

# Consumer food prices: recent developments in the euro area and Spain

Article 01  
29/03/2023

<https://doi.org/10.53479/29821>

## Rationale

Food prices have lately grown at rates unprecedented in recent decades. A detailed comparative analysis of these developments and their determinants from an international perspective is therefore interesting, focusing especially on dairy and cereals, given their high weight in the consumption basket and the strength of their inflation.

## Takeaways

- Food inflation in Spain has not been particularly different from that recorded in the euro area. However, its contribution to headline inflation has been greater because of food's higher weight in Spain's consumption basket.
- The prices of virtually all foods are rising, albeit with considerable heterogeneity.
- Different essentially global factors, which affected food commodity supply and production costs, have been the main determinants of food price developments, as illustrated by dairy and cereals.

## Keywords

Food prices, food inflation, value chain, Spain, euro area.

## JEL classification

E31, L66.

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### Introduction

Consumer food prices have surged globally over the last year. In December 2022 the year-on-year rate of inflation of food, beverages and tobacco (“food”),<sup>1</sup> measured in terms of the harmonised index of consumer prices (HICP), reached 13.8% in the euro area and 14.7% in Spain, a record for the statistical series launched in 1997 and much higher than the historical averages for 1997-2021 (2.1% and 2.4%, respectively).

This surge in food prices is a source of concern for two primary reasons. First, as a consumer staple, higher food prices may put access to healthy food at risk and also force consumers to spend less on other types of goods and services, particularly in the case of lower income households, for whom spending on food accounts for a larger share of their income and their consumption basket (García-Miralles, 2023). Second, households spend on food more often than on any other items. Food price developments therefore have a particularly strong influence on consumers when forming their inflation expectations (Peersman, 2022). This is key from a monetary policy perspective.

In light of the above, this article has a dual aim: (i) to provide a detailed analysis of recent food price developments in the euro area and Spain; and (ii) to analyse the determinants of such developments, considering the particular case of cereals and dairy owing to their high weight in the household consumption basket.

### Recent consumer food price developments

Consumer food prices have surged recently in both Spain and the euro area: year-on-year food inflation rose from less than 2% in both cases in 2021 H1 to 13.6% in the euro area and 14.2% in Spain in 2022 Q4 (see Chart 1.a).<sup>2</sup>

However, some cross-country heterogeneity is observed in terms of the strength of the rise in food prices. For instance, prices have risen particularly sharply in the Baltic States (Estonia, Latvia and Lithuania) and Slovakia, where year-on-year rates above 20% were recorded in 2022 Q4, at least partly because of these countries’ greater exposure to food and fertiliser imports from Russia, Ukraine and Belarus (Bodnàr and Schuler, 2022). Meanwhile, food inflation in France (10.7%) and Italy (11.8%) stood below the levels recorded in the euro area and Spain, whereas in Germany it was higher (16%) (see Chart 1.b).

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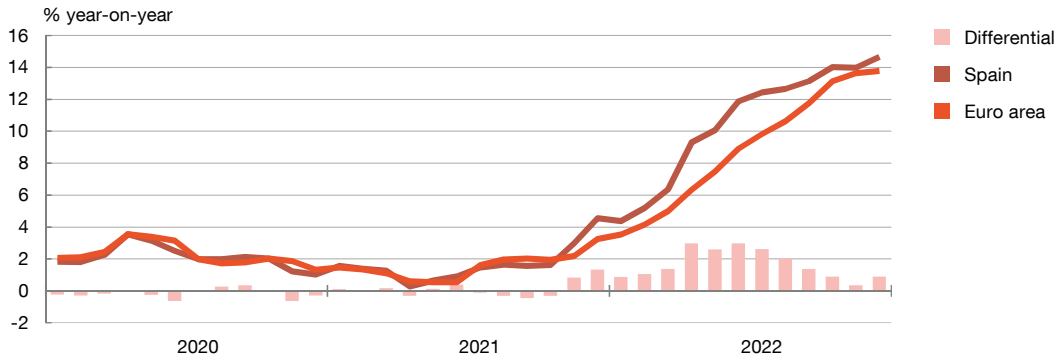
1 The special division “Food” comprises Division 01 “Food and non-alcoholic beverages” and Division 02 “Alcoholic beverages and tobacco” from the European Classification of Individual Consumption by Purpose (ECOICOP).

2 The analysis in this article will focus on food price developments up to 2022 Q4. Comparing food price developments in Spain and the euro area since January 2023 is affected by the impact of the tax reduction on certain basic foods approved by the Spanish Government under Royal Decree-Law 20/2022 of 27 December 2022.

