

Forschungsberichte
des
Fachbereichs Agrarwirtschaft Soest
Nr. 49

The Market of grain legumes in Spain

Results of the EU-project LegValue



Bruno Kezeya Sepngang

Frédéric Muel

Marcus Mergenthaler

Project LegValue: Fostering sustainable legume-based farming systems and agri-feed and food chain in the EU (Juni 2017 - Mai 2021). Website: <http://www.legvalue.eu>. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727672.

We thank **Prof. Dr. Ines Minguez-Tudela** (CEIGRAM) and Mr. **Pilar Galán López-García** (MAPA) for their good collaboration regarding information, constructive comments and review of this report.

© 2019

Forschungsschwerpunkt:
Agrarökonomie

Fachhochschule Südwestfalen
Standort Soest
Fachbereich Agrarwirtschaft
Lübecker Ring 2
59494 Soest

Tel.: 02921 / 378-3283
Fax: 02921 / 378-3200
E-Mail: agrar@fh-swf.de
www.fh-swf.de/FB/agrar

ISBN (print): 978-3-940956-85-9

ISBN (elektr): 978-3-940956-86-6

Table of contents

Table of figures.....	4
Abbreviations	5
1 Introduction.....	6
2 Data sources and methods.....	6
3 Results and discussion.....	7
3.1 Description of legume market heterogeneity.....	7
3.1.1 Field peas (<i>Pisum sativum</i>).....	7
3.1.2 Fresh beans (<i>Phaseolus vulgaris</i>)	8
3.1.3 Fresh peas (<i>Pisum sativum</i>).....	10
3.1.4 Faba beans (<i>Vicia faba</i>)	10
3.1.5 Other dry grain legumes: lentils, chickpeas and dry beans.....	12
3.2 Price analysis of grain legumes in Spain.....	14
4 Conclusion	16
References.....	17
Annex.....	18

Table of figures

Figure 1: Supply balance of field peas in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "071310 - Peas, " <i>Pisum sativum</i> ", dried and shelled, whether or not skinned or split), 08.04.2019. *: preliminary.	8
Figure 2: Supply balance of fresh beans in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "070820 - Fresh or chilled beans " <i>Vigna</i> spp., <i>Phaseolus</i> spp.", shelled or unshelled"), 08.04.2019. *: preliminary.	9
Figure 3: Production of fresh peas in Spain from 2013 to 2018. Primary sources: EUROSTAT. *: preliminary.	10
Figure 4: Supply balance of faba beans in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "071350 - Dried, shelled broad beans " <i>Vicia faba</i> var. <i>major</i> " and horse beans " <i>Vicia faba</i> var. <i>equina</i> and <i>Vicia faba</i> var. <i>minor</i> ", whether or not skinned or split"), 08.04.2019. *: preliminary.	11
Figure 5: Supply balance of chickpeas (Garbanzos) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.	12
Figure 6: Supply balance of dry beans (Judias secas) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.	13
Figure 7: Supply balance of lentils (Lentejas) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.	14
Figure 8: Producer prices of dry grain legumes in Spain from 2007 to 2017. Primary source: MAPA; in EIRIZ GERVAS ET AL. (2019).....	15

Abbreviations

CAP : Common Agricultural Policy

EU : European Union

FAO : Food and Agricultural Organisation

FWS : Food and Wines from Spain

ITC : International Trade Center

MAPA : Ministerio de Agricultura, Pesca y Alimentación (Engl. Ministry of Agriculture, Fisheries and Food)

PDO : Protected Designation of Origin

PGI : Protected Geographical Origin

USDA : United States Department of Agriculture

1 Introduction

Spain is one of the most important EU-countries producing and consuming legumes. Both grain legumes and fodder legumes are well represented, with Spain being the first producer of fodder legumes in the EU (EUROSTAT, 2019). Legumes can fix nitrogen from the air thanks to their rhizobia. In addition, they serve to loosen up crop rotation, which is an advantage from a phytosanitary point of view (ABEL, 2016; BÖHM, 2009). These advantages work as levers for the production of legumes in competition with other crops. The Mediterranean climate in Spain is one of the favourable conditions of the legumes production. Although grain legumes are traditional in the diet in Spain (FWS, 2019), their production decrease in the last decades in favour of cereals and other oil crops (EUROSTAT, 2019). Meanwhile those for fodder legumes like alfalfa did not decrease.

This report is part of the transdisciplinary EU research project "LegValue". Work package 3, which deals with the market and economics of legumes, has the objective to increase the market transparency of legumes. The present study describes the markets of the main grown grain legumes and shows price differences for grain legumes in Spain. Furthermore, some levers and barriers for the development of legumes in Spain will be highlighted. A mixed-method approach based on quantitative and qualitative analyses was used in this study. The parameters used for the quantitative analyses are production, domestic consumption, imports, exports and producer prices.

2 Data sources and methods

Seven legumes species are analysed in this report: field peas (harvested dried, lat. *Pisum sativum*), fresh beans (lat. *Phaseolus vulgaris*), fresh peas (harvested fresh, lat. *Pisum sativum*), faba beans (lat. *Vicia faba*), lentils (lat. *Lens culinaris* or *Lens esculenta*), chickpeas (lat. *Cicer arietinum*) and kidney beans (lat. *Phaseolus vulgaris*). These crops are selected based on their higher total production and consumption in Spain. A mixed methodological investigation was undertaken in this study. Several data bases (EUROSTAT, ITC and MAPA) were explored and used for a basic quantitative and qualitative description of the Spain grain legume market. The investigated period was from 2013 to 2018, whereby the quantitative data for 2018 are preliminary. The analysed data refer to the calendar years and not to the crop years. Furthermore, qualitative phone interviews with experts were undertaken in 2019. Based on their expertise in the grain legume market, their statements and estimations have been incorporated qualitatively in this report.

The analysed parameters are the production from EUROSTAT and MAPA; the import and export from ITC and the national consumption, which was calculated, based on the production, imports and exports. Due to the lack of information, the stock variation is not considered in this work. The repartition of the national consumption (food, feed and seed) is collected by the statistic MAPA, whereby the legumes in Spain are specific for a principal use, either food or feed.

3 Results and discussion

This chapter is dedicated to the description of the recent supply balances of grain legumes and identifies their different markets in Spain. The main used parameters are production, import, export and national consumption. Specific uses of the various grain legumes for food and for feed are highlighted.

3.1 Description of legume market heterogeneity

Legumes play an important role in Spain. Legumes constitute a traditional component of Spanish diets. Some of the legumes are used for feed. The share of vegetarians and vegans is low but the trends are increasing. However, the increase is very slow due to low meat prices, mainly of pork and chicken. The climatic conditions are favourable for the cultivation of legumes in Spain. Nevertheless, a severe decline of grain legume crops could be observed in the last decades in favour of cereals. Although farmers are aware of the advantages of legumes in the system, cultivation difficulties are mentioned as a hindrance to its development. In addition, the reduction of plant protection products that were the key to the cultivation of these legumes and the lack of varieties compared to cereals and oil crops belong to the principal reasons for the decline in production of these crops, said experts. Therefore, the increasing demand is covered by imports.

