3. The impact of agricultural price volatility on supply chain stakeholders in Burkina Faso

Summary report based on interviews conducted with actors in agricultural sectors and their trade associations in Burkina Faso

Inter-Réseaux Développement rural

Affects of price volatility on agricultural actors in Burkina Faso

Producers

Intra-annual volatility

Although most farmers are aware of the advantages of stocking production, they are often **forced to sell at harvest time** when prices are lowest. Two phenomena can be observed. (i) *Over-commercialization* in relation to household needs, due to liquidity constraints at harvest time and lack of storage capacity: during the lean season, when cereal availability decreases and prices are high, households with a food deficit have no choice but to buy the same products they sell on the local market at much higher prices. (ii) *Undervaluation* of produce: this occurs when farmers in surplus areas sell low during harvest season, rather than waiting for the lean season, when profits are higher. This can be explained by the absence of commercialization credit and inadequate individual and collective storage facilities.

Inter-annual volatility

Producers struggle to generate high returns and thus stabilize market supply due to **lack of long-term support to agricultural production.** Production support such as input subsidies, access to credit, improved extension, and farm management advisory services can help farmers improve profitability and secure their production systems. Lack of security induces highly variable returns that exacerbate volatility. Combined with uncertain market opportunities and unpredictable prices, insecurity pushes farmers to adopt risk minimization strategies that discourage investment in intensification.

As a result, farmers struggle to plan their economic activities, as price volatility makes it difficult to obtain a lucrative price every year. Farmers invest without knowing whether even their production costs will be covered. The result is increasing indebtedness, which further limits their ability to access credit and make investments. The instability means that prices cannot serve as signals for farmers to make decisions on what to plant and when.

"Price instability destabilizes the producer, who is unable to organize operations in a way that helps him develop. The farmer does not know at what price his products will sell. He makes loans and buys fertilizer on credit, without knowing the sale price. If

commodity prices fall, he cannot honor his commitments and will spend the next season in debt, and the one after that trying to bounce back." (source: UGCPA)

Farmers' organizations

Farmers' organizations (FOs) often have difficulty planning. Indeed, FOs that provide marketing support to their members through "pre-payment" (or advance payment) systems, for instance, grapple with managing price risk: it is difficult to set the purchase price for members when the market price is unknown. For FOs that market produce collectively, choosing when to release stocks is also a challenge: at what point are market prices high enough? When should the FO hold on to stocks, in hopes that prices continue to rise? These difficult decisions are exacerbated by the fact that FOs often have little flexibility in terms of their treasury, and practically no room to take risks or deal with market downturns.

Price volatility can also undermine collective dynamics, particularly when it comes to marketing produce. For example, when production is stored to be sold later, if prices do not increase enough, the operation will fail and the FO will not be able to cover the cost of collecting, storing and packaging the produce.

Spikes and/or unanticipated price changes can also lead members and/or purchasers to default on commitments or contracts. Thus, during low production years, farmers do not always respect commitments to deliver produce to the FO, opting instead to sell to the highest bidder. This phenomenon is amplified by the complexity of social relations between producers and traders.

Processors

"The first consequence is a lower profit margin for processing firms; it is rarely possible to pass on the totality of commodity price increases to the finished products, as this would scare off customers." (source: Afrique verte)

The steady rise in commodity prices in recent years has significantly reduced margins of small processing units and companies, threatening their survival.

"There have always been price fluctuations, but they stayed within reason. Since the price hikes of 2008 (32%), cereal prices have become unbearable and we hope that the good harvest in the 2009/2010 season will bring them down." (source: Société Faso Riibo)

These financial constraints make it difficult for companies to access credit, therefore reducing their ability to purchase raw materials in large quantities when prices are low.

Intra-annual price variations combined with lack of storage facilities (either unavailable or too costly to acquire) force these processing companies to buy part of their raw materials at high prices during the lean period.

