from petty trade, the availability of legumes and fruits, and the sale of livestock. However, households in some areas of the north such as Jigawa remain highly food insecure as a result of the continued limited market stocks and high prices in the area.

In the north-central parts of the country, where surplus production is common, the good onset of the season in mid-May and June encourages traders to start to release some stocks in these areas as early as June. These stocks will likely soon be further reinforced due to the flow of maize and tubers from southern Nigeria in June and July. Market prices exhibit a slight downward trend in prices, although they are still expected to remain above average.

In the Middle Belt, access to food remains difficult in this scenario due to the combined effect of high prices of cereal and basic household items and low household food stocks. However, a diversity of cash crops and urban labor opportunities provide alternative sources of cash to access food other than through own-production, thereby helping to mitigate food insecurity. Irrigated production of maize, legumes, and fruits provide in April a diversity of food to households near rivers and functional irrigation schemes such as Lake Chad, the Niger River and the Sokoto Rima. This will help mitigate rising food insecurity, since most households will be able to offset main-season crop losses. Still, food insecurity is likely to remain moderate as the lean period sets in starting June.

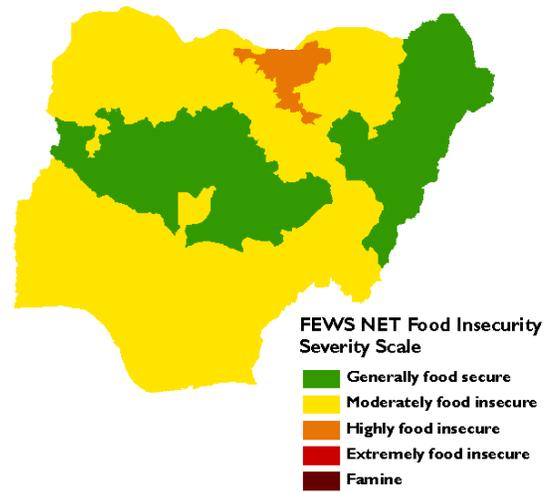
In the southern part of the country, the prices of maize, sorghum, and millet are expected to remain higher than the four-year average and the cost of the commodities in March 2007. The high cost of cereals in the north will cause an increase in demand that leads to the higher prices for these crops and cowpea in the south. The annual lean period in these southern areas occurs from April to July, with May and June as the most critical months, as the main annual harvest starts earlier in the south than in northern parts of the country. As a result, poor households remain moderately food insecure due to difficult access to food during this period, especially because food security conditions are more severe this year than normal.

In an effort to mitigate the impact of the limited stocks and high food prices, the Government of Nigeria releases stocks that are sold at subsidized prices, both from federal and from state reserves. Efforts are made to build consensus on when to buy or release what, how much, and where so that the implementation of the food reserve policy is coordinated. However, due to a low quantity of stocks held by the government, the impact of this intervention is limited.

**July to September 2008**

From July to September, food security is expected to improve in southern Nigeria, but food insecurity will likely persist or increase seasonally in many northern areas. In this third quarter of 2008, the main rainy season is expected to continue well in this scenario, increasing the likelihood of an average or better harvest starting in August and September in northern areas. The upcoming harvest will encourage more traders to release stocks onto the market, although cross-border trade between Nigeria and neighboring countries is expected to remain limited by official border closures. The government intervention of releasing grain at subsidized prices continues during the hunger season in July and August, with the same limited impact as occurred from April to June.

**Figure 2. Most-likely scenario: estimated food security conditions, April to June 2008**



Source: FEWS NET

Average rainfall throughout the country in July and August will continue to raise hopes for a normal harvest. As a result, farmers and traders begin release their old stocks. This will improve supplies on markets, and the prices of major commodities will start to decrease. However, food prices are expected to remain higher than the four-year average. July to September is the peak of the hunger period in northern Nigeria, when the most households have run out of stocks from last year’s harvest and rely on the market to purchase their food. Although the improved market conditions will help mitigate the rising food insecurity, conditions are still expected to deteriorate seasonally in July and August. The onset of the harvest in September is then expected to keep food insecurity to moderate levels in the northeast (including Yobe, Borno, and northern Gombe) and in the northwest (including Kebbi, Zamfara, Katsina, and Kano). However, localized areas such as Jigawa are likely to remain highly food insecure through September.

Additionally, in August, new maize, millet, legumes, and fruits arrive in local and urban markets. This increases household access to a greater diversity of food Labor opportunities for poor households will also increase from the surge in agricultural activities such as fertilizer application in the far north and harvesting in the north-central parts of the country.

Rainfall from the main rainy season will also improve pasture and water availability in August and September. This will lead to improved animal body conditions and milk production, which increase the sources of income and improve the livelihoods and food security of pastoral households. Pastoral households that previously migrated southward in search of pasture are able to return to their normal grazing areas in the north.