3.1.1 Field peas (*Pisum sativum*)

Field pea is the most produced grain legume in Spain. Field pea is a traditional crop in Spain and the level of its production was much higher in the past. According to EIRIZ GERVAS ET AL. (2019), the whole production of field peas in Spain are used for **feed**. Only a very small part is used for food. Experts have confirmed that the use of field peas and faba beans for food in Spain is not so important like those for lentils, dry beans or chickpeas. It should be noted that ~80 % of the production is sold on the market and the rest are for the internal use in the produced farms, namely for seed and feed.

Figure 1 presents the supply balance of field peas in Spain from 2013 to 2018. The production of field peas varies from year to year and shows a slight increase from 2014 and 2018. In this period, the highest production was reached in the years 2016 (275,000 t) and 2018 (260,000 t). A decrease in the production is predicted for 2019. The production of field peas in 2019 is estimated by 175,000 t (EUROSTAT, 2019). Field pea production is mainly a rain fed crop, and there can be strong variations between years depending on weather conditions. The increase from 2014 to 2015 is due to the new greening measures of the common agricultural policy (CAP) that started its implementation in 2015. According to MAPA (2017), two thirds of the cultivated area of field peas is from Castilla-Léon and Castilla la Mancha, which are located in the central plateau of the peninsula reaching from north-western parts to south-eastern parts.

The national consumption is mostly related to the production and the imports. Exports do not play a role in this calculation, because they are minor. Based on the data from figure 1, the imports in 2017 represents ~29 % of the production in the same years. In 2017, 33 % of the imports were from **Romania** and 23 % from **Bulgaria**. Remarkably, an exponential increase in the imports is observed in 2018, mainly from **Russia** and **Ukraine**. Since field peas are principally used for feed in Spain, the increase in livestock in Spain in the last years could explain the high interest in peas in Spain. The **increasing demand of meat in China** is the main driver of the increased livestock's production in Spain (USDA, 2018). This statement was also emphasized by the experts. According to ITC (2019), the export of meat,

principally of swine, are still increasing in the last year, ~1 Mio. t in 2014 to ~1,5 Mio. t in 2018. The principal markets here are France, China, Italy, Japan and Portugal.

The imports of field peas are more than twice as much as the production in 2018, namely 610,000 t imports. This market opportunity could also be explained by the import duty in India. The implementation of import taxes, up to 50 % in 2018 in India (GLOBAL TRADE HELPDESK, 2019), led to strong decrease of the field peas import in India, namely from more than 3 Mio. t in 2017 to 840,000 t in 2018. Therefore, Russia and Ukraine used Spain's market to sell their field peas previously sold to India. **Russia**, with ~280,000 t, was the main supplier, with a share of **46 %** for the total import into Spain. In 2018, **Ukraine** was the second largest supplier of field peas in Spain, with a share of **34 %** for their total import. These imports are also mainly used for feed in Spain. Geographically, Spain is far away from Russia and Ukraine but relating to shipping routes closer than India. Due to the strong demand for protein crops for feeding originated from increasing livestock numbers in Spain, bulk imports of large amounts are competitive with soya imports from South America. The overview of the foreign trade of field peas within EU-Intra and EU-Extra countries in Spain is described in annex 1.

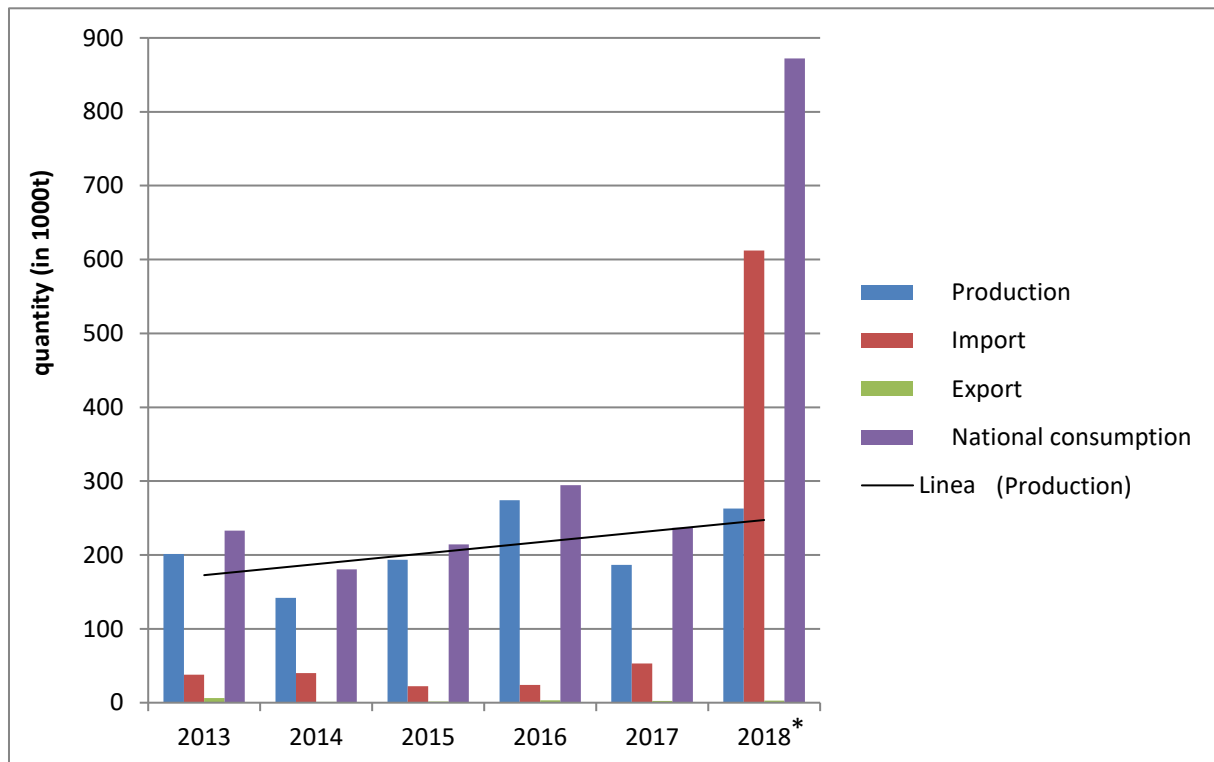


Figure 1: Supply balance of field peas in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "071310 - Peas, "*Pisum sativum*", dried and shelled, whether or not skinned or split), 08.04.2019. *: preliminary.

3.1.2 Fresh beans (*Phaseolus vulgaris*)

Fresh beans are the second most produced grain legumes in Spain with a production that varies from 138,000 t to 188,000 t in the last six years. They are only used in the human consumption. Figure 2 describes the supply balance of fresh beans in Spain from 2013 to 2018. In this period, the production shows a decreasing trend. This is most likely due to the competition from **Morocco**. That could be

explained by two arguments: The more favourable production costs in Morocco and the geographical location, which enables transport by sea directly and more cheaply than by truck. This is the same as the analysis in the UK (KEZEYA SEPNGANG ET AL., 2019), while the production of fresh peas and the other dry grain legumes are increasing (see the trend lines of the production on the different figures) the production for fresh beans is decreasing. This antagonistic course of production between the mentioned grain legumes could not be explained by experts yet.