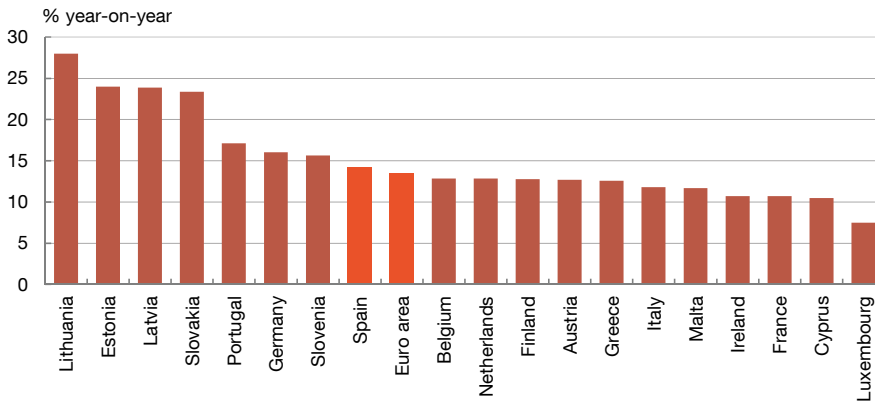
Chart 1

**Consumer food prices: recent developments**

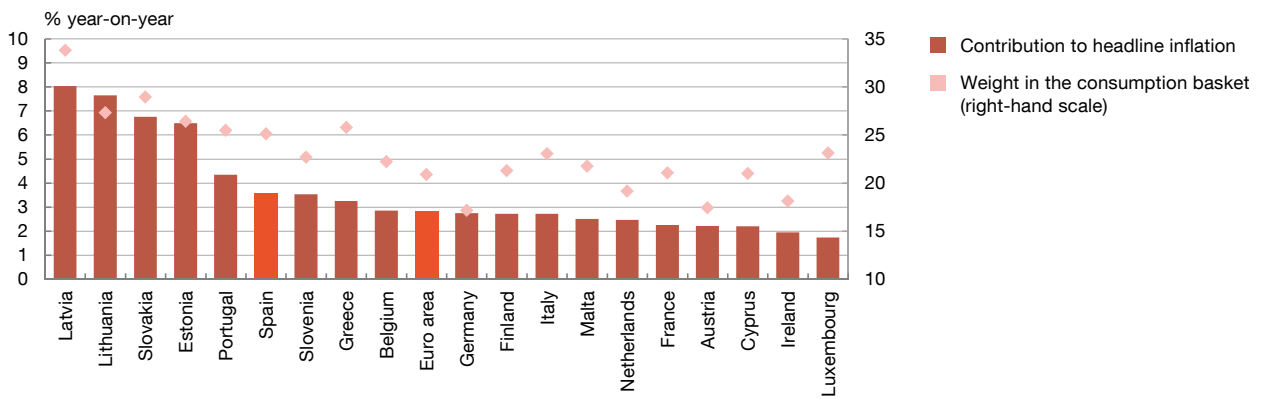
1.a HICP-Food, beverages and tobacco



1.b HICP-Food, beverages and tobacco, by euro area country. Year-on-year growth in 2022 Q4



1.c HICP-Food, beverages and tobacco, by euro area country. Contribution to headline inflation in 2022 Q4 and weight in the consumption basket for 2022



SOURCES: INE, Eurostat and Banco de España.



Furthermore, food inflation in 2022 Q4 was similar in the euro area as a whole and Spain, yet its contribution to headline inflation differed, as food accounted for a significantly higher share of the household consumption basket in Spain (25.1%) than in the euro area (20.9%) in 2022.<sup>3</sup> Thus, despite the similar year-on-year rates of change, the contribution to headline inflation was 3.6 percentage points (pp) in Spain in 2022 Q4, above the 2.8 pp in the euro area (see Chart 1.c). In this respect, combining the rates recorded in Spain with the weight of food in the euro area consumption basket results in a counterfactual contribution for 2022 Q4 of 3 pp – rather than the actual contribution of 3.6 pp –, in line with that recorded in the euro area.

Turning to the heterogeneity across euro area countries, food accounted for a very high share (above 26%) of the consumption basket in the Baltic States and Slovakia. Combined with the elevated food inflation recorded in those countries, this translated into much higher contributions (above 6 pp) to headline inflation than elsewhere in the euro area. Among the major euro area economies, in 2022 food accounted for 17.1% of the consumption basket in Germany, 21% in France and 23.1% in Italy, all below the weight in Spain. The contribution of food to headline inflation in these countries was therefore also lower than that recorded in Spain in 2022 Q4 (2.7 pp, 2.3 pp and 2.7 pp in Germany, France and Italy, respectively) (see Chart 1.c).