Price volatility sometimes pushes producers to default on contracts with processors in order to sell to the highest bidder.

Rural and urban consumers

Rural households: A majority of consumers are also producers. We can distinguish three categories of households: (i) non-producing households, which are entirely dependent on market prices in the same way urban households are; (ii) households producing a net deficit, i.e., production does not cover family food needs. They are strongly affected by price volatility, especially increases during the lean period, which affect their food security; (iii) households producing a net surplus, i.e., production covers food needs throughout the year. These households are affected by price volatility the same way producers are: falling prices at the time of sale affect the household's disposable income.

Urban households: Urban households make consumption choices based on the prices of imported and local products. The most vulnerable modify their eating habits to cover food staples, and when the situation worsens, they resort to debt and eat fewer meals a day. Dairy products, meat and vegetables are reduced under this strategy, which strongly impacts the nutritional situation, particularly of young children. When the crisis worsens, food riots are likely to break out in the cities.

The role of traders in the functioning of markets and their impact on price volatility: an ongoing debate

The interviews conducted for this study showed a genuine difference of opinion on traders' impact on price volatility. Some actors criticize their speculative tendency to hold on to stocks when prices are high and commodities scarce. Interviewees mentioned traders' practice of drastically reducing purchase prices in order to take advantage of producers' weak negotiating capacity and high liquidity needs, thus driving them to sell off their products, which are sold at high prices in deficit or remote areas.

However, others stressed the importance of traders, especially during deficit years, when they supply the market with purchases from neighboring countries. Traders have the ability to relieve isolated areas by marketing their products and/or providing access to products.

"In 2004/2005, at the peak of the food crisis in Burkina Faso, the cereal deficit was such that citizens and the government accused retailers of hiding stocks. An emergency meeting was convened at the Chamber of Commerce to ask merchants to bring out the cereals! We, the traders, proposed to wait 20 days, while we went to buy cereal in Ghana. The 18th day, we brought 20 trucks of cereal to the Ouagadougou market.," (source: member of the cereal industry trade association in Burkina Faso)

Although traders play off the volatility of prices to recoup this type of activity, interviews reveal that some traders face the same lack of investment capacity for long-term storage (borrowing in order to store large quantities). Moreover, they are subject to price risk during atypical years when abnormal market behavior results in small price fluctuations between harvest and the lean season. Many traders rotate their inventory several times a year (buying and selling fast) and therefore generate only very small margins on each rotation. Their expenditures are proportional to their ability to open up remote areas. The lack of organization of these actors and the emergence of "opportunistic traders" due to soaring prices raises the issue of regulating these actors.

In sum, the impact of price volatility on actors in the agricultural industry is mostly negative. However, it is important to keep in mind that some actors benefit from the increased intra-annual food prices to recoup costs of their operations. This is the case for intermediaries, but also producers who store produce and market it as a group (collective marketing, warrantage), thanks to a marketing loan that allows them to delay the release of produce on the market. "Typical" intra-annual volatility (low prices at harvest, high prices during the lean period) is, in this case, beneficial to producers who have storage capacity. The situation is problematic in the following cases: (i) for producers who cannot store, (ii) a market shift prior to or during the lean period for various reasons: massive imports, food aid or subsidized prices. There are also cases where price increases of imported cereals (and manufactured products like pasta) improve the competitiveness of local cereals (and local agro-food products), which can have a positive impact on producers.

strategies to cope with price volatility

Farmer organizations' strategies

To limit the impact of volatile commodity prices on their members, provide them market channels and a lucrative price, farmers' organizations implement different strategies and instruments. The following table provides an overview[6].

Type of instrument/strategy	UGCPA	UDPNS7	FepaB	Mogtedo	CISV[8]	FEPPASI	FNGN
Collective storage and marketing	X	X	X				
Warrantage					X		
Contracts with public and private actors	X	X	X				
Contract farming			X				
Agricultural stock exchanges			X				
Contractual relationship with processors				X			
Establishment of regional cooperatives						X	
Production support: input credits and training (IT, CEF)	X	X	X	X			X
Guarantee fund	X						
Price control	X			X			
Volume control	X			X			
Buffer stock							X
Security fund	X						
Quantitative restrictions on market access				X			

[6] This overview is not exhaustive.