Based on the course of the national consumption, it can be assumed that the demand of fresh beans in Spain is constant with a slightly decreasing trend over the last five years. The calculated national consumption of fresh beans is continuously higher than the production. This gap is filled by imports. On average from 2013 to 2018, **imports** represent 71 % of the fresh beans production in Spain with a slightly increasing trend. In 2017, **Morocco** (69 %) and **France** (29 %) were the principal origins of the Spain's imports. This foreign trade is favourable due to the liberalisation of trade for this product between EU and Morocco, contemplated in the trade agreement between them. Furthermore, the geographical position of Morocco and Spain is favourable for a trade within them.

The **export** of fresh beans is very low compared to the import. On average from 2013 to 2018, exports represent 12 % of the fresh beans production in Spain with a constant trend. In 2017, **Netherlands** (40 %), **France** (16 %) and **Portugal** (13 %) were the principal targeted countries of Spain's exports. The overview of the foreign trade of fresh beans within EU-Intra and EU-Extra countries in Spain is described in annex 2.

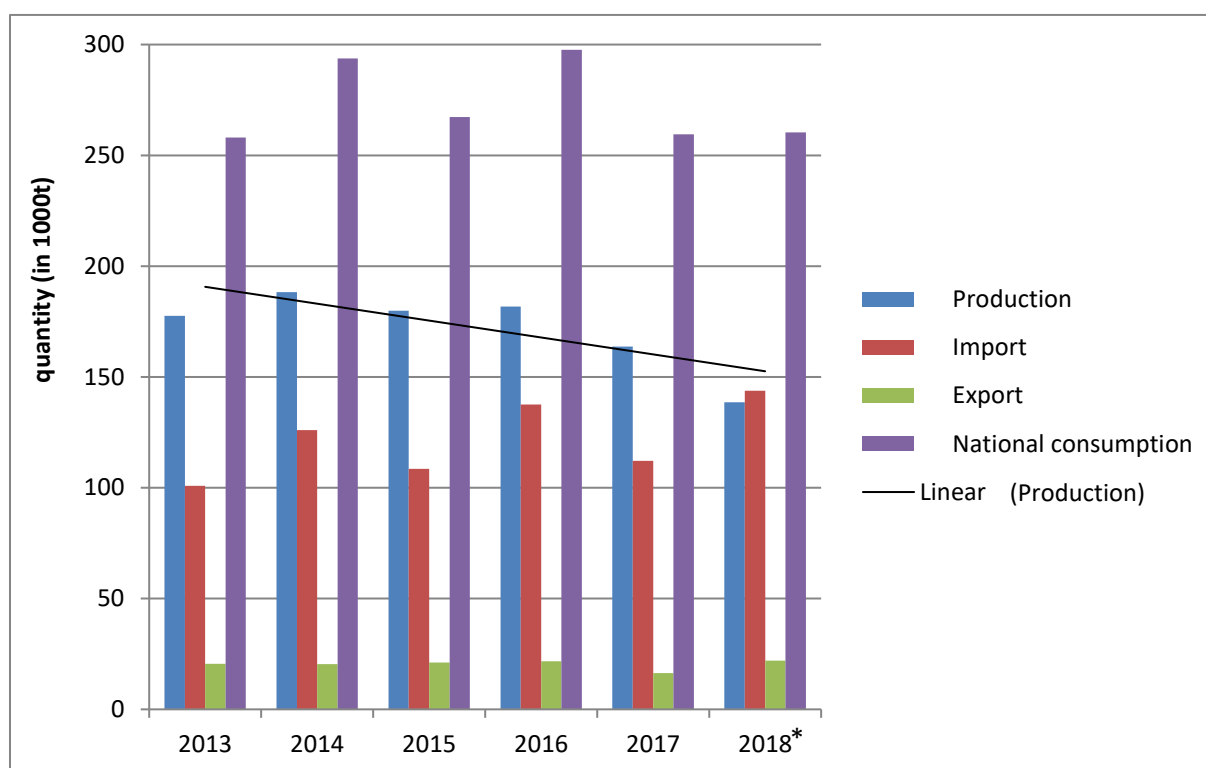


Figure 2: Supply balance of fresh beans in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "070820 - Fresh or chilled beans "*Vigna* spp., *Phaseolus* spp.", shelled or unshelled"), 08.04.2019. *: preliminary.

3.1.3 Fresh peas (*Pisum sativum*)

Fresh peas are the third most produced grain legumes in Spain. They are grown exclusively for human consumption. Figure 3 presents the production of fresh peas in Spain from 2013 to 2018. The production shows a slight increase over these six years. Foreign trade of fresh peas in Spain is minor so that the national consumption corresponds only to the production.

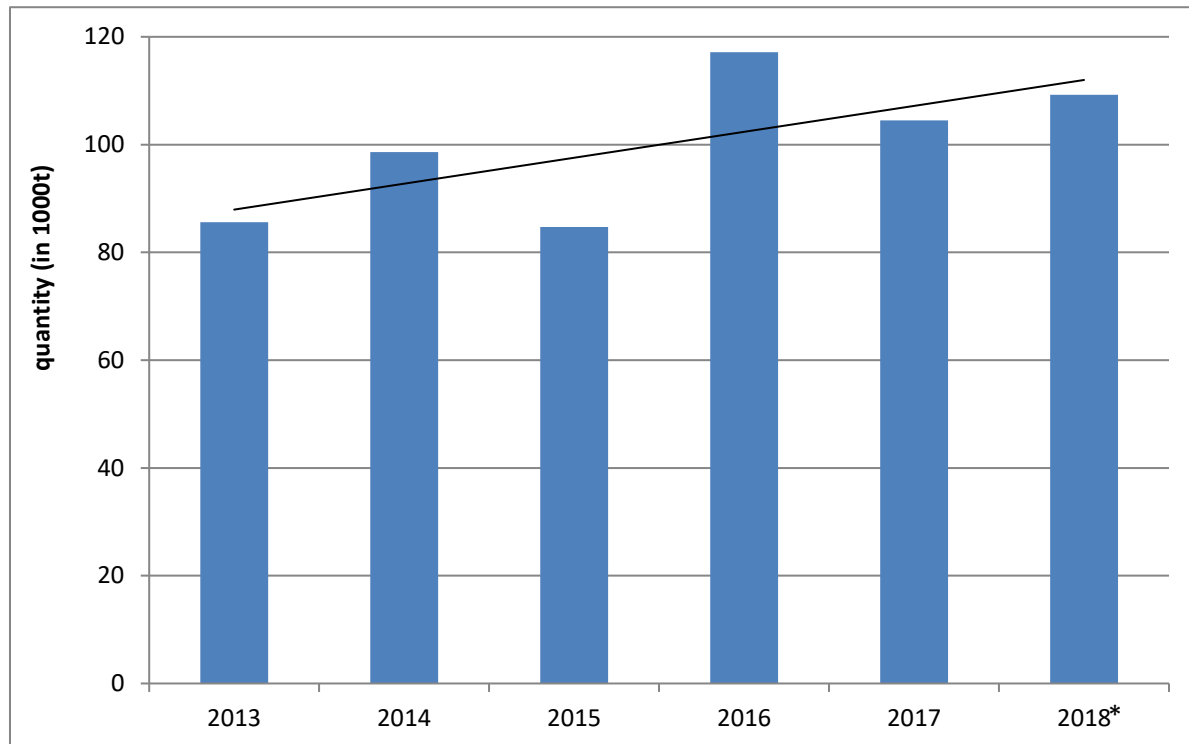


Figure 3: Production of fresh peas in Spain from 2013 to 2018. Primary sources: EUROSTAT. *: preliminary.

