

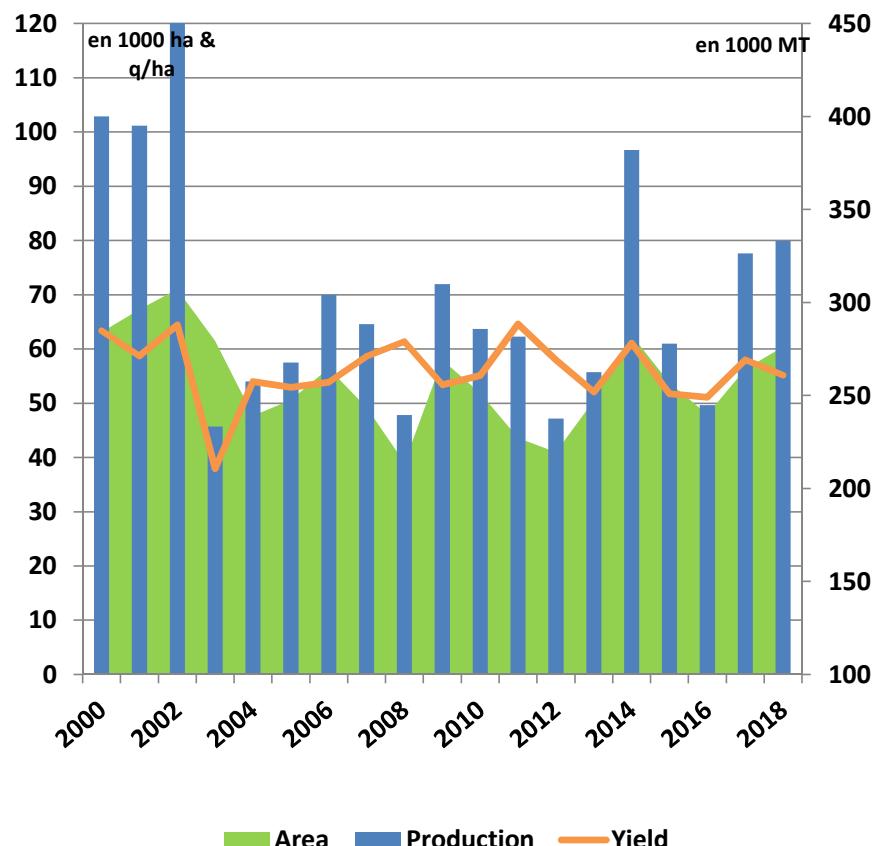


Technical & economic references for sorghum production in South- West of France

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SORGHUM PRODUCTION IN FRANCE



- Since 2003, sorghum area have varied between 40 and 60 000 ha
- An average yield at 56 q/ha with low variation
- A production, between 250 and 400 000 t. depending on the acreage

Source : Arvalis from Agreste

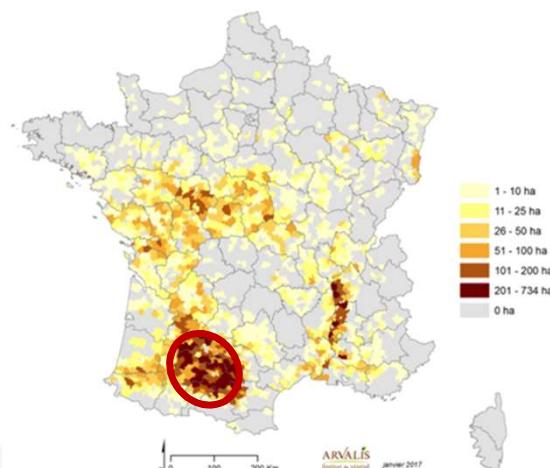
FOCUS ON MIDI-PYRENEES REGION

	Sorghum	Dry corn	Soybean (dry & irrigated)	Sunflower
Cultivated area 2015/16/17	18 500 ha	28 300 ha	50 000 ha	189 500 ha
Trend over the past 5 years*	 (+7.8%)	 (-4.2%)	 (+364%)	 (-17.8%)
% of national production**	36%	3%	38%	31%

Source : Agreste

*: average 11/12/13 vs 16/17/18

** : average 15/16/17



Rainfall measurement 15/04 au 15/09	260 to 300 mm
Sum T° base 6 15/04 au 15/09	1950 to 2200°C
Soil type	Clay and limestone or deep silts
Main rotation	Sunflower – wheat (cereals- oilseeds)