Lastly, although practically all food prices are increasing, some food prices have surged. Specifically, according to the 3-digit ECOICOP classification, the most noteworthy price increase was in “Oils and fats”, which grew year-on-year by 31.2% in 2022 Q4, both in the euro area and Spain.<sup>4</sup> However, its contribution to headline inflation was relatively moderate given its low weight in the consumption basket (see Table 1). In terms of the degree of the inflationary increase, it is followed by “Milk, cheese and eggs”, whose prices rose by 23.6% in the euro area and by 24.9% in Spain, and “Bread and cereals”, whose prices grew by 16.9% in the euro area, 2.4 pp less than in Spain. Given the high weight of these two consumption basket components, their joint contribution to headline inflation was particularly strong (1 pp in the euro area and 1.3 pp in Spain). “Vegetables” and “Meat” are the groups with the fourth and fifth highest price growth in the euro area – fifth and seventh in Spain –, making a sizeable joint contribution to headline inflation in both geographical areas (0.9 pp and 1.1 pp, respectively) because of their high weight in the consumption basket in both cases.<sup>5</sup>

In sum, recent developments in the prices of food with larger weights in the consumption basket in the euro area and Spain have corresponded closely. The remainder of the article explores the factors that could explain these developments, considering cereals and dairy in particular, whose prices have risen especially sharply from a historical perspective<sup>6</sup> and compared with other types of food in the current episode.

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3 One of the factors that could at least partly explain the different weight of food in the countries' consumption baskets is the difference in per capita income in each country (Yorukoglu, 2010).

4 The prices of this component began to rise before the others (after recording negative year-on-year rates between July 2018 and January 2021) and reached an all-time high in mid-2022, due to the effects of Russia's invasion of Ukraine on the price of vegetable oils, especially sunflower oil, as Ukraine was the world's largest exporter of this type of oil.

5 “Alcoholic beverages and tobacco” had the first and third highest weights in “Food, beverages and tobacco” in the euro area and Spain, respectively. However, the recent increase in alcoholic beverage and tobacco prices has been much smaller than that observed in the other food classes (see Table 1).

6 In the case of Spain, this historically unusual behaviour stands out, especially when compared with the increases in the prices of “Oils and fats” and “Meat” in 2022 Q4, which were similar to the peak values recorded between 1997 and 2021 (see Table 1).

Table 1

**Breakdown of food sub-indices, by ECOICOP classes and by special divisions**

	ECOICOP classes (corresponding codes in brackets)	HICP weight for 2022	Inflation rates			Contribution to headline inflation in 2022 Q4
			2022 Q4	Peak (1997- 2021)	Three-year: 2022 Q4 / 2019 Q4	
Euro area	Bread and cereals (0111)	2.8	16.9	9.8	20.5	0.5
	Meat (0112)	3.6	15.0	8.9	20.1	0.5
	Fish and seafood (0113)	1.1	12.2	6.5	16.9	0.1
	Milk, cheese and eggs (0114)	2.2	23.6	13.8	27.0	0.5
	Oils and fats (0115)	0.5	31.2	11.9	40.3	0.1
	Fruit (0116)	1.4	7.4	10.8	15.6	0.1
	Vegetables (0117)	1.9	16.9	16.4	22.6	0.3
	Sugar, jam, honey, chocolate and confectionery (0118)	1.0	11.9	5.0	13.7	0.1
	Food products n.e.c. (0119)	0.7	14.5	4.6	16.2	0.1
	Non-alcoholic beverages (0121 and 0122)	1.5	11.8	6.2	14.9	0.2
	Alcoholic beverages and tobacco (021 and 022)	4.3	4.7	8.3	10.4	0.2
	Unprocessed food (a)	5.0	13.7	8.3	19.4	0.7
	Processed food (b)	15.9	13.4	7.0	20.0	2.1
	Total	20.9	13.5	5.7	19.8	2.8
Spain	Bread and cereals (0111)	3.1	19.3	10.6	23.1	0.6
	Meat (0112)	5.5	12.3	11.7	17.6	0.7
	Fish and seafood (0113)	2.7	11.2	7.4	16.0	0.3
	Milk, cheese and eggs (0114)	2.7	24.9	17.2	28.3	0.7
	Oils and fats (0115)	0.6	31.2	31.3	57.9	0.2
	Fruit (0116)	2.2	9.3	17.5	19.0	0.2
	Vegetables (0117)	2.4	17.3	11.6	22.3	0.4
	Sugar, jam, honey, chocolate and confectionery (0118)	0.8	13.8	6.7	15.3	0.1
	Food products n.e.c. (0119)	0.7	17.4	9.2	19.5	0.1
	Non-alcoholic beverages (0121 and 0122)	1.5	11.1	6.2	19.7	0.2
	Alcoholic beverages and tobacco (021 and 022)	3.0	5.0	15.1	6.8	0.2
	Unprocessed food (a)	8.1	13.0	8.4	19.6	1.0
	Processed food (b)	17.1	14.8	8.9	22.2	2.5
	Total	25.1	14.2	6.6	21.4	3.6

**SOURCES:** Eurostat and Banco de España.

**a** Includes all meat sub-classes except sub-classes 01127 and 01128 ("Dried, salted or smoked meat" and "Other meat preparations"). Also includes sub-classes 01131 and 01133 ("Fresh or chilled fish" and "Fresh or chilled seafood"), sub-class 01147 ("Eggs"), sub-class 01161 ("Fresh or chilled fruit") and sub-class 01171 ("Fresh or chilled vegetables other than potatoes and other tubers").