3.1.4 Faba beans (*Vicia faba*)

Faba beans are the fourth most important grain legume in Spain. Yields are with 13 dt/ha in 2017 low in Spain (EUROSTAT, 2019). According to EIRIZ GERVAS ET AL. (2019), almost the whole production of faba beans in Spain are used for **feed**. Experts mentioned that a small part of the production is harvested fresh and sold as canned food. The same applies for field peas that are exclusively used for feed. Approximately 80 % of the produced faba beans in Spain come on the market and the rest (~20 %) are for internal use in the produced farms. Internal use here means the part that is not sold on the market. It also includes the direct transaction between different farms, without the intervention of any other stakeholder. In contrast to Germany, ~70 % of the produced faba beans and ~55 % of field peas are for internal use in the producing farm, because this is more profitable than to sell it on the market. The smaller amount in internal used of grain legume for feed in Spain is because farms are more specialised. According to FADN PUBLIC DATABASE (2019) only 4 % of the total number of farms in Spain in the year 2017 have a mixed structure, around 70 % are specialised only in plant production (fieldcrops, horticulture and wine) and the rest 26 % in animal production (milk, grazing livestock and granivores). This can explain why the produced grain legumes are rather sold on markets in Spain.

Figure 4 presents the supply balance of faba beans in Spain from 2013 to 2018. The production of faba beans varies from year to year and its evolution over the years presents an arc of circle. The exponential increase from 2014 to 2015 is due to the new greening measures of the common agricultural policy (CAP) that started its implementation in 2015. The lack of profitability, due to the low prices for faba beans is the reason for the continuous decrease in production from 2015 to 2018. According to MAPA (2017), half of the cultivated area of faba beans is from Andalucía in the very south of the country.

Foreign trade of faba beans plays an important role for this product in Spain. Based on the data from figure 4, the mean quantity of exports from 2013 to 2018 represents ~10 % of the mean quantity of the production in the same period of years. The share of imports is 40 % of the production. This also shows that the **imports** dominate exports. The continuous increase of imports from 2013 to 2017 could also be explained by the increase in meat production in Spain over these years. For the year 2017, the **UK** (32,000t) that covered 66 % of the imports into Spain was its main supplier, followed by **France** (15 %) and **Poland** (13 %). These imports were used for feed in Spain.

Although the **exports** show an increasing trend from 2013 to 2017, the share of this market is very small. **France** and **Portugal** together represented 62 % of the exports from Spain in 2017. It is assumed that these exports to France and Portugal are used for feed. The overview of the foreign trade of faba beans within EU-Intra and EU-Extra countries in Spain is described in annex 3.

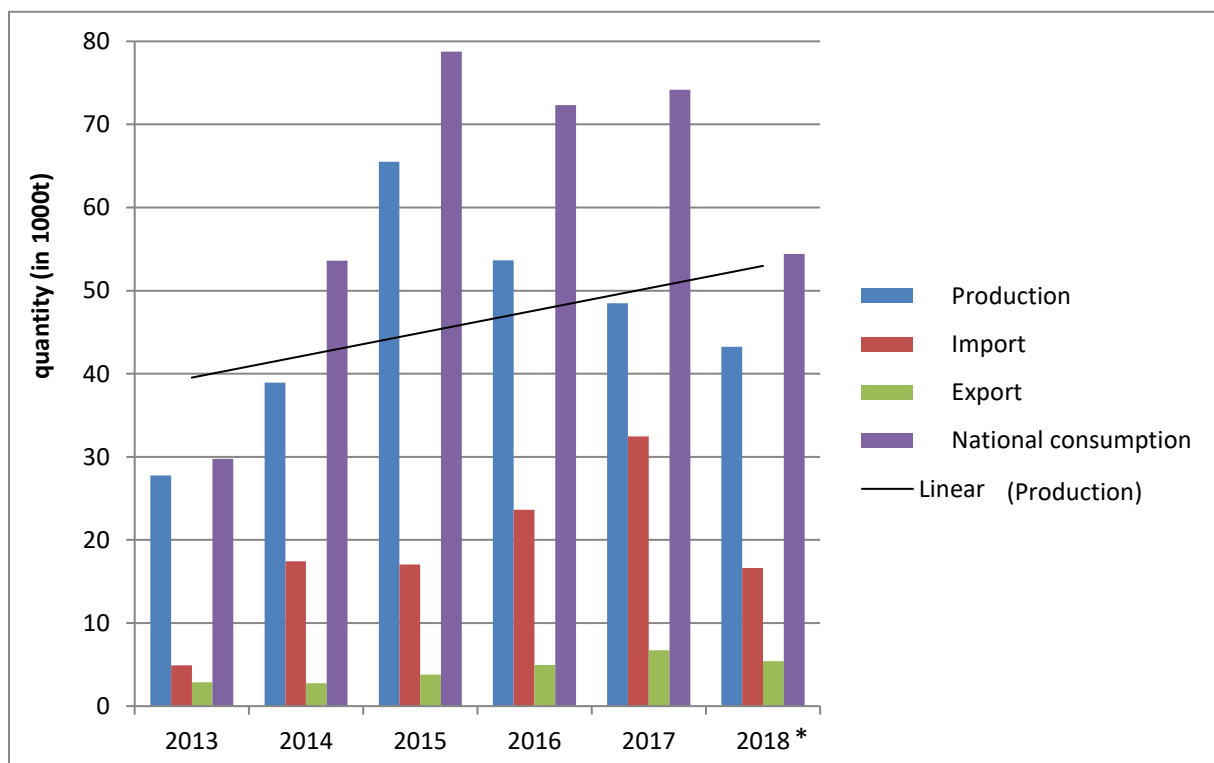


Figure 4: Supply balance of faba beans in Spain from 2013 to 2018. Primary sources: EUROSTAT and ITC (Filtered on "071350 - Dried, shelled broad beans "*Vicia faba* var. *major*" and horse beans "*Vicia faba* var. *equina* and *Vicia faba* var. *minor*", whether or not skinned or split"), 08.04.2019. *: preliminary.