PRODUCTION SYSTEM OVERVIEW

- NON-IRRIGATED CROPS IN MIDI-PYRENEES -

	Corn	Sorghum	Sunflower	Soybean
Precocity group	Early (série 11)	Half Early	Mid late	Grpe I/II
Water resource	rainy	rainy	rainy	rainy
Seedling density (seeds/ha)	80 000	320 000	70 000	500 000
Seed origin	100 % Certified	100 % Certified	100 % Certified	50% Farm 50% Certified
Soil pest protection	✓	✓	✓	Inoculum
Fungicidal protection			✓	
Insecticide protection	✓			
Weeding	Pre-emergence	Post-emergence (root penetration + foliar + contact)	Pre-emergence crop	Pre & post-emergence
Mineral fertilisation N (en kg/ha)	169	127	38	/
Mineral fertilisation P2O5 (en kg/ha)	55	55	55	50
Mineral fertilisation K2O (en kg/ha)	/	/	/	50
Harvest moisture content (en %)	≈ 15%	16%	< 9%	< 14%

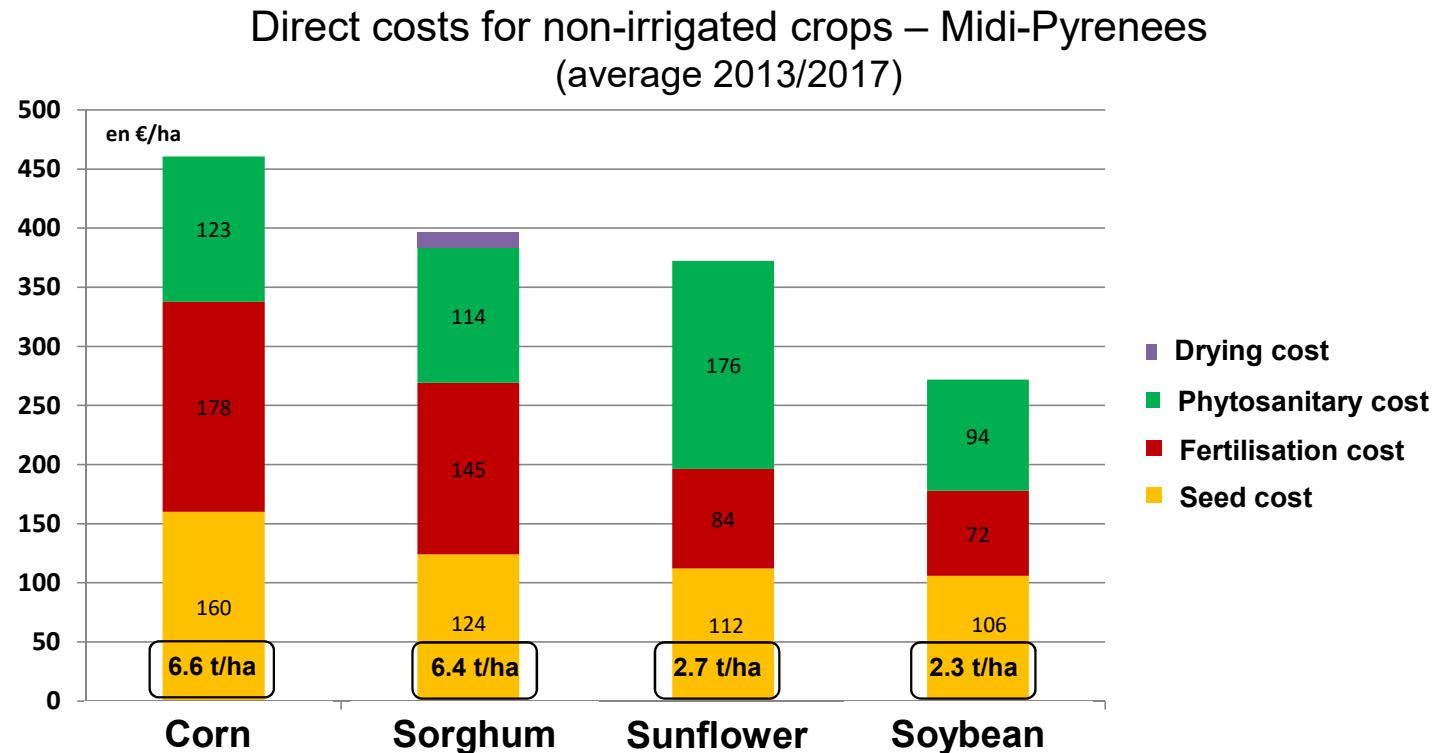
Source : ...