**b** Includes all food, beverages and tobacco sub-classes except those mentioned in note a.

## Cereals price developments

The cereals market in the European Union (EU) is relatively open,<sup>7</sup> so domestic cereals prices develop in a similar way to international prices. Global supply and demand of cereals are, therefore, essential to understanding price developments on the domestic market.

In this context, several, essentially global, factors have influenced recent cereals prices in Europe. First, some supply-side factors have limited cereals production worldwide: reduced harvests due to droughts in some leading producers, such as Canada, the United States and Russia (European Commission (EC), 2022a); supply chain bottlenecks; temporary export restrictions linked to the COVID-19 pandemic; and a significant increase in demand from China. This situation was exacerbated by the disruption of wheat trade in the Black Sea following the Russian invasion of Ukraine<sup>8</sup> in February 2022 and the dip in expected Ukrainian harvests. In consequence, global cereals production failed to meet demand, causing stocks to shrink in both 2021 and 2022 (see Chart 2.a). Second, global cereals production was also severely affected by surging agricultural input prices – higher energy prices and soaring fertiliser prices were particularly to blame. Rising fertiliser prices were, at least in part, a result of burgeoning gas prices, since gas is an indispensable input in fertiliser manufacturing (see Chart 2.b).<sup>9</sup>

As a consequence of these events, cereals prices began to climb strongly in 2021 H2, both in the euro area and Spain, until peaking in 2022 H1. While prices remain at historically high levels (see Chart 2.c), as of summer 2022, prices have begun to fall thanks to: the positive outlook for harvests in Canada and South America; a record harvest in Russia; the opening of humanitarian corridors; the continuation of the Black Sea grain initiative; and shrinking demand owing to higher prices.<sup>10</sup>

Lastly, rising cereals prices have been passed through the length of the value chain, both in Spain and in the euro area. Higher commodity (cereals) prices have been passed through, with a slight lag, to the producer prices of products made with cereals – flour, for example – since 2021 H2. More specifically, increases in these producer prices were generally more subdued than those in commodity prices, and appear to have begun to slow during 2022 H2, in line with the slowdown in cereals prices (see Chart 3.a).<sup>11</sup> The similarity in the developments of flour producer prices in Spain and in the euro area should be emphasised, as it underlines the fact that there are common drivers to the rising food prices. Similar, and also partial, pass-through of producer prices to consumer prices of bread and cereals has been seen. In particular, both in Spain and in the euro area, consumer prices of products made with cereals began to rise towards the end of 2021 (although less so than commodity prices and producer prices) and have continued to do so in recent months at an ever decreasing rate (see Chart 3.b).

7 In 2021 and 2022, 292 million tonnes of cereals were produced in the EU, 22.3 million tonnes imported and 47.9 million tonnes exported (*Agricultural Market - EU cereals balance sheets*, European Commission).

8 In 2020, Russia and Ukraine accounted for around 30% and 14%, respectively, of global wheat and maize production.

9 The increase in fertiliser prices was magnified by the fact that higher domestic prices led some countries to impose export restrictions on fertilisers (Food and Agriculture Organization of the United Nations (FAO), 2022a).

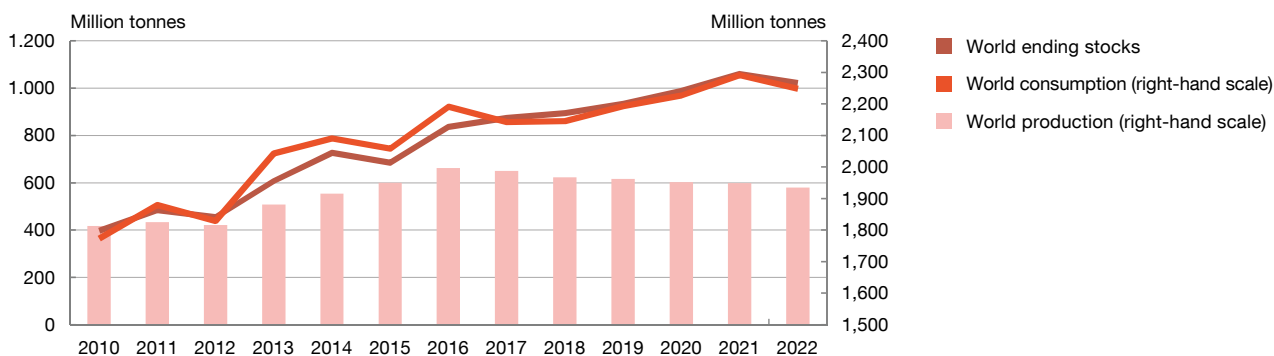
10 Another potentially relevant factor was the EU derogation allowing land that the Common Agricultural Policy requires lie fallow (5% by surface area) to be used to bolster cereals stocks depleted following Russia's invasion of Ukraine.

