

Monitoring of market prices of agricultural products in Bougouni and Koutiala, Mali

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Table of Contents

Introduction.....	1
Price Data collection.....	2
Price data analysis	3
Average prices of cereals, legumes and tubers.....	3
Average prices of vegetables and fruits	4
Livestock prices analysis	5
Inputs price analysis	6
Conclusion	7

Introduction

Information on market conditions is a necessary tool for the proper functioning of a liberal economy. This tool allows not only a markets transparency but also a better resource allocation from economic actors. In the framework of the Africa RISING project, information on market conditions is focused on price dynamics of agricultural products and inputs. This has for objective to determine the price trends of agricultural products and inputs, develop a database that will serve for the market analyses and price simulations, and also to inform farmers about the market dynamics.

Price Data collection

There is a set of price collection methods, each with its advantages and disadvantages. There are among them passive observation, interview of actors, account book of traders, and products purchasing. The method of products purchasing is expensive and can provide biased prices if we are not in conditions of average consumer. The price collection by the account book is an interesting method but requires a close collaboration with the traders. The passive observation of transactions has the advantage of collecting prices as they are practiced in the markets, but it will be necessary to determine the weight of measurement units used in these transactions as in the case of interview. The interview of the actors is the fastest method of price collecting. It and has been for this analysis. A questionnaire covering most of agricultural products and inputs was used to collect the quarterly data in the project intervention sites in Bougouni (Dieba, Flola, Sibirila, and Madina) and Koutiala (M'pessoba, Nampossela, N'golonianasso, Zanzoni, Sirakele). The price data include:

- Cereals and legumes (maize, sorghum, millet, rice, groundnut, cowpea, etc.);
- Vegetables, tubers and fruits (tomato, onion, pepper, eggplant, lettuce, sweet potato, banana, mango, papaya, etc.);
- Livestock (cattle, sheep, goats, poultry, etc.);
- Agricultural inputs (mineral fertilizers, herbicides, insecticides, etc.).

Price data analysis

This section focuses on quarterly analysis of the average prices in urban centers (Bougouni and Koutiala) and in intervention villages.

Average prices of cereals, legumes and tubers

Cereal and legume prices include those millet, sorghum, maize, rice, groundnut and cowpea. On average the prices in Bougouni and Koutiala are higher than the prices in rural areas, particularly in the project intervention villages. The average prices of maize grain are estimated to FCFA 100 in rural area 2016 against FCFA 121 in the urban area of Bougouni in the third quarter 2016. Also we note the lowest prices are recorded in the 1st quarter (post-harvest period) while the high prices are observed in the third quarter (lean period). For example, the average price of groundnut grain was FCFA 450 during the first quarter 2016 against FCFA 675 during the third quarter 2016 in project villages in Koutiala district. Tables 1 and 2 give the price trends of main cereals, legumes, and tubers in urban and rural markets in Bougouni and Koutiala in 2016.

Table 1: Average prices of cereals, legumes, and tubers in urban and rural markets in Bougouni (FCFA/kg)

Crops	Janv. - March 2016		April - June 2016		Jul - Sept 2016	
	Urban market	Rural market	Urban market	Rural market	Urban market	Rural market
Maize	108,33	82,92	123,33	104,38	121,25	100,00
Sorghum	133,33	101,06	139,17	125,83	143,33	109,17
Millet	152,92	131,27	179,17	151,25	195,83	150,00
Rice	335,00	298,75	353,33	337,92	341,67	363,34
Fonio	433,33	317,93	518,33	350,00	483,33	100,00
Groundnut	358,33	295,85	471,67	475,00	641,67	475,00
Cowpea	318,75	286,45	370,00	389,60	454,17	516,67
Sweet potato	92,92	114,58	191,67	180,20	287,92	77,78
Yams	194,17	183,53	283,33	141,67	397,93	84,58

Source: calculated by the authors using data prices survey

Table 2: Average prices of cereals, legumes, and tubers in urban and rural markets in Koutiala (FCFA/kg)

Crops	Janv - March 2016		April - June 2016		Jul - Sept 2016	
	Urban market	Rural market	Urban market	Rural market	Urban market	Rural market
Maize	90,42	85,00	125,00	114,17	158,33	154,17
Sorghum	121,67	113,77	146,67	141,67	150,00	155,00
Millet	139,58	136,67	179,17	161,67	160,00	177,92
Rice	291,67	308,33	340,00	350,00	372,50	383,33
Fonio	358,33	391,67	500,00	433,33	683,33	516,67

Groundnut	450,00	433,33	545,00	516,67	650,00	620,83
Cowpea	279,58	258,33	320,83	300,00	400,00	400,00
Sweet potato	88,33	96,67	166,67	166,67	137,50	166,67
Yams	500,00	500,00	433,33	500,00	854,17	833,33

Source: calculated by the authors using data prices survey

Average prices of vegetables and fruits

Information on average prices of vegetables and fruits during the first three quarters of 2016 show there is a difference between prices in urban and rural markets in Bougouni and Koutiala districts. For some vegetables and fruits, the average prices in rural areas are high compared to average prices in urban markets. For example, average price of pepper in Bougouni district is higher in rural markets than urban market in the three quarters of 2016 (FCFA 1575, FCFA 2233, and FCFA 2400 in rural markets against FCFA 1541, FCFA 2166, and FCFA 2191 in urban market of Bougouni). We note also that in both urban and rural markets the prices are low in the first quarter (January – March 2016), and are high in the third quarter (July – September 2016) for some vegetables and fruits such tomato, pepper, banana, and papaya. These two periods correspond to post-harvest and lean periods respectively. There is a difference in average prices in Bougouni and Koutiala over the three quarters. Some vegetables and fruits are less expensive in Koutiala district (onion and pepper).