[7] Departmental unions of cowpea producers in the province Sanmatenga.

[8] CISV is an Italian NGO that supports a farmers' cooperative in southwestern Burkina Faso.

First and foremost, storage

Some FOs offer collective storage facilities, for marketing purposes or not: UGCPA collects and stores members' cereal surplus to sell during the marketing year. CISV supports a cooperative that practices warrantage by allowing its members to store produce so they can sell it during the lean period and obtain warehouse credit to develop other income generating activities.

Access to finance and production support

Some FOs also implement strategies to improve access to credit for both the organization and its members, such as the use of warehouse receipts, or a guarantee fund (sometimes backed by financial partners or members' contributions, as in the case of FepaB). These tools facilitate access to credit lines from microfinance institutions (MFIs) and commercial banks to (i) finance inputs for members, and sometimes, (ii) provide cash advances on members' standing crops (the case of UGCPA).

Strategies to hedge price risk

FOs use several types of strategies to hedge price risk. (i) They spread payments over the crop year by making advance payments prior to harvest (November). Prices are then revised at the beginning of the marketing year (January), at which time rebates or additional payments are made. (ii) Similarly, in the case of warehouse receipts, credit is calculated by applying a discount to the crop value, to protect members from prices that are not high enough to recoup their costs. (iii) FOs strive to gather as much information as possible on external factors influencing prices, so as to calculate a fair price at each stage. (iv) FOs consult with other sector actors to fix prices. In Mogtedo, producers and parboilers negotiate the price of paddy and impose a floor price on all traders who buy on this market, which is controlled by the FO. (v) To protect themselves against potential years of instability, some FOs implement a guarantee fund to cover deficits if the fixed price is higher than the selling price, so as to avoid indebting farmers (the case of UGCPA, which takes 2 FCFA per kilogram of rice stored, to finance the fund).

Strategies to ensure marketing channels and the matching of supply to demand

The concentration of supply in one FO is an asset for buyers who want to simplify transactions by limiting the number of points of purchases. The interviews revealed different forms of contractual relationships: post-harvest contracts with institutional buyers (e.g., PAM/P4P, SONAGESS), which use a bidding process to supply their retail distribution network based on strict quality criteria (FepaB, UGCPA); post-harvest contracts with traders and processors (the case of most FOs), which require good negotiation skills; specific contracts between actors from the same supply chain (as in Mogtedo); and finally, contract farming, as established by FepaB via production contracts between the FO and its members, used to honor its commitments with WFP (P4P) and the Burkinabe Brakina brewery.

Participation in cereal stock exchanges is another way to find market opportunities for producers and FO members by connecting sellers and buyers in the national or sub-regional area.

Volume control
Interviews revealed the case of one FO that sets quantitative thresholds for products going to market. This is the case of the cooperative in Mogtedo, which promotes the flow of its members' products to the market before opening it up to products from non-members. This same cooperative has a buffer stock (constituted through repayment in kind of input credit) for when market volumes are low, thus allowing it to regulate prices at the local level.

Member loyalty and reinforcement of the cooperative spirit
One of the challenges for FOs that market their members' produce is to guarantee volumes needed to ensure profitability. This requires members to meet their delivery commitments and repay credit in kind. To address this problem, FOs use different strategies to ensure member loyalty including (i) provision of services: access to credit inputs, training, technical advice based on incentive systems that rank producers in different categories depending on their ability to honor commitments, the highest ranking providing more advantageous services (eg., UGCPA) and (ii) the payment of dividends on profits generated by product sales.