11 Note that producer prices have also been affected by the rise and subsequent easing of energy costs in the industrial sector.

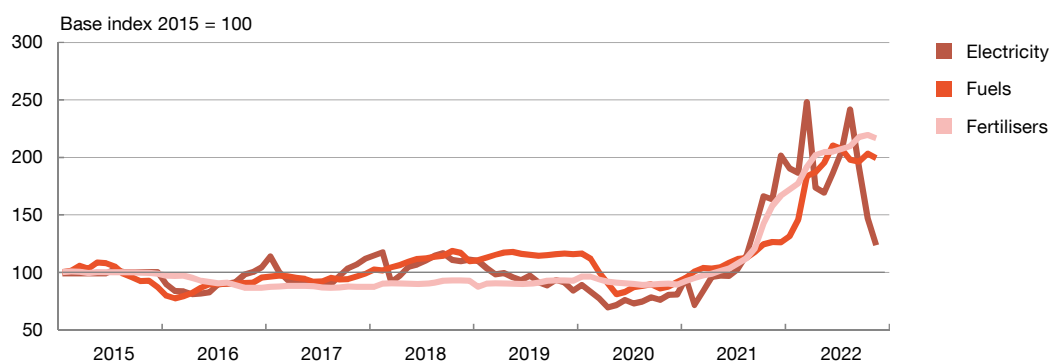
Chart 2

## Cereal consumption, production and prices

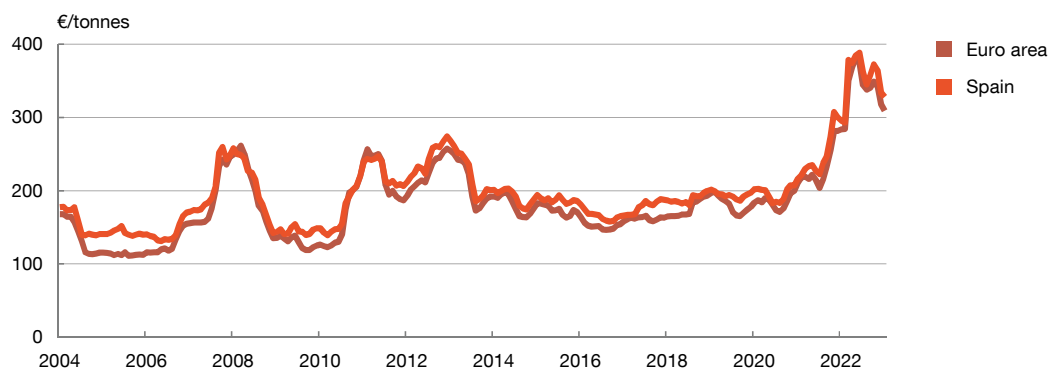
### 2.a World consumption, production and stocks of cereals



### 2.b Prices paid by Spanish farmers (selected inputs)



### 2.c Price of wheat in the euro area and Spain



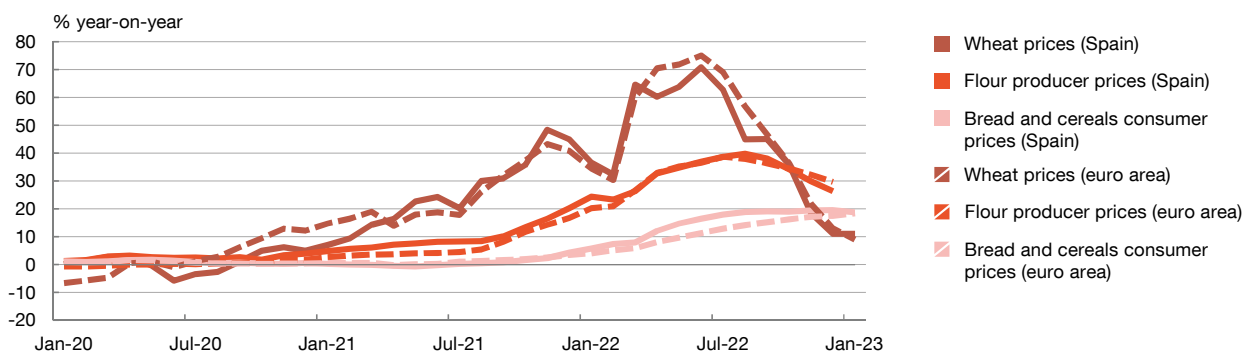
SOURCES: Cereals market situation (European Commission, February 2023), Directorate-General for Agriculture and Rural Development and Ministerio de Agricultura, Pesca y Alimentación.