Table 3: Average prices of vegetables and fruits in urban and rural markets in Bougouni (FCFA/kg)

Crops	Janv - March 2016		April - June 2016		Jul - Sept 2016	
	Urban market	Rural market	Urban market	Rural market	Urban market	Rural market
Tomato	199,58	171,06	272,92	235,21	482,92	300,63
Onion	337,50	393,75	304,17	329,79	400,00	516,67
Pepper	1541,67	1575	2166,67	2233,33	2191,67	2400
Eggplant	139,58	129,60	124,58	180,63	269,58	200,46
Cabbage	146,25	141,48	173,75	194,80	317,52	378,70
Okra	966,67	1160,43	1000,00	1083,33	n/a	n/a
Banana	239,58	161,25	337,50	n/a	320,83	245,32
Mango	200,00	n/a	140,00	100,00	78,33	82,40
Papaya	164,58	150,63	318,75	150,00	375,00	n/a
Lettuce	143,33	179,38	194,18	250,00	440,83	n/a

Source: calculated by the authors using data prices survey

Table 4: Average prices of vegetables and fruits in urban and rural markets in Koutiala (FCFA/kg)

Crops	Janv - March 2016		April - June 2016		Jul - Sept 2016	
	Urban market	Rural market	Urban market	Rural market	Urban market	Rural market
Tomato	300,00	216,67	400,00	366,67	416,67	466,67
Onion	181,67	153,33	266,67	213,33	341,67	308,33
Pepper	1200,00	1000,00	1666,67	1500,00	2108,33	2000,00
Eggplant	175,00	100,00	391,67	291,67	325,00	158,33
Cabbage	183,33	100,00	187,50	233,33	375,00	333,33
Banana	300,00	200,00	400,00	375,00	416,67	400,00
Mango	83,33	100,00	150,00	133,33	137,50	n/a
Papaya	179,17	133,33	247,93	200,00	300,00	195,83
Lettuce	200,00	200,00	383,33	233,33	258,33	n/a

Source: calculated by the authors using data prices survey

Livestock prices analysis

Livestock is mainly composed of cattle and small ruminants. There are also the livestock products (milk and eggs). The average prices have been recorded in urban and rural markets of Bougouni and Koutiala during the month of August 2016 (see table 5 below). The results show that the prices are generally low in rural markets compared to prices in urban markets in Bougouni and Koutiala. For example, the price of beef is estimated to FCFA 512500 and FCFA 320625 in urban and rural markets respectively in Bougouni. We note that for some animals, the prices are relatively low in Koutiala according to the localization of market. For example, the beef price is low in Koutiala whatever the type of market. The cow price is lower in urban market of Koutiala than in urban market in Bougouni.

Table 5: Average prices of livestock in urban and rural markets of Bougouni and Koutiala

Animal / Animal products	Bougouni August 2016		Koutiala August 2016	
	Urban market	Rural market	Urban market	Rural market
Beef	512500	320625	342500	308750
Cow	282500	169375	196375	180000
Veal	132500	96875	108500	116500
Aries	67500	57188	138500	94000
Sheep	47500	40000	52250	49875
Goat	55000	38750	37375	31375
Goat female	40000	29438	39375	33875
Chicken	5000	2594	3313	2725

Hen	2813	1756	2813	2063
Guinea fow	4000	2563	3625	3000
Donkey	66250	60938	72500	74000
Milk (1 litre)	300	200	350	300
Eggs (alveole)	2000	1850	2000	1800

Source: calculated by the authors using data prices survey

Inputs price analysis

Information about prices inputs include mineral fertilizers, insecticide, herbicide used for cereals (millet, sorghum, maize, rice) and cotton production. The average prices were recorded in urban markets of Bougouni and Koutiala in August 2016. There is no significant difference in prices in the two markets. The average price of cotton herbicide (cotonet 104 EC) is even similar both in Koutiala and Bougouni districts (FCFA 4000 per liter). In summary, the prices of agricultural inputs are relatively similar in urban markets located in the intervention zones of the Africa RISING project.

Table 6: Average prices of agricultural inputs in urban markets of Bougouni and Koutiala (FCFA)

Agricultural Inputs	Unit	Urban market Bougouni	Urban market Koutiala
Cotton complex	Bag of 50 kg	12500	13000
Cereal complex	Bag of 50 kg	12500	13000
Urea	Bag of 50 kg	11000	12000
Cotton insecticide (attakan)	Liter	8000	8500
Cotton herbicide (cotonet 104 EC)	Liter	4000	4000
Maize herbicide (Nicomaïs 40 SC)	Liter	7500	6500
Atrazine 500g/l	Liter	3000	4000
Rice herbicide (Alligator)	Liter	4000	3000

Source: calculated by the authors using data prices survey

Conclusion

The results showed a difference in average prices of agricultural products and inputs in urban and rural markets of Bougouni and Koutiala districts. The agricultural products and inputs are relatively less expensive in rural markets whose the prices are generally the production prices. This analysis is an information source that could help farmers in the resource allocation for the production. This analysis is also important for researchers for the market analyses and prices simulation.