FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

EatSafe: Evidence and Action Towards Safe, Nutritious Food

COVID-19 Response — EatSafe's Food Price Monitoring Tool

February 2022

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gain Global Alliance for Improved Nutrition
ILRI INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE
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Busara

EATSAFE'S COVID-19 RESPONSE

Using GAIN's established relationships with traditional markets where nutritious foods are sold, EatSafe has worked to strengthen the voice of vendors and consumers in the pandemic response and recovery in:

Bangladesh	**Tanzania**
Kenya	**Ethiopia**
Nigeria	**Mozambique**

In October 2020 GAIN began collecting data in two traditional markets in each country **to assess the functioning of markets and market actors under COVID-19**.

While there was a variety of data collected under this activity, this presentation demonstrates the use of an **interactive tool developed to analyze prices of a basket of nutritious foods sourced in traditional markets.**

PRICE ASSESSMENT

of select nutritious foods

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- Selection based on nutritional value, local availability & relevance
- Prices assessed bi-weekly in two markets
- Average price is assessed from three different vendors by local enumerators
- Average weights are pre-assessed/or weighted each time
- Price trends are displayed in local currency/standard units

COUNTRIES AND STUDY LOCATION (TRADITIONAL MARKETS)

COUNTRY	STUDY LOCATIONS (TRADITIONAL MARKETS)
Bangladesh	Banolata Kacha Bazar, Dhaka
	Islambag Kacha Bazar, Dhaka
Kenya	Marikiti Market, Machakos, Machakos county
	Madaraka market, Thika, Kiambu county
Nigeria	Gosa Market, Abuja
	Utako Market, Abuja
Tanzania	Buguruni Market, Dar-es-Salaam
	Kariakoo Market, Dar-es-Salaam
Ethiopia	Kera Market, Addis Abeba
	Lafto Market, Addis Abeba
Mozambique	Maquinino Municipal Market, Beira
	Munhava Municipal Market, Beira

ASSESSED FOOD ITEMS

	Pulses, roots and tuber	Egg and dairy	Poultry, meat and fish	Fruit and vegetable
Bangladesh	Chickpeas	Sour yogurt	Fish (Rui, small)	Red amaranth
	Lentils	Egg		Papaya
Ethiopia	Split field peas	Cottage cheese	Fish (Flito)	Green leafy vegetables
	Lentils	Milk	Chicken	Carrots
		Egg		Tomato
Kenya	Beans-Rosecoco	Milk	Fish (Omena)	Kales
	Green grams	Egg	Beef (with bones)	Cabbage
	Lentils (Kamande)			Carrots
Mozambique	Cowpeas	Milk	Goat meat	Cabbage
	Sweet potatoes		Beef	Carrots
	Manioc			Kowa
				Lettuce
				Banana
Nigeria	Brown beans	Egg	Fish (Titus)	Lettuce
	White beans		Meat	Carrots
	Soya beans		Poultry	Tomatoes
Tanzania	Groundnuts	Milk	Beef liver	Spinach

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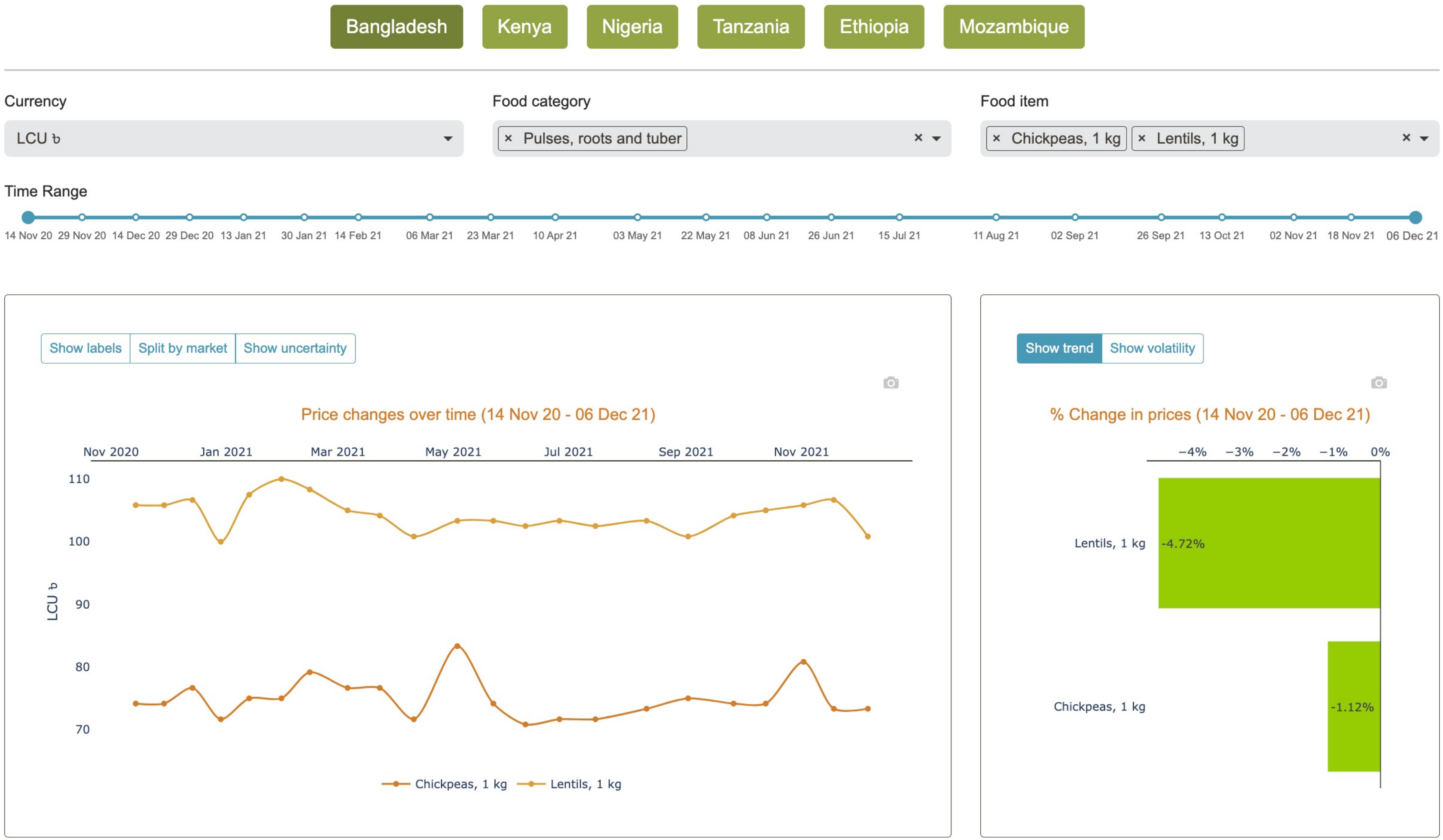
FOOD PRICE MONITORING TOOL