Joint strategies to drive local regulation
To address the problem of poorly organized markets (especially in border regions, as the FEPPASI experience demonstrates), some FOs rely on cooperation/partnership strategies with decentralized services of the State, local and sometimes municipal governments. The goal is to create favorable conditions so that everyone can play their role in the market.

Other findings on the choice and level of implementation of FOs' strategies:

Strategies that differ in scale: The majority of strategies implemented by FOs are limited in scope. Either very localized (e.g., the self-managed Mogtedo market), or limited to local, occasionally departmental, or regional levels (e.g., UGCPA, which contributes 5% to SONAGESS stocks), these initiatives do not influence the market in terms of quantities.

Strategies that differ depending on prices: When prices fall, it is in the interest of FOs to sell as a group, to benefit from greater negotiating power with traders. Conversely, when prices rise, FO members can make a profit by storing and selling later, provided they have the technical and financial capacity. In this case, the strategy becomes more individual than collective.

Strategies that differ depending on surplus areas and areas of chronic deficit
In surplus areas (such as the southwest), FOs focus on marketing the surplus of their members, while in deficit areas (such as the northwest, an area that faces food insecurity), FOs help members develop off-season crops like vegetables and other income-generating activities to mitigate cereal production deficits. The challenge is to secure incomes so that households can buy cereal. This is the case of the *Fédération nationale des groupements Naam* (FNGN), which combines the promotion of off-season crops with food granaries and training in soil fertility renewal techniques. Furthermore,

to better match supply to demand and supply deficit areas with products from surplus areas, FepaB has implemented a strategy to sell production from union affiliates that produce a surplus to affiliates that face deficits. FNGN pursues a similar strategy. The initiatives of *Afrique Verte/*Aprossa are along the same lines.

Processors' strategies

Despite price volatility and lack of government and international aid, which affects the capacity of processors to secure their incomes, some strategies have nevertheless been put in place.

The federation of agro-food industries in Burkina Faso (FIAB) wants to strengthen its members' capacity (small agro-food processing units) to contract and negotiate with FOs: two key factors to the process of stabilizing raw materials prices.

Processors choose not to increase prices of processed products despite fluctuations in the cost of raw materials, so as not to destabilize consumers and lose a clientele that is difficult to keep loyal.

"We set an average price which is the balance point between the low prices of raw materials at harvest time and the high prices during the lean season. The goal is to keep a fixed price throughout the year." (source: Société Faso Riibo)

Another strategy is to maintain the selling price by reducing the volume per bag.

"This year, our company was highly threatened by the sharp rise in sugar prices (which have more than doubled). This increase is the result of a government policy that requires sugar importers to first purchase supplies from the national sugar companies, before importing the remainder. The result is that prices have soared, because local sugar supply does not cover demand. We do not want to increase the selling prices of our products, so we have chosen to reduce the volume per bag, otherwise, we would already be bankrupt." (source: Société Faso Riibo)

Food security strategies of producer households and rural consumers

At the local level: implementation of village cereal banks to store food in preparation for the lean period. Families may also have their own granaries.

Trade associations strategies

Lobbying the government is one of the main strategies of agricultural sector trade associations: negotiating agricultural finance, renewed involvement in national agricultural production, protection of local markets vis-à-vis imports and better market regulation.

The *Comité Interprofessionnel des Céréales du Burkina* (CICB), for example, is working to develop cereal marketing cooperatives at the local level, in collaboration with local elected officials. The idea is to identify a number of markets in Burkina Faso to create the first cereal cooperatives.

"Local elected officials will identify a rural municipality to sell cereal on market day. A market study will be carried out in the vicinity of the town the day before the market to fix a guaranteed minimum price the next day. On market day, the producer brings his

cereals to the market, the Comité will monitor the buyers and sellers entering the market and make note of quantities. The next day, the producer comes to receive payment for sale. The trader no longer has to intercept farmers on the way to the market to buy at lower prices. We have identified three markets where we will implement these cereal marketing cooperatives by early 2011."