Source : Arvalis* & Terres Inovia** experts

* : French institute of cereals, ** : french institute of oilseed

Congress 2018

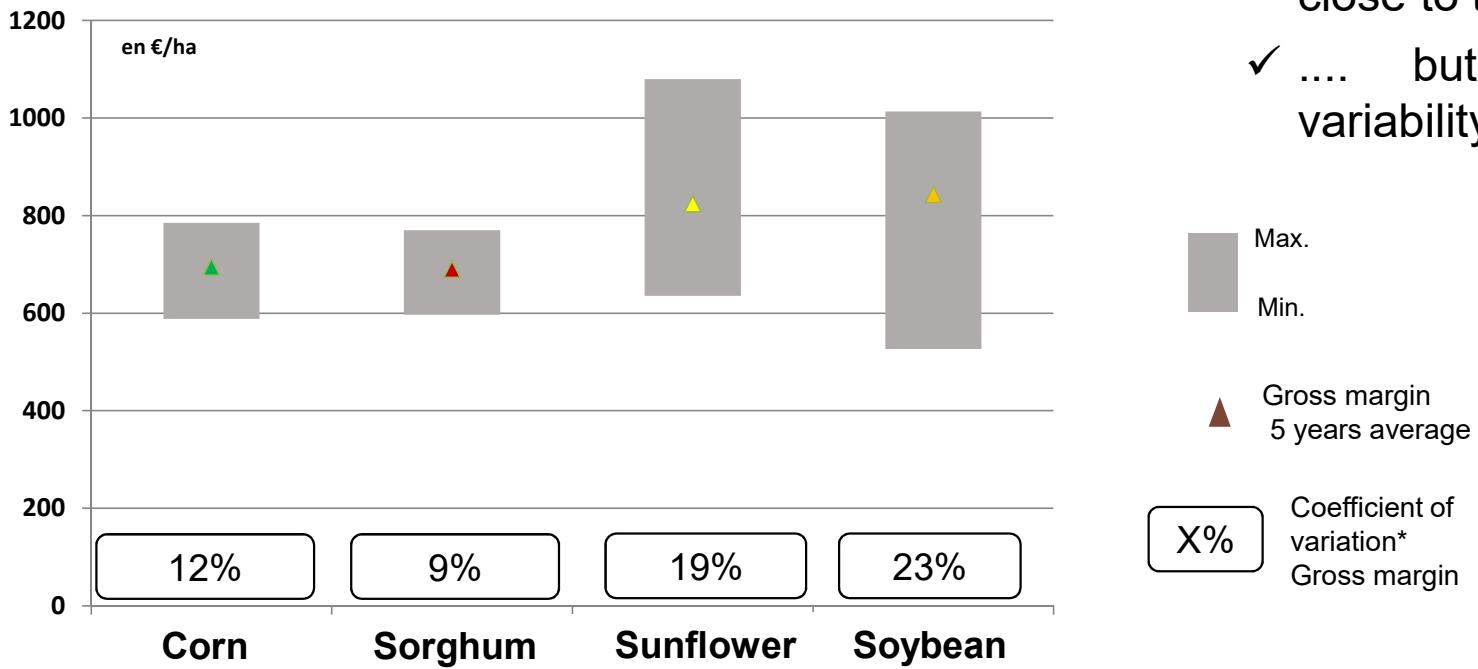
ECONOMIC REFERENCES FOR SORGHUM COMPARED TO OTHER NON-IRRIGATED CROPS



Source : Arvalis from expertise Arvalis – Terres Inovia

VARIABILITY ANALYSIS OF GROSS MARGIN FOR NON-IRRIGATED CROPS – MIDI-PYRENEES -

Gross margin spread (max/min) and average for several non-irrigated crops (2013/2017)



- ✓ On average, sorghum gross margin is close to the other crops
- ✓ but shows a lower inter-annual variability.

FOR FRENCH PRODUCERS, SORGHUM GRAIN IS...

- Economic arguments :
 - gross margin equivalent or very close to the one of the other crops
 - lower gross margin variability (good for income management)
 - Close customers (feed use in France, Spain...) & various outlets (human, fish & pet food, industrial uses)
- But also a crop :
 - to diversify crop rotation
 - to spread better its work schedule
 - to manage climatic, agronomic & market risks
 - to deal with environmental & climatic challenges in the future

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Merci

Thanks

Grazie

Спасибо



Source : photothèque Arvalis

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