Bangladesh
Kenya
Nigeria
Tanzania
Ethiopia
Mozambique

Currency: LCU ৳

Food category: × Pulses, roots and tuber

Food item: × Chickpeas, 1 kg × Lentils, 1 kg

Time Range: 14 Nov 20 – 06 Dec 21

14 Nov 20
29 Nov 20
14 Dec 20
29 Dec 20
13 Jan 21
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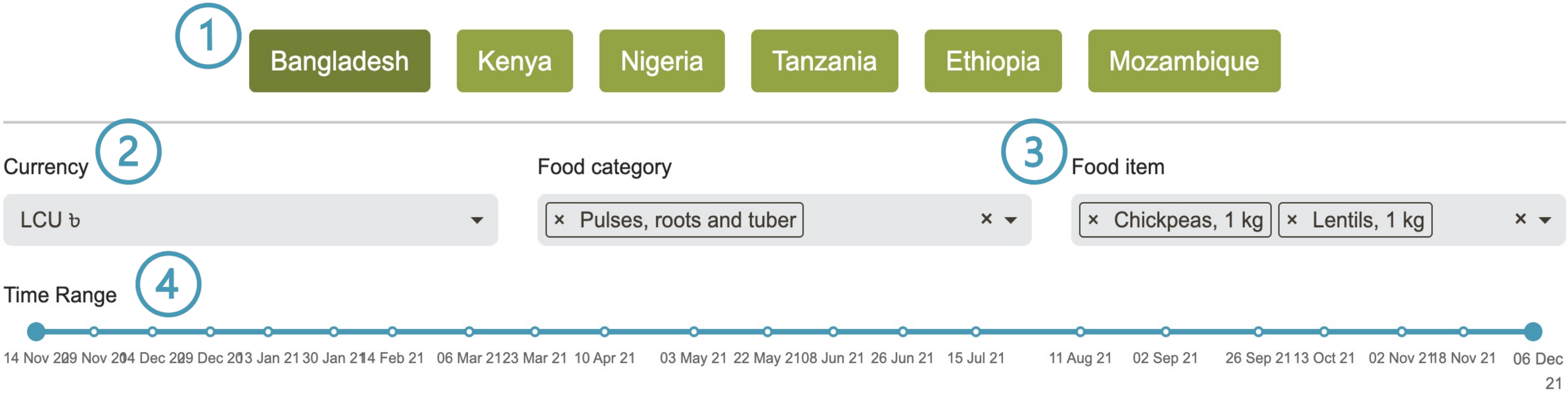
14 Feb 21
06 Mar 21
23 Mar 21
10 Apr 21
03 May 21
22 May 21
08 Jun 21
26 Jun 21
15 Jul 21
11 Aug 21
02 Sep 21
26 Sep 21
13 Oct 21
02 Nov 21
18 Nov 21
06 Dec 21
Show labels
Split by market
Show uncertainty
Price changes over time (14 Nov 20 - 06 Dec 21)
Nov 2020
Jan 2021
Mar 2021
May 2021
Jul 2021
Sep 2021
Nov 2021
110
100
90
80
70
LCU ৳
Chickpeas, 1 kg
Lentils, 1 kg
Show trend
Show volatility
% Change in prices (14 Nov 20 - 06 Dec 21)
−4%
−3%
−2%
−1%
0%
Lentils, 1 kg
-4.72%
Chickpeas, 1 kg
-1.12%