Some trade associations and FOs work to secure markets for local products. In the case of the trade association *Comité interprofessionnel du riz du Burkina Faso* (CIRB), this involves promoting local rice, as a way to ensure more stable opportunities for producers through improved product visibility. To cope with rising prices of local rice compared to imported rice, CIRB set up flagship stores with illuminated signs indicating that "this seller is licensed by the trade association - high quality local rice sold here": "CRIB, sellers of local rice". The strategy is to publicize, including through radio and TV, the licensed shops that sell good quality rice at an acceptable price. The idea is to improve the visibility of local rice as well as fight against fraud (resellers who sell imported rice packaged as local rice).

Government intervention in the regulation of markets in Burkina Faso: initiatives, perspectives and recommendations of stakeholder

Regulatory instruments used in agricultural markets in Burkina Faso

Price **stabilization** instruments

Production support policies based on subsidizing agricultural inputs and setting a floor price: since the 2008 crisis, a government "rice" operation has subsidized fertilizer and seeds, which have been distributed to farmers on credit with repayment in kind at delivery (amount based on the floor price set by the government);

Market Information Systems (MIS): dissemination of price information to avoid local speculation (TV, radios);

Stocks in SONAGESS: SONAGESS has 2 stocks:

- The National Security Stock is designed to address food security, and has no impact on price volatility due to small volumes (approximately 30,000 tons);
- The intervention stock, which involves a few tens of thousands of tons more, is also inadequate and unable to play a regulating role.

The government also sets up on an ad hoc basis **border control instruments**: for example, restrictions on import tariffs and/or border closings in the event of price spikes. These measures go against Community trade control regulation (liberalized regional domestic markets and Community trade policy at the borders).

Instruments to **reduce the effects** of price volatility retroactively

These measures fall under the strategy of prevention and management of food crises, and generally target vulnerable populations:

Subsidized prices in deficit regions: the objective is to limit price hikes in deficit areas where food insecurity is high.

Distribution of food vouchers (Ouagadougou and Bubo Dioulasso), via a licensed distribution network.

Free distribution of seed and fertilizer.

Food and cash for work initiatives, promotion of income generating activities, etc.

Perspectives of agricultural sector stakeholders on government intervention in market regulation: challenges and recommendations

Marketing: support collective marketing in surplus areas and regulate the activities of traders

If FOs market their production collectively, traders will be able to buy in large quantities at lower prices and pass on this savings to consumers.

Today in Burkina Faso, there is no licensing system for traders; the result is that anyone can get involved. Government regulation is recommended to improve the transparency and functioning of markets heavily influenced by this group of actors.

Improve transparency and market information
Interviews revealed a lack of transparency in the very markets that need information to operate effectively. It is the trade associations' role to encourage information-sharing between supply chain actors, but they need support in the form of government regulation to do so.

Moreover, many FOs stressed the lack of knowledge and information on the flow of cereals within the country and with neighboring countries. Here, too, the government could play a regulatory role by requiring actors to communicate on their levels of stocks, location, business operations, etc. This would make it easier to identify surplus and deficit areas.

Mobilization of buffer stocks and the establishment of social safety nets
The SONAGESS stock is no longer decentralized. There is a need to move towards a decentralization of food security stocks. In addition, these national stocks are not big enough to truly affect markets. The volume of the national security stock has not been revised since the early 1980s, while production has tripled and the population more than doubled.

Better coordination between public and private actors, particularly FOs
Private actors, especially FOs, are sometimes destabilized when faced with unexpected and inopportune government interventions such as subsidized prices, food aid operations, and input subsidies, which can disrupt the market and create distortion. There is a need to improve dialogue between public and private actors to enhance the effectiveness of interventions and market predictability.

Agricultural policies
The government only reacts once a crisis is underway, when it really should intervene beforehand, especially to support production. Pre-crisis interventions include training

farmers, providing them adequate equipment, and supplying quality inputs. There is a need to implement policies that encourage production, storage and marketing.