3.1.5 Other dry grain legumes: lentils, chickpeas and dry beans

The demand of lentils (lat. *Lens culinaris* or *Lens esculenta*), chickpeas (lat. *Cicer arietinum*) and kidney beans (lat. *Phaseolus vulgaris*) in Spain is high. From the total national production, around 90 % of these grain legumes come on the market in 2017 (EIRIZ GERVAS ET.AL, 2019). Of the other 10 %, around 9 % is used as seed. According to MAPA (2018) the production of these crops is much lower than the imports. These dry grain legumes have traditionally an important place in human consumption and are used as protein source alternative to meat. Experts added that legumes-based dishes are offered at least twice a week by the school's catering. These imports can also be explained by the low price of imports due to better yields and low production costs in America, and because they are a stable source of supply.

The production of **chickpeas** slightly increased from 2013 to 2017, and the average of the production was about 32,800 t. In this period, the demand of chickpeas in Spain was mainly covered by the imports. There was a big increase of production in 2018 (76,000 t). The reasons of this doubling in production of chickpeas in 2018 is its profitability, in contrast to sunflower, which is going down. In 2018 the demand of chickpeas was for the first time in many years, covered in first place by its own production. Andalucía with around 60 % of total chickpeas cultivated area in Spain topped the production in 2017 (MAPA, 2017). According to ITC (2019) Spain imported 50,000 t of chickpeas in 2018. The main origins of this import were USA, Mexico and Argentina (see annex 4). Since the exports of chickpeas from Spain are very small, the supply deficit should be estimated to the imports. In 2017, an increase in the export was observed, principally to Portugal (3,000 t), Pakistan (1,000 t) and Egypt (1,000 t).

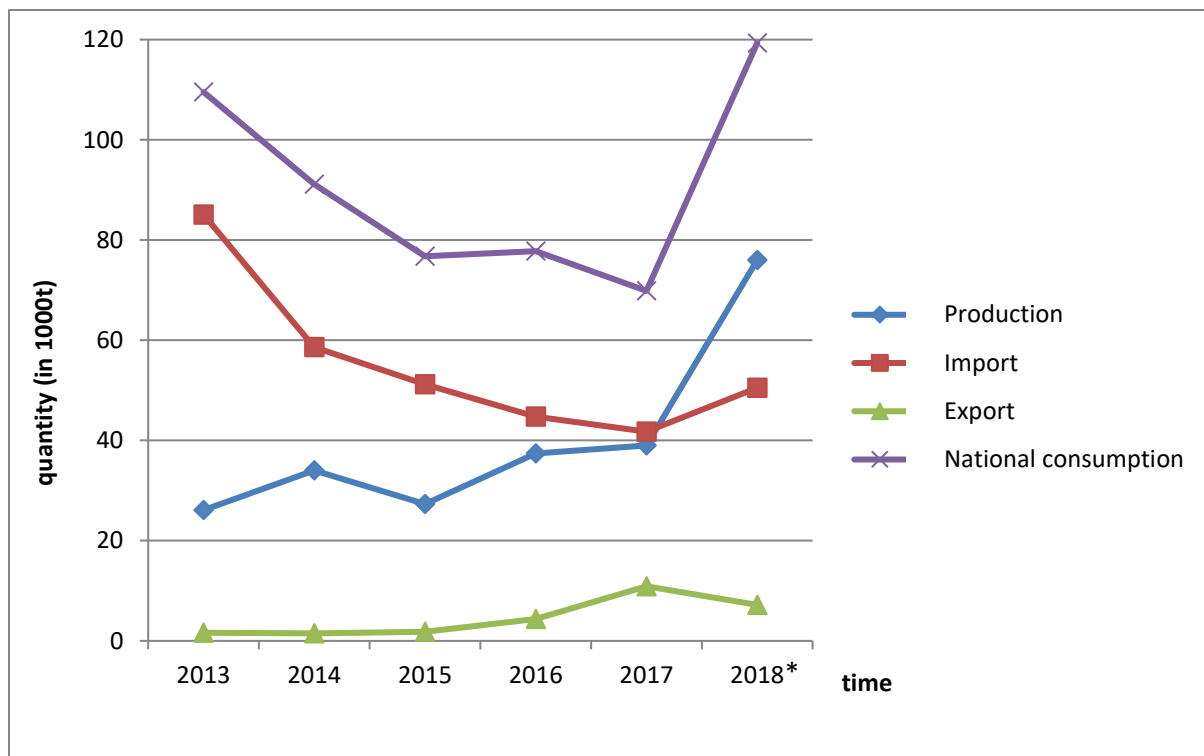


Figure 5: Supply balance of chickpeas (Garbanzos) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.

Same to chickpeas, the production of **dry beans (kidney beans; “*Phaseolus vulgaris*”)**, shows a slight and progressive increase from 2013 to 2017, 11,300 t to 20,000 t. For the year 2017, 13 % of the grain production is in association with corn (EIRIZ GERVAS ET AL., 2019). Castilla-Léon in the central north-west with 65 % of the total acreage in 2017 is the principal region where dry beans are grown in Spain (MAPA, 2017). Here too, the demand is mainly covered by imports. According to ITC (2019) Spain imported yearly around 40,000 t of dry beans (*Phaseolus Vulgaris*), mainly from Argentina because of the lower price there. Similar to chickpeas, exports are very small.

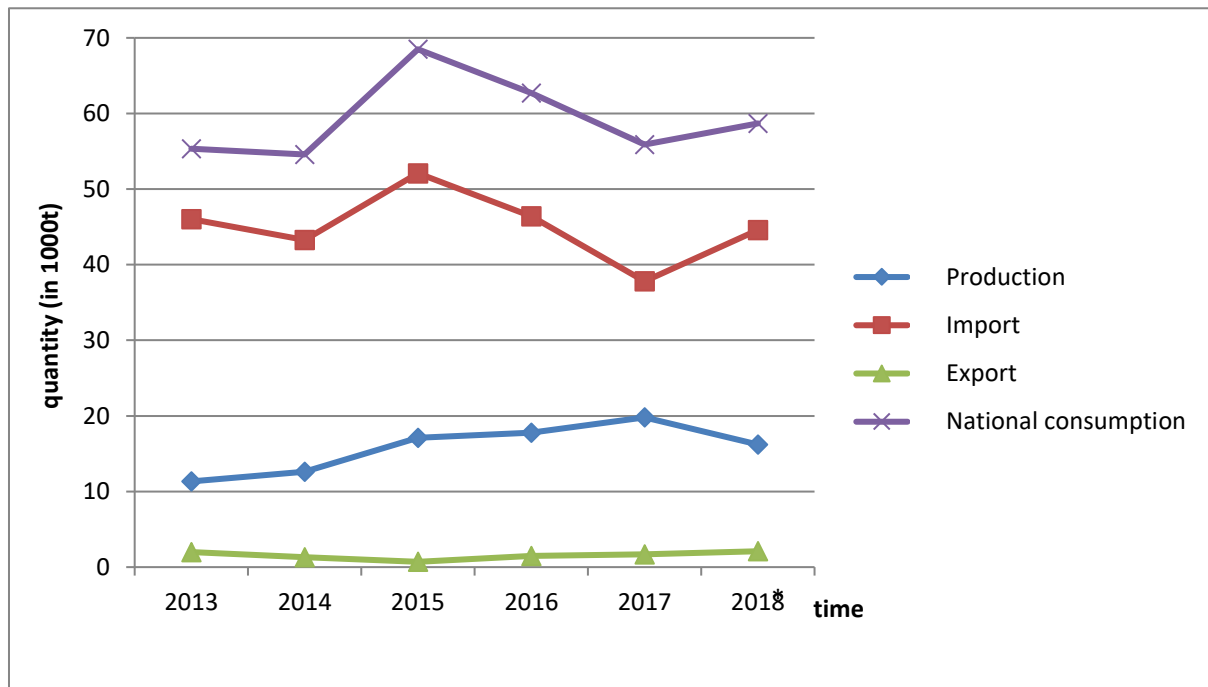


Figure 6: Supply balance of dry beans (Judias secas) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.