KEY FEATURES


①
Bangladesh
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Tanzania
Ethiopia
Mozambique
②
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02 Nov 21
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06 Dec 21

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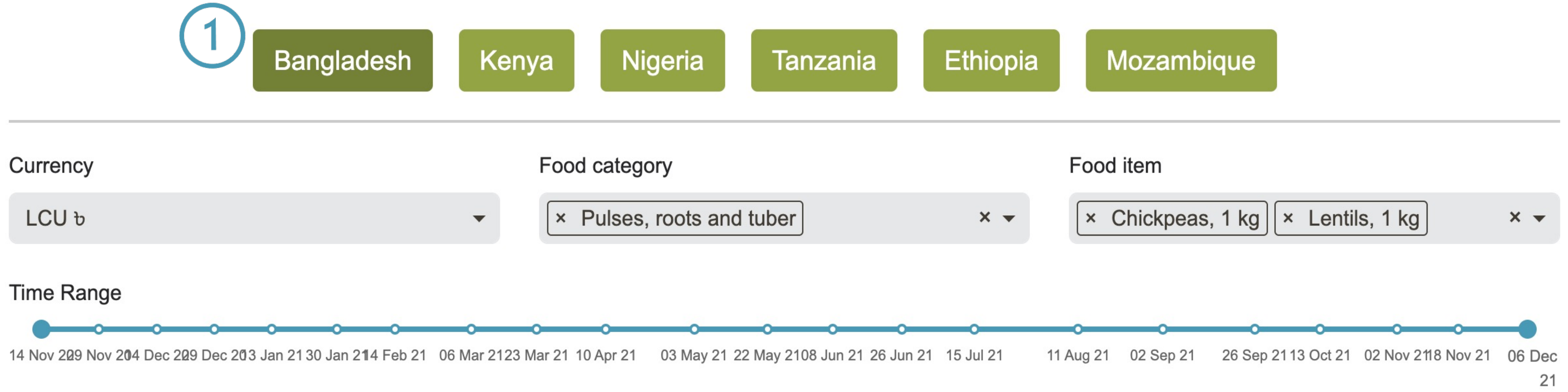
Time Range

- ① **Countries included**
- ② **Currency**
- ③ **Food category and food item**
- ④ **Time range**

KEY FEATURES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Bangladesh
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Ethiopia
Mozambique
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Currency: LCU ৳

Food category: × Pulses, roots and tuber

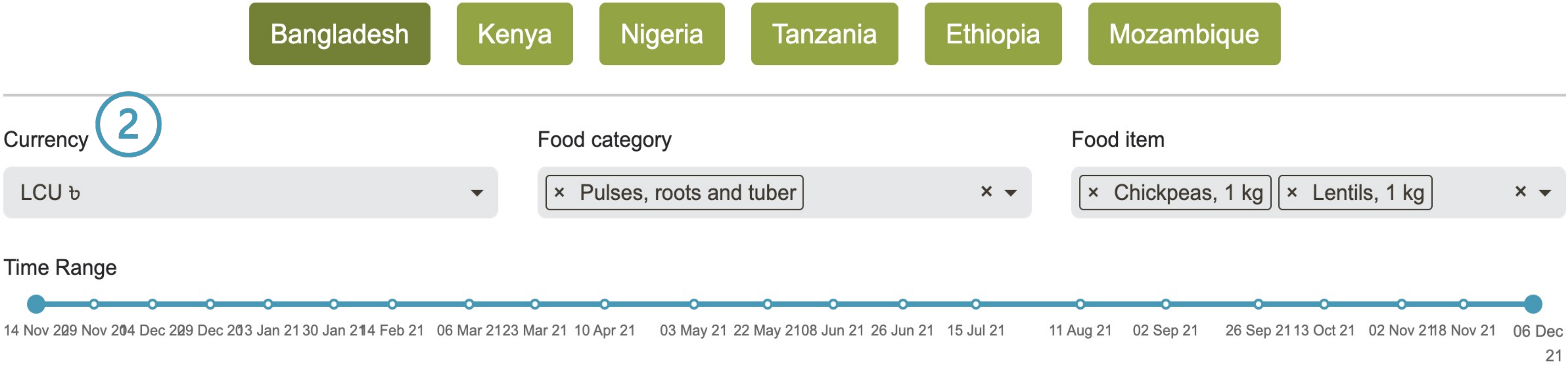
Food item: × Chickpeas, 1 kg × Lentils, 1 kg

Time Range

① Countries included

The price tool highlights food prices for six countries: Bangladesh, Kenya, Nigeria, Tanzania, Ethiopia, and Mozambique, which can be selected individually.