Government support to processors is insufficient. Consultative frameworks are in place (CICB, CIRB, etc.), but overall, the productive phases of the agricultural supply chain receive more support than the processing and upgrading phases.

It is hoped that the government will implement a genuine strategy for financing agriculture and the various links in the supply chain. For example, one way to increase competition among traders and reduce speculation or unfair agreements, is to create and/or strengthen the business skills of traders (through credit).

There is a need to focus on sectors that are key to food security—namely maize and rice—rather than trying to promote all products (the current strategy of the Ministry of Agriculture).

Conclusion and recommendations: Striking a balance between public and private sectors in the regulation of agricultural markets in Burkina Faso

The volatility of agricultural prices in Burkina Faso is a structural phenomenon that has been around for several decades. Its consequences affect agricultural industry actors, especially farmers and their organizations, in diverse ways. Different actors have different interests when it comes to market functioning: traders, processors and farmer organizations who stock to sell surplus would like to benefit from increased intra-annual prices, but also hedge the risks of inter-annual variations. FOs in deficit areas have developed strategies to support income diversification and promote village food security stocks. While "typical" intra-annual volatility is easy to manage, these actors must face the challenge of atypical market downturns, when price risk is high.

Market unpredictability is the major constraint facing agricultural actors today. In light of the structural adjustment programs (SAPs) of the 1990s and reduced government involvement in the regulation of agricultural markets, actors have developed instruments (see table above) that are private-sector based but also designed to substitute government failures.

Today, **the government plays only a very small role in regulating markets**. Agricultural actors criticize the lack of market regulation (especially the lack of organization of traders); the ineffectiveness of national security and intervention stocks to regulate markets; the absence of support for production, processing, and upgrading local products; as well as uncoordinated, unexpected measures that can be counterproductive.

For their part, **FOs are developing interesting strategies that combine private and public-type instruments**, but these initiatives are being implemented on a very small scale—regional, at best. These FOs are largely supported by donors and technical assistance providers, without whom their activities would be seriously compromised. Moreover, despite the government's lack of support to FOs, it plays a key role in their operations, often serving as the major trading partner their products (e.g., UGCPA and FepaB). The current challenge is to find a middle ground between total reliance on private sector operators and the highly interventionist policies of the 1970s: **a joint**

public-private partnership approach to market regulation. This could involve (i) the introduction of a combination of instruments that aim to anticipate market behavior, (ii) a consultative decision-making approach that brings together supply chain stakeholders and government actors, (iii) price negotiations (price ranges) between public and private players.

FOs may be taking care of the production support needs of their members, but the government still has a role to play in facilitating access to agricultural finance. Similarly, even though FOs have taken it upon themselves to test new contractual forms to market their products, the government still needs to regulate traders' activities and takes steps to create a secure environment (by registering contracts, offering possibilities to take legal recourse, etc.). And while FOs can develop regulatory tools to control volumes on highly restricted markets, the government needs to more fully appropriate the country's production, to increase its capacity to stock food in case of crisis or price volatility.

Trade organizations offer an adequate framework for negotiations and to improve dialogue between the private and public sectors. They exist in several industries, including cereal and rice (the legislative process is underway), and their main role is currently to lobby and promote local products. It would be useful for them to develop their potential (i) to oversee contracts between sector actors and (ii) negotiate with government authorities.

Finally, we must not forget that Burkina Faso is part of a fast-changing sub-regional economic community. **Regional integration**, the free movement of goods within the sub-region, and the implementation of a regional agricultural policy should be considered as driving forces for domestic agricultural production. Discussions on regulation of domestic markets must be integrated into a more comprehensive approach to regulation within the regional economic community: (i) management of complementarities between major production and consumption areas, (ii) selection and coordination of regulatory instruments at different scales, and (iii) establishment of effective border tools to manage international price volatility.