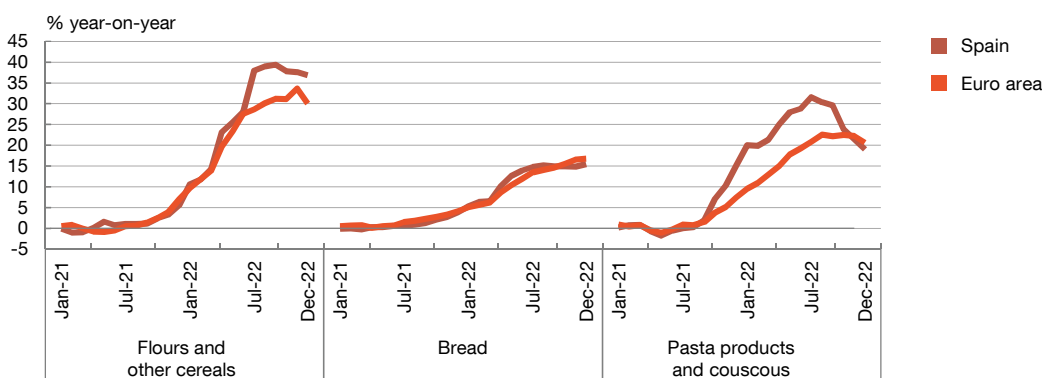
Chart 3

### Cereal and cereal product prices

#### 3.a Cereal prices at different stages of the value chain (euro area and Spain)



#### 3.b HICP-Food in the euro area and Spain (selected sub-classes)



SOURCES: Directorate-General for Agriculture and Rural Development, Eurostat and INE.



## Milk price developments

The main drivers of recent milk price developments relate to supply issues at the European level. First, milk production costs in Europe began to rise sharply from spring 2021 onwards, owing, above all, to the upsurge in feed prices (see Chart 4.a), which account for around 60% of total costs in milk production (Ministerio de Agricultura, Pesca y Alimentación (MAPA), 2022b). This pronounced rise in feed prices appears to have been largely brought about by the events described in the previous section on global cereals prices and exacerbated by the war in Ukraine, which also resulted in a marked increase in the energy costs borne by milk producers. Second, the effects of unfavourable weather in Spain and in the wider EU must be taken into account, as highlighted by the prolonged drought, which affected the quality of pasturage, and abnormally high temperatures, which complicated milk yields (EC, 2022b).

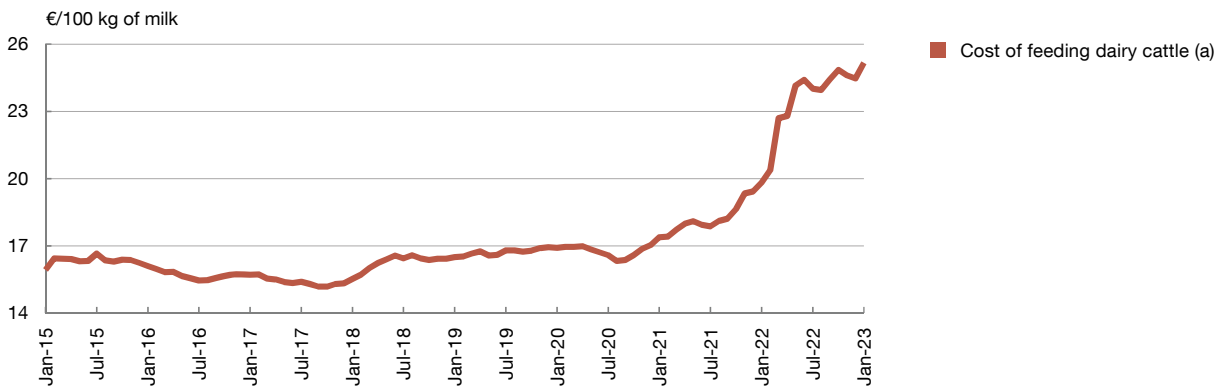
In this environment, milk producers were dealing with significantly rising costs and shrinking margins for a large part of 2021 and early 2022, which appear to have prompted increased slaughter rates in the EU (FAO, 2022b). In other words, in the face of rising costs, it is more