KEY FEATURES


Bangladesh
Kenya
Nigeria
Tanzania
Ethiopia
Mozambique
2
Time Range
14 Nov 20
29 Nov 20
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Currency: LCU ৳

Food category: × Pulses, roots and tuber

Food item: × Chickpeas, 1 kg × Lentils, 1 kg

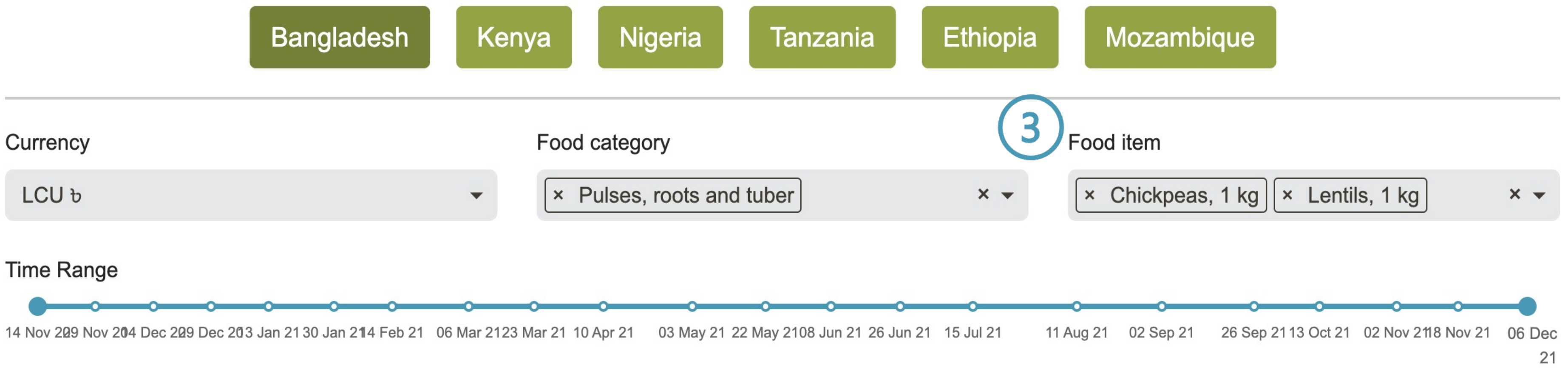
② Currency

By default, the price tool displays food prices in local currency (LCU), however the currency can be changes to USD$, or PPP Inter. $., which can be selected in the dropdown menu.

USD$ and PPP Inter.$ exchange rates are taken from https://www.exchangerates.org.uk/ (as of Dec 2020) and https://data.worldbank.org/indicator/PA.NUS.PRVT.PP?locations=NG by the World Bank.

Country	Currency
Bangladesh	৳, Taka
Kenya	KSh, Kenyan Shilling
Nigeria	₦, Naira
Tanzania	TSh, Tanzanian Shilling
Ethiopia	Br, Ethiopian Birr
Mozambique	MT, Metical

KEY FEATURES


Bangladesh
Kenya
Nigeria
Tanzania
Ethiopia
Mozambique
3
Time Range
14 Nov 20
29 Nov 20
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29 Dec 20
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13 Oct 21
02 Nov 21
18 Nov 21
06 Dec 21

Currency: LCU ৳

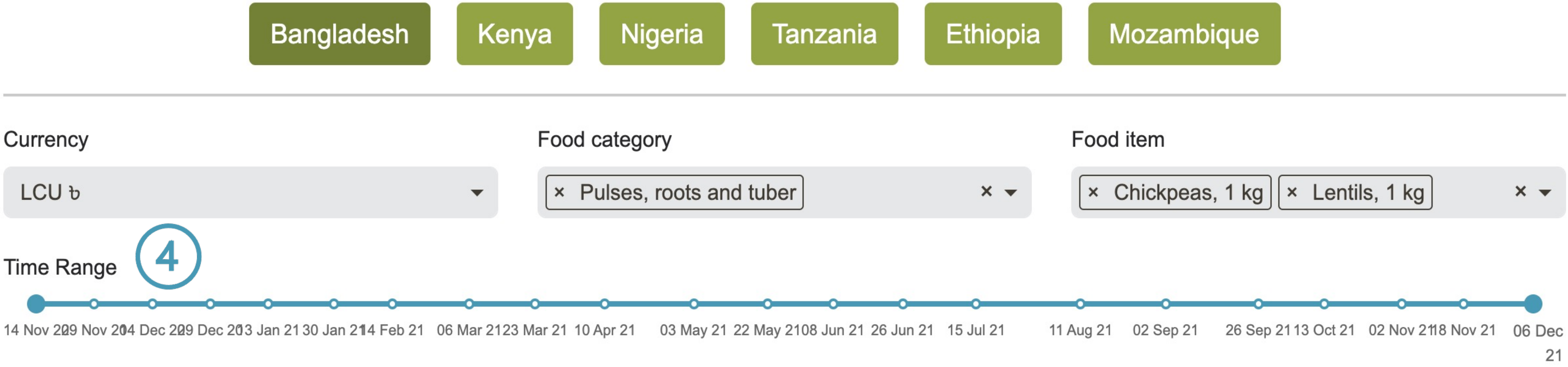
Food category: × Pulses, roots and tuber

Food item: × Chickpeas, 1 kg × Lentils, 1 kg

③ Food category and food item

In each of the six countries, four food groups (i.e., pulses, roots and tuber, eggs and dairy, poultry, meat and fish, and fruits and vegetables) and up to five food items have been assessed and can be selected individually in the drop down menu.