Different to chickpeas and dry beans, the production of **lentils** in Spain presents a more fluctuating production from 2013 to 2017, namely of about 27,000 t on average. For the year 2017 Castilla la Mancha in the central south-west was the main region where lentils were produced, namely with 80 % of the acreage in Spain. Spain imported yearly around 70,000 t of lentils. This shows that the demand is higher than the production. The main origins of this import in 2017 are Canada and USA (ITC, 2019). In 2017, an increase in the export was observed, principally to Morocco with 8,000 t. For more details about the foreign trade, see annex 5.

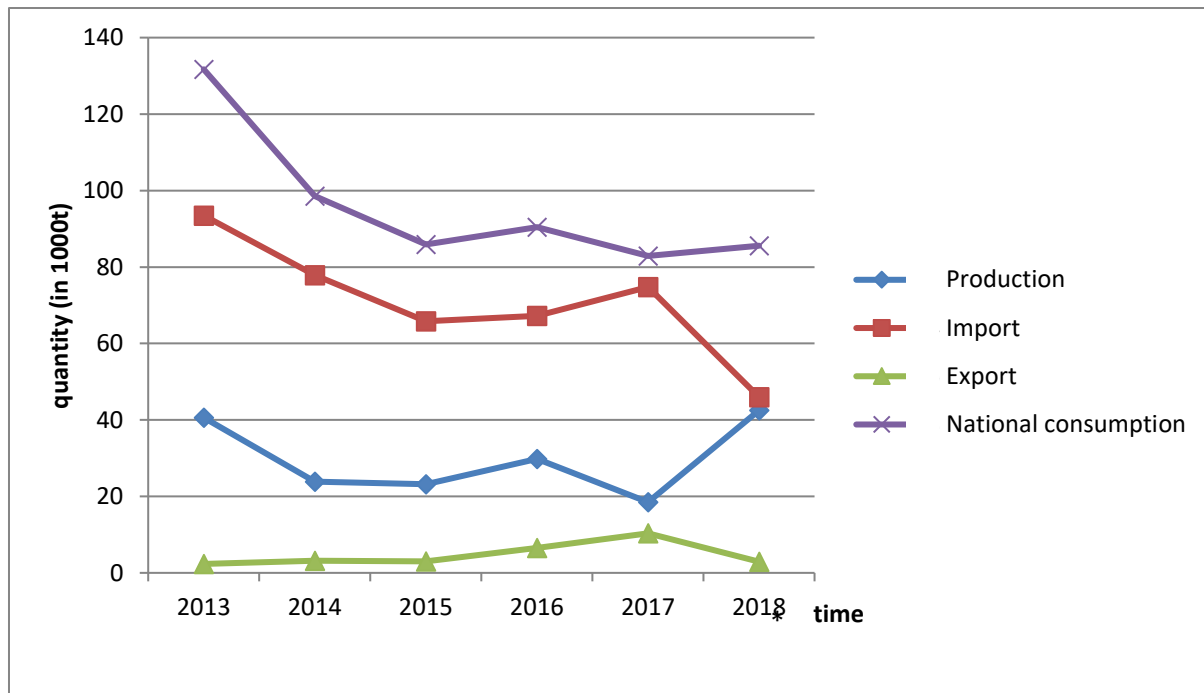


Figure 7: Supply balance of lentils (Lentejas) in Spain from 2013 to 2018. Primary sources: MAPA and ITC 02.05.2019. *: preliminary.

3.2 Price analysis of grain legumes in Spain

This chapter gives an overview of the price levels of the different grain legumes. It also highlights the trends of the prices in the last years. Generally, the prices depend on the supply (domestic and worldwide), the demand and the quality of the production. The variety of the selected legumes also influences the prices. Contracts farming conduct to better prices for farmers, but they are not common in Spain yet. The exception are products with Protected Designation of Origin (PDO) or Protected Geographical Origin (PGI). They guarantee the originality and the quality of the products. Therefore, the PDI-varieties achieve higher prices. These quality standards, which are more numerous in the dry bean sector, represent a traditional and valued market in Spain, but still of a very small size. The bulk of the market is barely regulated by the origin factor, but the price conditioner has a great weight (demand is very elastic to price level). This contrasts with what happens in other European countries, such as Germany, where consumers are willing to pay a higher price for the regional factor (KEZEYA SEPNGANG ET AL., 2018).

Figure 8 presents the producer prices of different grain legumes in Spain. These are the prices that the farmers received. On the first sight, the prices of grain legumes used for feed (faba beans and field peas) are lower than those of legumes used for human nutrition (dry beans, lentils and chickpeas). This shows that the use of legumes has a major impact on legume prices. Consequently, the food market here has the highest value.