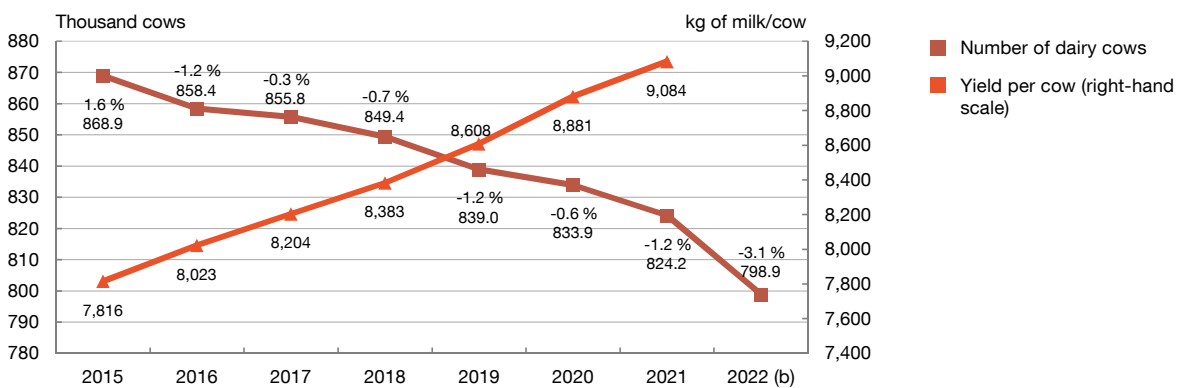
Chart 4

**Milk production: costs and output**

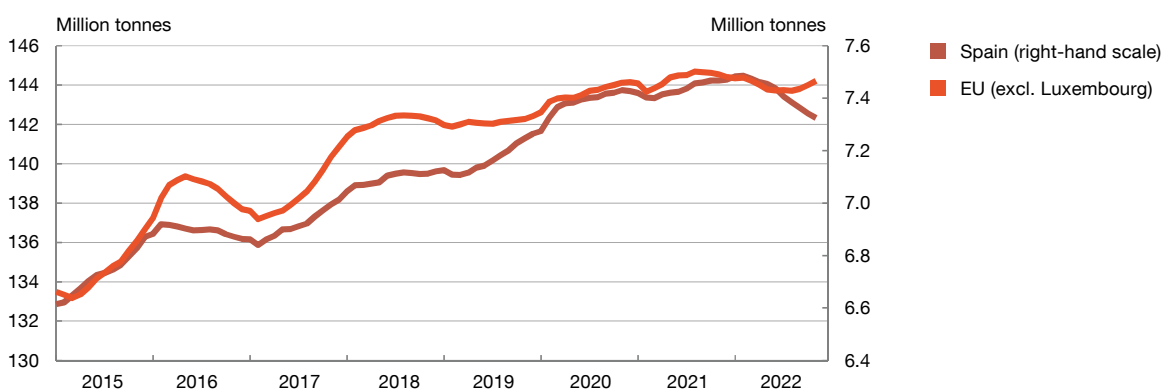
**4.a Cost of feeding dairy cattle in Spain**



**4.b Relationship between number of dairy cows (over 24 months old) and yield in Spain**



**4.c Deliveries of raw milk reported in the EU and Spain (12-month moving sum)**



SOURCES: Ministerio de Agricultura, Pesca y Alimentación and Eurostat (Newcronos).

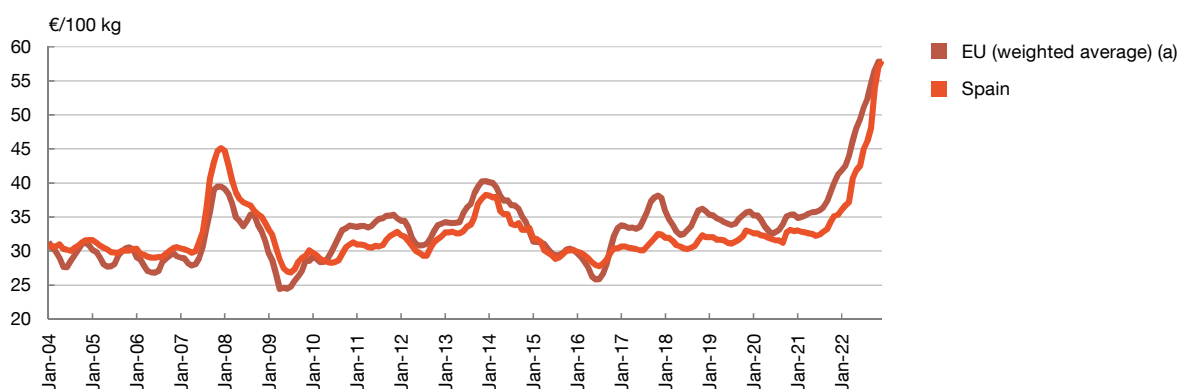
a On Sub-Directorate General of Livestock Production estimates, around 0.74 kg of a complete portion of dairy cattle feed is needed to produce a kilogram of milk (MAPA, 2022c).

b Average number of dairy cows, January-November 2022.