KEY FEATURES


Bangladesh
Kenya
Nigeria
Tanzania
Ethiopia
Mozambique
4
14 Nov 20
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30 Jan 21
14 Feb 21
06 Mar 21
23 Mar 21
10 Apr 21
03 May 21
22 May 21
08 Jun 21
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15 Jul 21
11 Aug 21
02 Sep 21
26 Sep 21
13 Oct 21
02 Nov 21
18 Nov 21
06 Dec 21

Currency: LCU ৳

Food category: × Pulses, roots and tuber

Food item: × Chickpeas, 1 kg × Lentils, 1 kg

Time Range

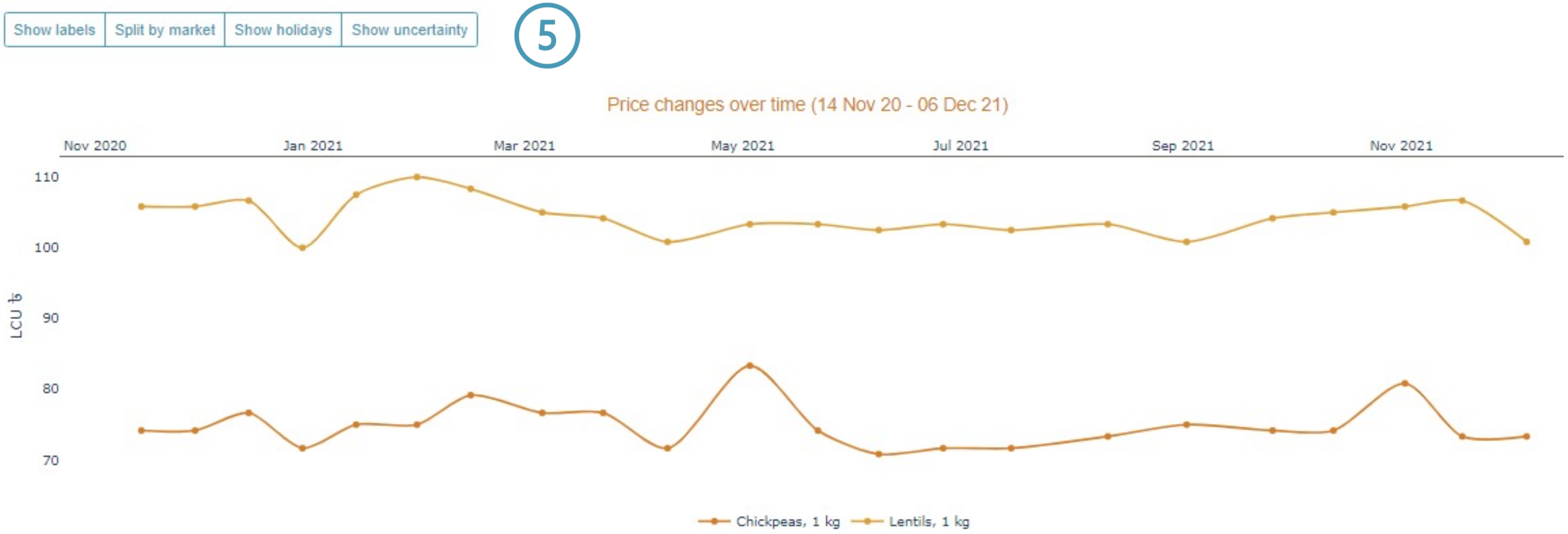
④ Time range

The price assessment start date varies slightly between the countries. Price assessments were conducted approximately every two weeks in both markets. The tool allows for selection of consecutive time ranges in the displayed plot.

Country	Time range	# of rounds
Bangladesh	14 Nov 2020 – 6 Dec 2021	26
Kenya	04 Dec 2020 – 24 Sep 2021	26
Nigeria	09 Dec 2020 – 08 Dec 2021	18
Tanzania	05 Jan 2021 – 08 Jan 2022	19
Ethiopia	17 Apr 2021 – 17 Nov 2021	6
Mozambique	18 Aug 2021 – 23 Dec 2021	12

PRICE TOOL LINE PLOTS

Based on the selected ① country, ② currency, ③ food items, and ④ time range, price changes are being displayed in line plots.