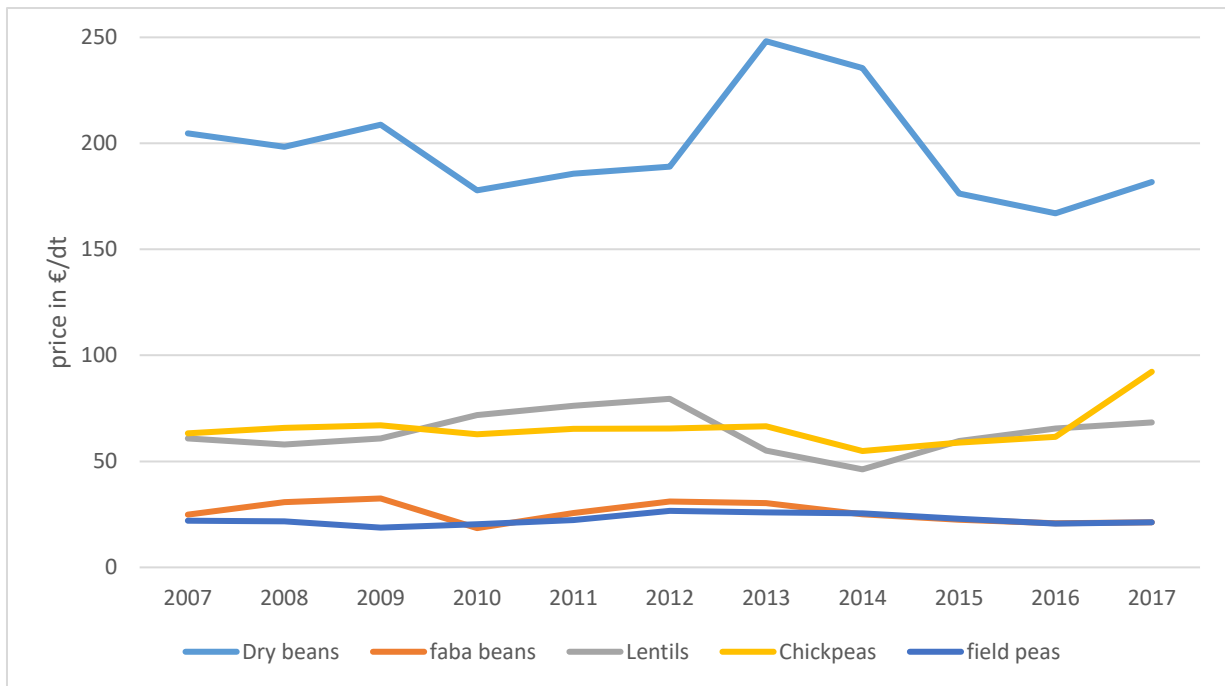


Figure 8: Producer prices of dry grain legumes in Spain from 2007 to 2017. Primary source: MAPA; in EIRIZ GERVAS ET AL. (2019).

While the prices of dry beans are around 200 €/dt on average, those for lentils and chickpeas are 65 €/dt and faba beans and field peas 24 €/dt. The large price difference between dry beans and other legumes is because the main produced varieties of dry beans in Spain is produced under quality standard, namely under the PDO or PDI status (FWS, 2019). Meanwhile, chickpeas or lentils production are mainly commodity grains. The share of the produced PDI-varieties here is lower than for dry beans. The prices of dry beans were so high in 2013 and 2014 because of the low production in these years. It should be noted that the imported unit value of dry beans, around 100 €/dt, is two times lower than the producer price (~ 200 €/t) in Spain. This explains the high import of this crop into Spain, principally from Argentina. Since Castilla-Léon is the most important region of dry beans production, their prices are probably set there, too. This is probably the case for lentils in Castilla la Mancha, field peas in Castilla-Léon and Castilla la Mancha, and faba beans and chickpeas in Andalucía.

4 Conclusion

Similar to many other European Countries, the importance of legumes in Spanish agriculture is growing. In terms of production, field pea shows the highest production of grain legumes, with an average production in Spain of about 200,000t in the last five years. It is followed by fresh beans, fresh peas, faba beans, chickpeas, lentils and dry beans.

While in other EU-countries field peas and faba beans are also used for food, they are practically used for feed in Spain. Furthermore, only 20 % of their production is used internally by the produced farmers. This is due to the high specialization of farms in Spain. The demand of field peas exponentially increased in the last years. This was covered by the import from Non-EU countries. Due to higher import tax in India, Spain is an important market for international trade, as it is the case for the import of field peas from Russia and Ukraine in 2018. On the other side fresh legumes (fresh peas and fresh beans), chickpeas, lentils and dry beans are used for human consumption. Thereby, PGI and PDO are seen as levers for the legumes market in Spain.

Although Spain is the main consumer of grain legumes for food, the deficit is still high and imports play an important role, mainly from outside of Europe. The USA and Canada are the main suppliers of lentils, chickpeas and dry beans in Spain. Domestic demand is so high for fresh beans that an important quantity is imported, mainly from Morocco and France. This increasing demand for legumes indicates a high potential for the European legumes market.

References

ABEL H (2016) Bedeutung von Körnerleguminosen für Naturhaushalt, Land- und Ernährungswirtschaft. In JEROCH H, LIPIEC A, ABEL H, ZEENTEK J, GRELA E R & BELLOF G (2016) körnerleguminosen als Futter- und Nahrungsmittel. DLG verlag, S.46-50.

BÖHM H (2009) Körnerleguminosen –Stand des Wissens sowie zukünftiger Forschungsbedarf aus Sicht des Ökologischen Landbaus. Verlag Eugen Ulmer KG, Stuttgart. Journal für Kulturpflanze, 61 (9). S. 324–331, 2009, ISSN 0027-7479.

FADN PUBLIC DATABASE (2019) https://ec.europa.eu/agriculture/rica/database/report_en.cfm?dwh=SO

GLOBAL TRADE HELPDESK (2019) <http://www.globaltradehelpdesk.org/en>

MAPA, MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (2019) <https://www.mapa.gob.es/es/estadistica/temas/>

Eiriz Gervas D.G., Mancheño Losa S. & López Pérez J.J. (2019) Anuario de estadística. Ministerio de Agricultura, Pesca, Y alimentación avance 2018. Madrid, 2019.

EUROSTAT (2019) <https://ec.europa.eu/eurostat/data/database>

FWS, FOOD AND WINES FROM SPAIN (2019) Legumes & Rice. Edited by Adrienne Smith/@ICEX. <https://www.foodswinesfromspain.com/spanishfoodwine/global/food/products/subproducts/PRG2017729548.html>

ITC, INTERNATIONAL TRADE STATISTIC: <http://www.intracen.org/itc/market-info-tools/statistics-import-product-country/>

KEZEYA SEPNGANG B., STAUSS W., STUTE I. & MERGENTHALER M. (2018): The market of grain legumes in Germany – First results of the EU-project LegValue. Forschungsbericht des Fachbereichs Agrarwirtschaft Soest, Nr. 44.

KEZEYA SEPNGANG B., VICKERS R, MUEL F, SMADJA T & MERGENTHALER M. (2018): The market of grain legumes in the UK –Results of the EU-project LegValue. Forschungsbericht des Fachbereichs Agrarwirtschaft Soest, Nr. 47.

USDA FOREIGN AGRICULTURAL SERVICES (2018) Exports drive Spanish Animal Production. GAIN Report number: SP1801 .

Annex

Production and foreign trade of field peas in Spain (in 1000 t)									
		2014	2015	2016	2017	2018	Average (2014-2018)	Sources	
Production		141,9	193,4	274,0	186,4	263,0	211,7	Eurostat	
Imports	EU-intra	9,1	10,5	11,7	42,1	78,5	30,4	Eurostat	
	Ranking for the year 2018	Romania				17,4	59,8	38,6	ITC
		France	7,1	7,8	4,2	6,6	14,4	8,0	ITC
		Poland	0,4	0,5			1,7	0,8	ITC
	EU-extra	23,3	7,5	7,8	6,9	533,5	115,8	Eurostat	
	Ranking for the year 2018	Russia	2,0			5,7	278,8	95,5	ITC
		Ukraine	9,2		9,0	2,0	206,9	56,8	ITC
		Kazakhstan					42,3	42,3	ITC
	Total imports	32,4	18,1	19,5	49,0	612,0	146,2	Calculated	
	ITC-Data	32,4	18,1	19,5	49,0	612,0	146,2	ITC (As control)	
Exports	EU-intra	1,0	1,3	3,1	1,7	2,7	2,0	Eurostat	
	Ranking for the year 2018	Portugal	0,4	0,6	1,7	1,0	1,2	1,0	ITC
		France	0,1	0,3	1,1	0,4	1,1	0,6	ITC
	EU-extra	0,1	0,2	0,0	0,0	0,1	0,1	Eurostat	
	Total exports	1,1	1,5	3,1	1,7	2,8	2,0	Calculated	
	ITC-Data	1,1	1,5	3,1	1,7	2,8	2,0	ITC (As control)	

Annex 1: Production and foreign trade of field peas in Spain (in 1000 t).