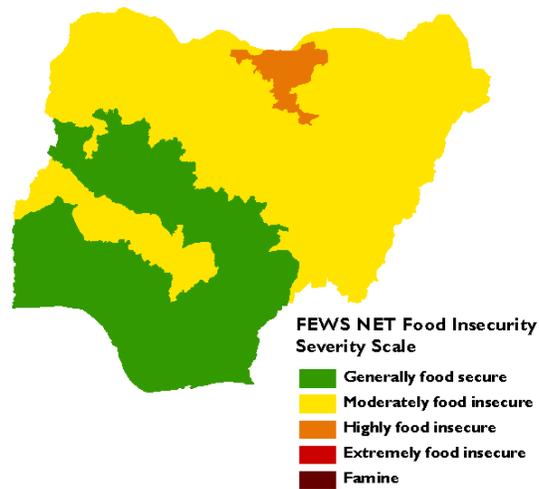
The border closures between Nigeria and neighboring countries will have negative food security implications for the region, especially Niger. July and August are the peak months of the hunger season in the Sahel, and are usually marked by the highest prices and the lowest stocks of the year. Grain exports from Nigeria to neighboring countries, especially maize in August and sorghum in September, usually help reinforce market stocks in those countries and make food more available to households. However, this year, exports of grain from Nigeria to the neighboring countries are expected to be less than normal even given prevailing limited market stocks as a result of the expected border closures from July to September. This limited grain trade will prevent market stocks from increasing as much in Niger during these months, triggering price hikes and exacerbating food insecurity.

**Worst-case food security scenario**

**April to June 2008**

In the worst-case scenario, food security deteriorates across almost all of Nigeria. The main 2008 rainy season could start late and perform poorly in both northern and southern areas. Limited government interventions to support agricultural inputs enable high international prices of fertilizer to drive domestic prices very high. Poor expectations for the upcoming harvest would cause traders to further withhold stocks, and government efforts to intervene could fail due to limited resources and poor coordination, causing to prices to continue to sharply increase to above 50 percent of the average. Additionally, border closures

**Figure 3. Most-likely scenario: estimated food security conditions, July to September 2008**



Source: FEWS NET

**Table 2. Worst-case scenario assumptions and indicators**

**April to June**

- 2008 rainy season starts late and performs poorly
- Access to fertilizer and seeds is limited due to high international prices
- Border closures remain, further limiting cereal trade
- Prices reach 50 percent above average, and market stocks are very limited
- Government stocks are poorly distributed, and have no positive impact on food supplies

**July to September**

- Traders do not release stocks, expecting further price increases with expectation of poor 2008 harvest
- Prices continue to escalate
- The 2008 main harvest begins late and is below average
- Border closures remain in place

would continue in this scenario, further limiting the transfer of the already limited food stocks to significantly deficit areas.

In northern areas, the rainy season starts later than usual, with below-normal rainfall in many areas. In the south, excessive rains could cause flooding that leads to soil erosion, loss of farmland, and production shortages during the main harvest that starts in June in southern areas; in the south, the price of yam, cassava, legumes, fruits, and processed food reach historical highs as a result.

Additionally, households do not have enough resources to invest in land preparation and agricultural inputs. High food prices and tight supplies cause resources that are usually allocated for the purchase of seeds and fertilizer and land preparation to be diverted to food purchases, and limited government support in input markets causes high international fertilizer prices to impact domestic prices. As a result, poor households use poor-quality seeds and fertilizer for farming, which combines with the erratic season to cause expectations of a poor harvest starting in August and September in northern areas.

Markets react to the late and erratic start of the season. Traders continue to hold onto stocks, causing exceptionally high prices of all major commodities. Prices that were already high exceed 50 percent above the average, and markets remain poorly supplied. Demand for cereal from neighboring countries for Nigerian food is low despite rising food insecurity in localized areas of Niger and Chad; foreign traders and governments are not buying because prices are too high and supplies tight. The impacts of the even higher prices cause private cross-border trade to be even lower than in the most-likely scenario when compounded with the border closures between Nigeria and its neighbors. The transfer of food from Nigeria to deficit areas of Sahelian countries is thus even lower than expected.

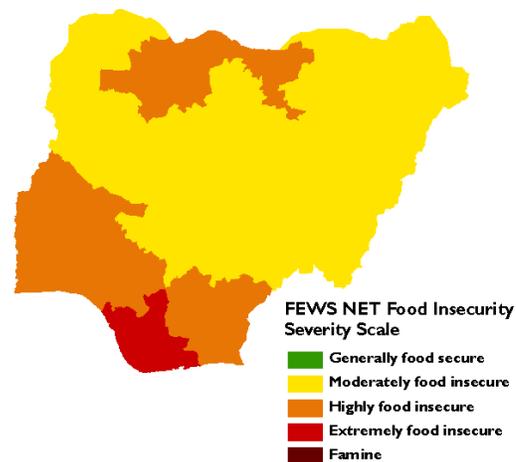
The low market stocks and high prices of major staple foods lead to limited food access, causing reduced meal frequency and inadequate balance of nutrients. Poor households in the north depend on drastic coping mechanisms such as distress migration, sale of farmland and other assets, and remittances for survival. The situation results in a surge in malnourished children in the dry savannah in states such as Jigawa and Katsina. Moderate and high food insecurity spreads throughout northern Nigeria as the hunger season begins in May and June.