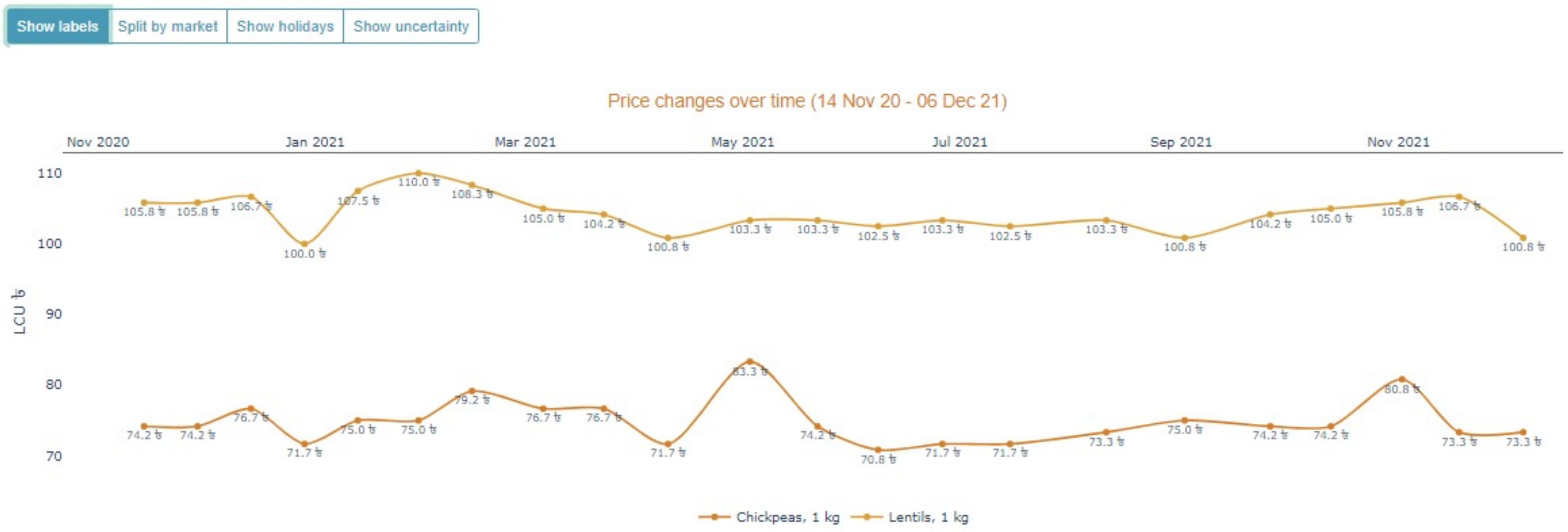

Show labels
Split by market
Show holidays
Show uncertainty
⑤
Price changes over time (14 Nov 20 - 06 Dec 21)
Nov 2020
Jan 2021
Mar 2021
May 2021
Jul 2021
Sep 2021
Nov 2021
110
100
90
80
70
LCU ৳
Chickpeas, 1 kg
Lentils, 1 kg

Additional features can be selected (⑤). All plots can be directly downloaded as .png.

LINE PLOT FEATURES

SHOW LABELS

…adds labels to each data point in the unit/currency selected.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LCU ৳
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106.7 ৳
100.0 ৳
107.5 ৳
110.0 ৳
108.3 ৳
105.0 ৳
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74.2 ৳
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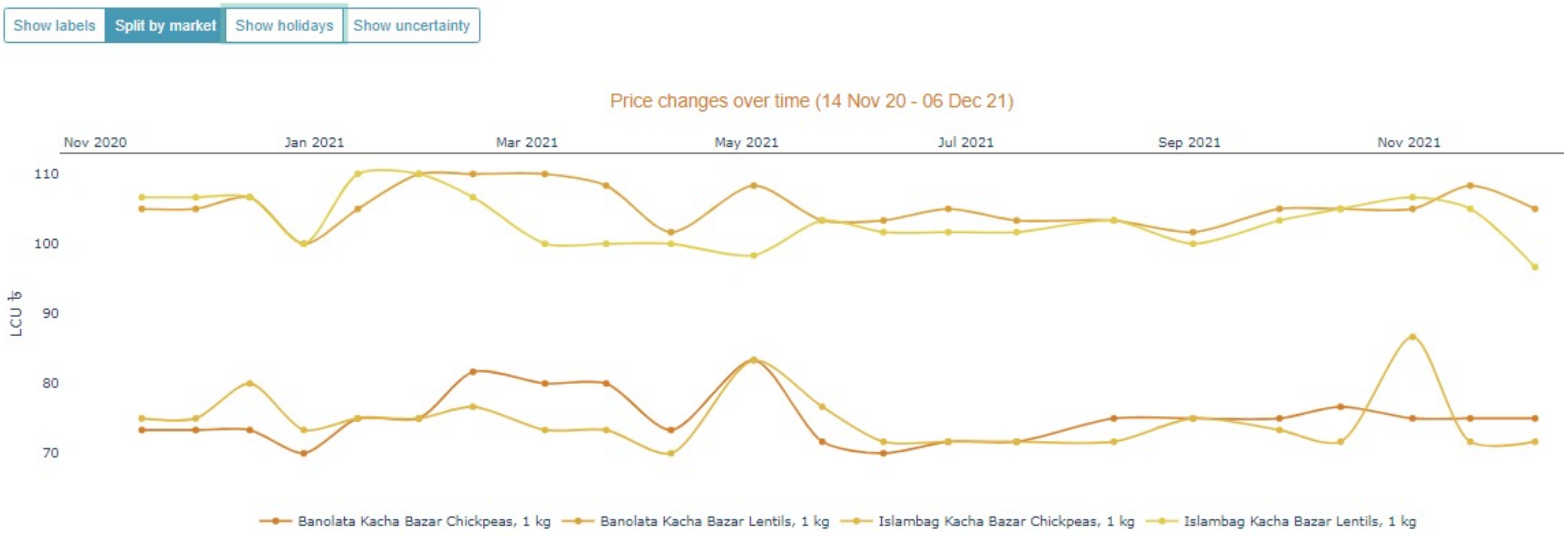
71.7 ৳
73.3 ৳
75.0 ৳
74.2 ৳
74.2 ৳
80.8 ৳
73.3 ৳
73.3 ৳
Chickpeas, 1 kg
Lentils, 1 kg