Production and foreign trade of fresh beans in Spain (in 1000 t)									
		2014	2015	2016	2017	2018	Average (2014-2018)	Sources	
Production		188,2	180,0	181,7	163,7	138,6	170,4	Eurostat	
Imports	EU-intra	51,9	29,6	50,4	34,4	56,2	44,5	Eurostat	
	Ranking for the year 2018	France	49,2	28,9	49,5	32,2	54,1	42,8	ITC
		Portugal	0,2	0,2	0,2	1,1	1,1	0,6	ITC
	EU-extra		74,0	78,5	87,1	77,7	87,6	81,0	Eurostat
		Morocco	74,0	78,5	87,1	77,7	87,5	80,9	ITC
	Total imports	126,0	108,1	137,5	112,1	143,7	125,5	Calculated	
	ITC-Data	126,0	108,1	137,5	112,1	143,7	125,5	ITC (As control)	
Exports	EU-intra	20,4	21,4	21,2	16,2	21,8	20,2	Eurostat	
	Ranking for the year 2018	Netherlands	7,5	7,1	7,5	6,5	7,9	7,3	ITC
		Germany	2,4	3,1	3,0	1,9	4,8	3,1	ITC
		France	3,6	4,3	3,9	2,7	2,9	3,5	ITC
		Portugal	3,1	3,5	3,2	2,2	2,3	2,9	ITC
		Italy	2,1	1,7	1,4	1,2	1,4	1,5	ITC
	EU-extra	0,1	0,2	0,1	0,1	0,2	0,2	Eurostat	
	Total exports	20,5	21,6	21,4	16,4	22,0	20,4	Calculated	
ITC-Data	20,6	21,6	21,4	16,4	22,0	20,4	ITC (As control)		

Annex 2: Production and foreign trade of fresh beans in Spain (in 1000 t).

Production and foreign trade of faba beans in Spain (in 1000 t)									
		2014	2015	2016	2017	2018	Average (2014-2018)	Sources	
Production		38,9	65,5	53,6	48,5	43,2	50,0	Eurostat	
Imports	EU-intra	14,8	15,1	21,7	30,7	14,6	19,4	Eurostat	
	Ranking for the year 2018	UK	4,4	4,4	15,2	21,3	7,3	10,5	ITC
		Latvia	3,0	4,3	3,9		3,4	3,6	ITC
		France	2,2	1,8	1,9	5,0	3,1	2,8	ITC
	EU-extra	2,6	1,9	1,9	1,8	2,0	2,0	Eurostat	
	Ranking for the year 2018	Egypt	1,0	1,0	1,0	1,3	1,4	1,1	ITC
		Australia	0,9	0,4	0,5	0,3	0,4	0,5	ITC
	Total imports	17,4	17,1	23,6	32,4	16,6	21,4	Calculated	
	ITC-Data	17,4	17,1	23,6	32,4	16,6	21,4	ITC (As control)	
Exports	EU-intra	2,6	3,4	4,8	6,3	5,2	4,5	Eurostat	
	Ranking for the year 2018	Portugal	0,7	0,7	1,4	1,6	2,3	1,3	ITC
		France	1,1	1,3	2,1	2,5	1,6	1,7	ITC
	EU-extra	0,2	0,4	0,2	0,4	0,2	0,3	Eurostat	
	Total exports	2,8	3,8	5,0	6,7	5,4	4,7	Calculated	
	ITC-Data	2,8	3,8	5,0	6,7	5,4	4,7	ITC (As control)	

Annex 3: Production and foreign trade of Faba beans in Spain (in 1000 t).

Production and foreign trade of chickpeas in Spain (in 1000 t)									
		2014	2015	2016	2017	2018	Average (2014-2018)	Sources	
Production		34,0	27,3	37,4	39,0	76,0	42,7	MAPA	
Imports	EU-intra	1,0	1,5	1,3	2,2	3,1	1,8	Eurostat	
	EU-extra	57,2	48,4	42,6	39,5	48,2	47,2	Eurostat	
	Ranking for the year 2018	USA	11,4	10,7	13,7	18,2	19,5	14,7	ITC
		Mexico	27,5	26,4	18,6	12,7	17,4	20,5	ITC
		Argentina	5,5	9,8	7,5	7,5	9,1	7,9	ITC
	Total imports	58,2	49,9	43,9	41,8	51,3	49,0	Calculated	
	ITC-Data	58,6	49,9	43,9	41,8	50,5	48,9	ITC (As control)	
Exports	EU-intra	1,1	1,0	2,4	5,8	3,0	2,6	Eurostat	
	Ranking for the year 2017	Portugal	0,3	0,3	0,3	2,8	0,4	0,8	ITC
		Belgium	0,3	0,3	0,5	1,0	1,7	0,8	ITC
	EU-extra	0,4	0,8	2,0	5,1	4,2	2,5	Eurostat	
	Ranking for the year 2017	Egypt			0,2	1,1		0,7	ITC
		Pakistan				1,1		1,1	ITC
	Total exports	1,5	1,8	4,4	10,9	7,3	5,2	Calculated	
ITC-Data	1,5	1,8	4,4	10,9	7,2	5,2	ITC (As control)		

Annex 4: Production and foreign trade of chickpeas in Spain (in 1000 t).

Production and foreign trade of lentils in Spain (in 1000 t)									
		2014	2015	2016	2017	2018	Average (2014-2018)	Sources	
Production		23,9	23,2	29,8	18,5	42,5	27,6	MAPA	
Imports	EU-intra	1,9	2,9	3,1	2,6	2,1	2,5	Eurostat	
	Portugal	1,3	1,6	1,9	1,4	1,2	1,5	ITC	
	EU-extra	70,4	62,9	64,0	72,1	43,9	62,7	Eurostat	
	Ranking for the year 2018	USA	24,7	24,7	26,1	34,4	22,0	26,4	ITC
		Canada	50,6	37,8	36,3	35,6	20,8	36,2	ITC
	Total imports	72,3	65,8	67,1	74,7	46,0	65,2	Calculated	
	ITC-Data	77,8	65,8	67,2	74,7	46,0	66,3	ITC (As control)	
Exports	EU-intra	1,9	1,6	2,2	2,2	2,4	2,1	Eurostat	
	EU-extra	1,3	1,6	3,0	0,4	0,5	1,4	Eurostat	
	Total exports	3,3	3,2	5,2	2,6	2,9	3,4	Calculated	
	ITC-Data	3,3	3,2	5,2	2,6	2,9	3,4	ITC (As control)	

Annex 5: Production and foreign trade of lentils in Spain (in 1000 t).