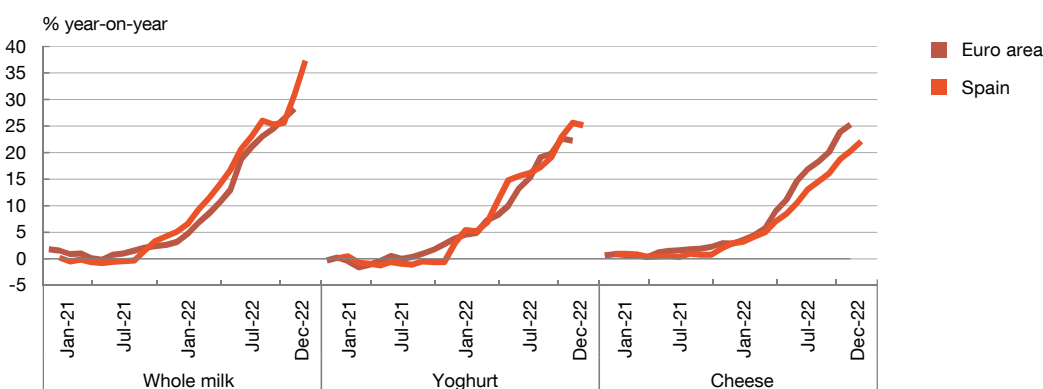


Chart 5  
Milk prices

### 5.a Farm-gate price of raw milk



### 5.b HICP-Food in the euro area and Spain (selected sub-classes)



SOURCES: European Commission (Milk Market Observatory), Ministerio de Agricultura, Pesca y Alimentación, INE and Eurostat.

a EU-25 (to 2006), EU-27 (to 2013), EU-28 (to 2019), EU (excl. United Kingdom since 2020).



profitable to sell less productive dairy cows (the older ones) to be slaughtered for their meat. As a result, Spain suffered a significant drop in its stock of dairy cattle in 2022 (see Chart 4.b)<sup>12</sup> and the raw milk supply dropped in 2022 in Spain and in the EU (see Chart 4.c).<sup>13</sup>

As a consequence of cost increases and reduced raw milk supply, farm-gate milk prices have rocketed since late 2021, reaching record highs by late 2022, both in Spain and in the EU as a whole (see Chart 5.a).<sup>14</sup> This price surge in late 2022, while other costs, such as those for feed and

12 In particular, between 2015 and 2021 the decline in the number of dairy cattle older than 24 months ranged from -0.3% to -1.2% each year, but accelerated to -3% in 2022. Until 2021, the downwards trend in dairy cattle stock was counteracted by an increase in yield per cow (linked to a greater concentration of livestock farmers) that was enough to post annual increases in raw milk production. These trends were common to most European Union countries (MAPA, 2022d).

13 Milk supply fell globally (EC, 2022a).

14 The largest contraction in Spanish supply in late 2022 may explain, at least partly, why increases in raw milk prices have been steeper than those of the wider EU, to the point that, for the first time since 2016, in December 2022 the price for 100 kg of milk was higher, although not by much, in Spain than in the EU.

energy, were levelling off, is the result of a slight lag in the pass-through of the cost increases recorded since mid-2021 (MAPA, 2022d).

Lastly, although these price increases are seen in the initial stages of milk production and, therefore, in dairy producer prices, they have been passed through to dairy consumer prices (see Chart 5.b). Furthermore, these products have also been affected by increases in production and distribution costs. For example, around 20% of milk production costs were attributable to packing and packaging expenses in 2021 (MAPA, 2021) – expenses that grew substantially in 2022 as a result of the sharp rise in plastic prices linked to higher energy prices.<sup>15</sup>

## Final remarks

Increases in consumer food prices have been substantial throughout 2022, showing very similar behaviour in Spain and in the wider euro area. The higher relative weight of food in the Spanish consumption basket means that its contribution to headline inflation has been greater. Similarly, price increases have proven to be somewhat heterogeneous across different food categories, with cereals and milk-related item prices standing out owing to the steepness of their price rises and their high relative share in the consumption basket. As commented above, the behaviour of these prices appears to be fundamentally related to essentially global supply-side issues.

Given that commodity prices have eased, a slight slowdown in food price increases is to be expected in the euro area and Spain.<sup>16</sup> However, there is a great degree of uncertainty surrounding the possible consequences of the 2022 drought in Europe for agricultural production and, therefore, for food prices in 2023.<sup>17</sup> In addition, the war in Ukraine represents a source of significant uncertainty for food prices, given the importance of Russia and Ukraine on global cereals markets.

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<sup>15</sup> Specifically, producer prices for plastic packing and packaging rose 14% in 2022.

<sup>16</sup> In the case of Spain, additionally, in January 2023 the reduction in VAT on some basic foodstuffs came into force, meaning that in January and February there was a slight slowdown in food price growth in Spain, which was not the case in the wider euro area.

<sup>17</sup> For example, estimations for Spanish olive oil production from the 2022 harvest – constituting the 2022/23 marketing year – point to it being 48% lower than in 2021/22, largely on account of the effects of the drought (MAPA, 2022a).

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## How to cite this document

Borrallo, Fructuoso, Lucía Cuadro-Sáez, Matías Pacce and Isabel Sánchez. (2023). "Consumer food prices: recent developments in the euro area and Spain". *Economic Bulletin - Banco de España*, 2023/Q2, 01. <https://doi.org/10.53479/29821>

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ISSN 1695-9086 (online edition)