LINE PLOT FEATURES

SPLIT BY MARKET

…displays the prices by market of assessment for the respective food item. In each of the countries, prices were collected from two traditional markets. Prices for each food item have been collected from three different vendors in each market.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110
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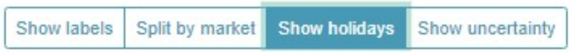
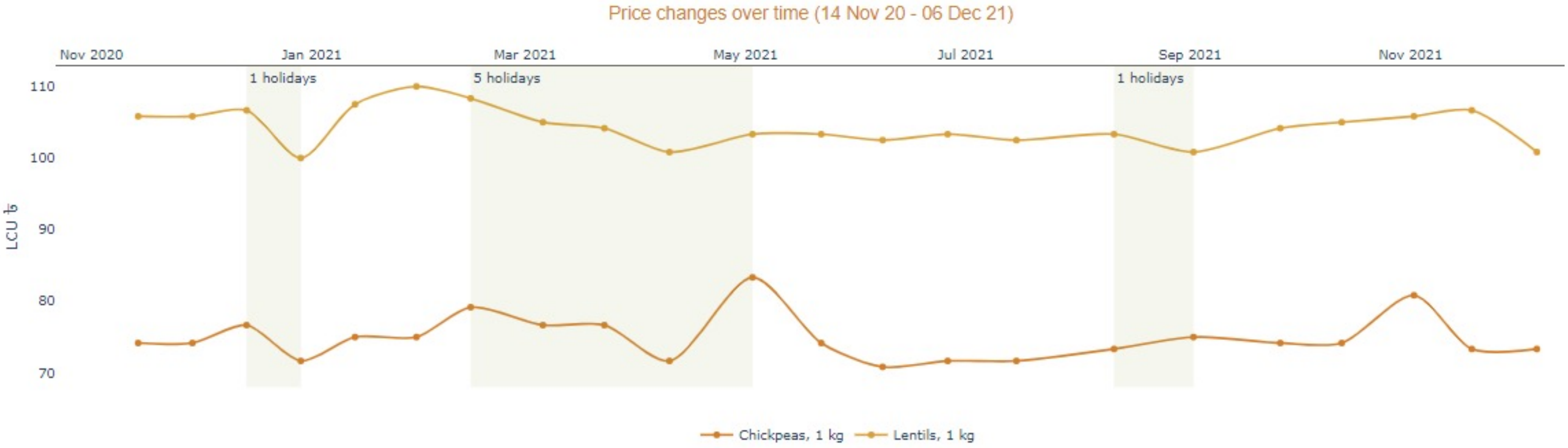
90
80
70
LCU ৳
Banolata Kacha Bazar Chickpeas, 1 kg
Banolata Kacha Bazar Lentils, 1 kg
Islambag Kacha Bazar Chickpeas, 1 kg
Islambag Kacha Bazar Lentils, 1 kg

LINE PLOT FEATURES

SHOW HOLIDAYS

…highlights public holidays over the time of price assessment as prices might increase over holiday seasons. The feature is currently only available for the countries: Bangladesh, Nigeria, Ethiopia and Mozambique.