In southern areas, May to June is the peak of the hunger period, and high levels of food insecurity occur as a result of exceptionally high prices due to the flooding in certain areas and a poor onset of their main harvest. The most vulnerable households in Bayelsa, Rivers, and Delta states in the south become extremely food insecure as they have poor transportation systems, and food availability is significantly decreased by flooding and the already low market supplies.

The poor performance of the season will also result in late pasture production. Faced with fodder scarcity, most pastoral households in the north move southward where fodder is more available. Those that stay, hoping for an improvement in rainfall, lose some of their animals due to the fodder and water scarcity. Faced with rising food insecurity due to the loss of their assets, those pastoral households could migrate to major cities to sell their labor to meet their food needs by June or July. In areas where pastoralists remain, the struggle for resources between farmers and herders leads to conflicts, the destruction of farmlands and other property, and the loss of human and animal lives.

In the worst-case scenario, no effective response in terms of strategic grain reserves is accomplished. Strategic grain resources are limited to almost nothing at both the federal and state levels. Additionally, a lack of coordination between federal and state governments could result in different entities intervening in the markets at inappropriate times, negating any minimal impact that the limited resources available could have had on the low market supplies and high prices of basic grains.

**Figure 4.** Worst-case scenario: estimated food security conditions, April to June 2008



Source: FEWS NET

**July to September 2008**

Food security deteriorates further in northern Nigeria from July to September 2008 in the worst-case scenario, and conditions are worse than normal in the south. The limited amount and uneven distribution of rainfall that begin in June continues through the remainder of the season, leading to droughts and excessive and widespread crop failures throughout the north and the middle belt. The low access to fertilizers and quality seeds results in further reductions in yields in some areas of the far north when the main 2008 harvest begins in September. Ineffective road systems and high cost of fuel make it difficult to transport crops that were recently harvested in the south to the north, and the high fuel costs also make it difficult for households to bring their produce and animals to markets.

Even before the main harvest begins, traders would react to the unfavorable conditions by continuing to withhold their stocks. Panic buying from traders would occur in all major markets of northern Nigeria, leading supplies to be tight both in Nigeria and neighboring Sahelian countries. However, cross-border trade continues to be limited, as border closures remain in place even longer than in the most-likely scenario. As a result, prices of all major cereal and cash crops reach historical high levels across West African markets.

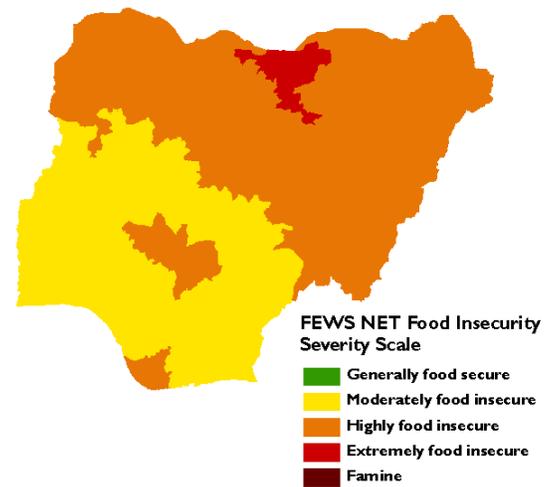
During this peak hunger period in northern Nigeria, food access is constrained more than normal by the very high prices of all major commodities; the situation results in extreme food insecurity in localized areas of the dry belt and the middle belt in Nigeria. The rise in food insecurity would result in a decrease in meal frequencies, inadequate balance of nutrients, and a surge in malnutrition in the North.

As a result, households go deeper into debt because of pressing needs. They send an increasing number of members of the household, including women, to cities in search of employment opportunities. Remittances are relied on for up to 40 percent of household sources of income, as opposed to 10 percent in normal periods. Across the north, households become highly food insecure, with continued pockets of extreme food insecurity.

Continued poor performance of the season exacerbates the late pasture development that began in May in this scenario. The cost of fodder remains high and livestock prices begin to deteriorate. Normal seasonal migration patterns of pastoral households are not followed, leading to increased conflict between farmers and herders and heavy losses of animals and farmlands. The deterioration of the sources of income and resultant decreased food access for pastoral households results in a surge in malnutrition among children under the age of five.

Although farmers would expand the cultivated area planted for major crops in this scenario to compensate for low market stocks, the cumulative impacts of droughts, crop failures, and low fertilizer usage would result in poor cereal production, which would be identified by preliminary findings in September. The unfavorable conditions would lead to unseasonably high prices, low stocks, and low household food reserves after the harvest begins, increasing the prospect of rising food insecurity in 2009 in northern and north-central parts of the country.

**Figure 5. Worst-case scenario: estimated food security conditions, July to September 2008**



Source: FEWS NET