Show labels
Split by market
Show holidays
Show uncertainty

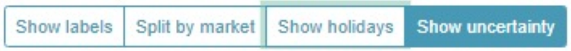


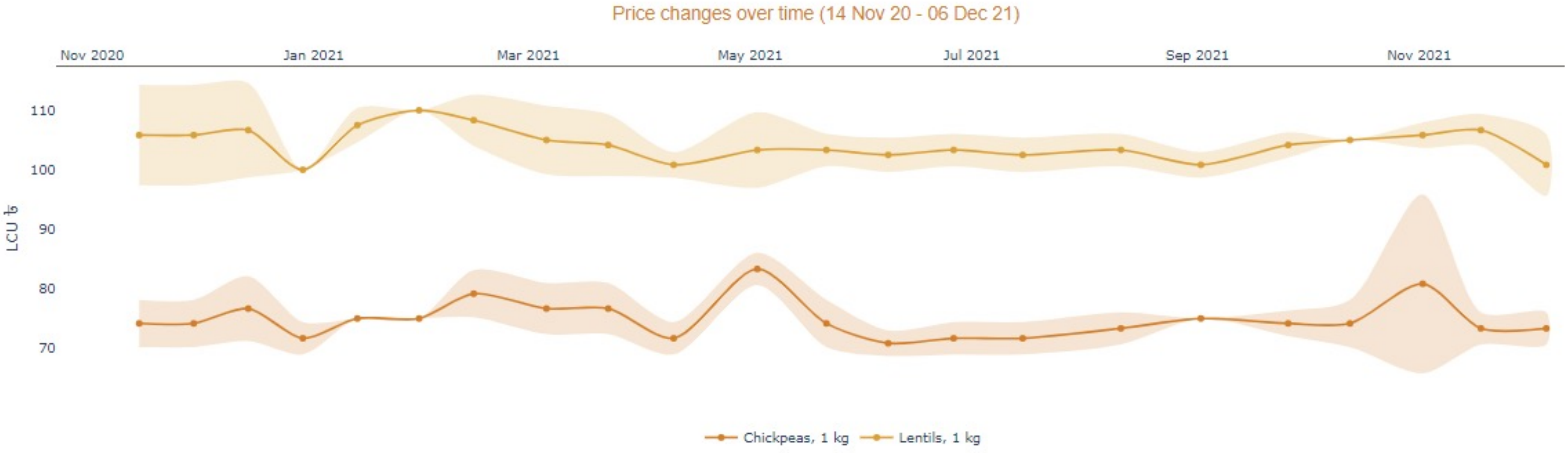
Nurtini et al., (2018) Factors Affecting Cattle Prices During Year-End Holiday Season. FANRes 2018. https://doi.org/10.2991/fanres-18.2018.47

LINE PLOT FEATURES

SHOW UNCERTAINTY

…adds the variability of the price data based on the three assessments taken from each market for each food item for each price assessment round.

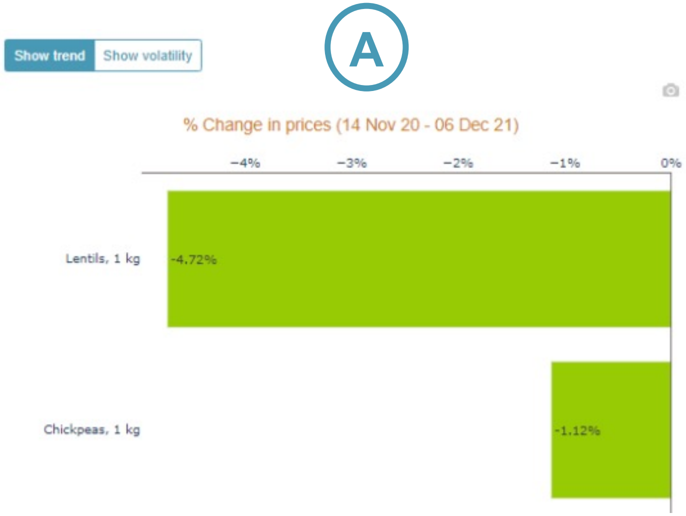

Show labels
Split by market
Show holidays
Show uncertainty

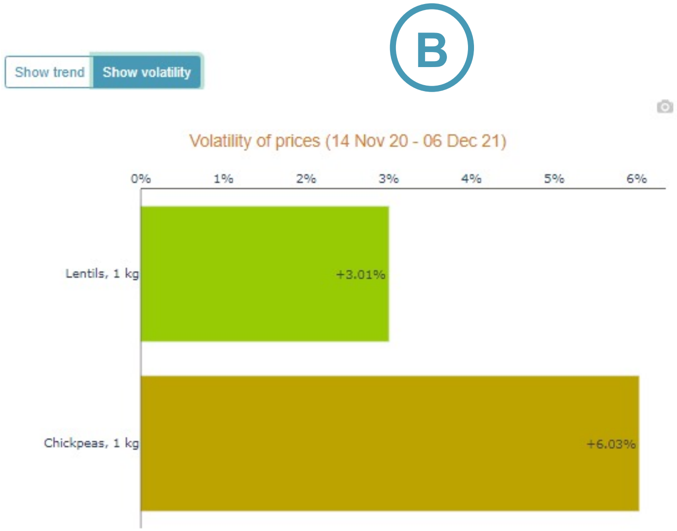


PRICE TOOL BAR CHART

For each price assessment and the respectively selected (1) country, (2) currency, (3) foot items, and (4) time range, the share of price changes (%) is displayed in a bar chart by food item **(A)**. Green depicts a negative price change, red a positive price change.

In addition to the trend analysis the volatility can be selected and is displayed as % volatility in logarithm of prices **(B).**


Show trend
Show volatility
A
% Change in prices (14 Nov 20 - 06 Dec 21)
−4%
−3%
−2%
−1%
0%
Lentils, 1 kg
-4.72%
Chickpeas, 1 kg
-1.12%


Show trend
Show volatility
B
Volatility of prices (14 Nov 20 - 06 Dec 21)
0%
1%
2%
3%
4%
5%
6%
Lentils, 1 kg
+3.01%
Chickpeas, 1 kg
+6.03%

All bar charts can be directly downloaded as .png.

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