



Towards the **EU FOOD SAFETY FORUM:** shaping together the new collaborative platform

Sustainable food: how to keep it safe?

15 December 2021

ON LINE EVENT

h. 10:00 - 12:00 CET



Grant Agreement No. 101000613

www.foodsafety4.eu





Beyond farm gate and value chain actions: Barilla Sustainable Farming



MICHELE SUMAN

BARILLA SPA



“Good for You Good For the Planet” vision

- To improve the raw material sustainability’s performances, by engaging new relationships with the up-stream value chains actors, mainly raw materials producers, farmers’ cooperative, mills and processors
- To look at these interactions as a potential **source of new information and data useful to monitor tools and strategies efficiency**

In 2008, Barilla obtained Environmental Product Declaration for pasta and some other products and confirmed that the greatest environmental impacts belonged to raw material production (crop cultivation).

WE HAVE NO ALTERNATIVE TO SUSTAINABILITY...
(BARILLA CENTER FOR FOOD AND NUTRITION)

Alimentazione, Barilla: "Non abbiamo alternative alla sostenibilità"

Appuntamento organizzato da Fondazione Barilla e Food Tank sul futuro dei sistemi

RESETTING THE FOOD SYSTEM FROM FARM TO FORK
Let's make the future grow
1 DICEMBRE 2020

Partners: Barilla, foodtank, MATERIALI GEOGRAFICI, CIPIT, and others.

Carrefour promuove il corner di prodotti sostenibili

Le vetrine di 19 multinazionali più rispettose dell'ambiente saranno esposte in un'area dedicata nei supermercati di tutta Europa dal 15 dicembre.

GOOD FOR YOU

2020 KEY RESULTS



476 PRODUCTS reformulated with a better nutritional profile

(since 2010)



We have **REMOVED PALM OIL** from **100%** of our **PRODUCTS**

(since 2016)



5+ MILLIONS of **EUROS** and **4.170+ TONNES** of **PRODUCTS** donated to associations during the Covid-19 pandemic



GENDER PAY EQUALITY **ACHIEVED** for Barilla People worldwide

BARILLA SUSTAINABILITY PROJECTS



BARILLA SUSTAINABLE FARMING

COCA HOLLANDS

grandduro.net

IL MANIFESTO DEL GRANO DURO

WASA CO2 COMPENSATI

Gran Cereale LE EMISSIONI SONO COMPENSATE

WASA PAPER

Harry's

100% RESPONSABILI

Buongran

Voretto

COCA HOLLANDS

IL MANIFESTO DEL GRANO DURO

GOOD FOR YOU GOOD FOR THE PLANET

GOOD FOR THE PLANET

2020 KEY RESULTS



Over **10,000** farms engaged in **SUSTAINABLE AGRICULTURE PROJECTS**



99.6% RECYCLABILITY of our packaging



100% of **EGGS** in line with high Animal Welfare Standard



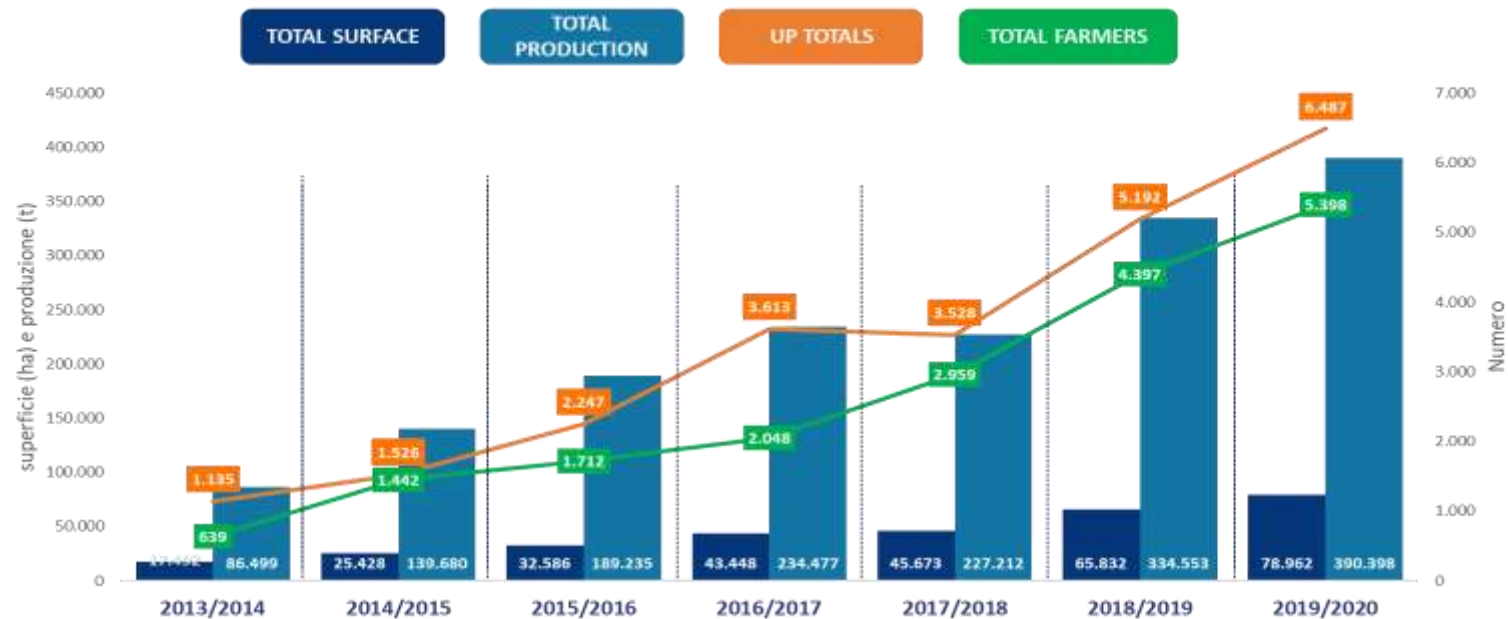
Reduced **CO₂eq** by **31%** and **WATER USE** by **23%**

(since 2010)

Barilla Sustainable Farming (BSF) project

In the last decade: **strategical (use of land & crop rotation), technical (nutrient efficiency & DSS) and commercial (contracts & quality)** aspects related to durum wheat cultivation. The main outcomes of the BSF are recognizable on the "**Handbook for the Sustainable Cultivation of Quality Durum Wheat**", a new “sustainability tool” tailored on a **decision support system (DSS) called granoduro.net®** and the design and use of a **set of rules on durum wheat cultivation contracts**. From 2013 to 2020, the number of BSF participants pass from 630 to **more than 5,000 farmers**, Barilla increased its purchase of high quality and sustainable durum wheat by cultivation contract from most vocated production areas in Italy, passing from 86,500 to **more than 390,000 ton of durum wheat** produced using these tools.

GRANODURO.NET – DEVELOPMENT ALONG THE YEARS



GRANODURO.NET, WEB APP



- Usable directly from the field
- Consultation/modification of company and production units
- Records of crop operations
- Consultation: meteorological data, phenological model, fungal disease risk indices, advice on nitrogen fertilization

Barilla Sustainable Farming (BSF) project

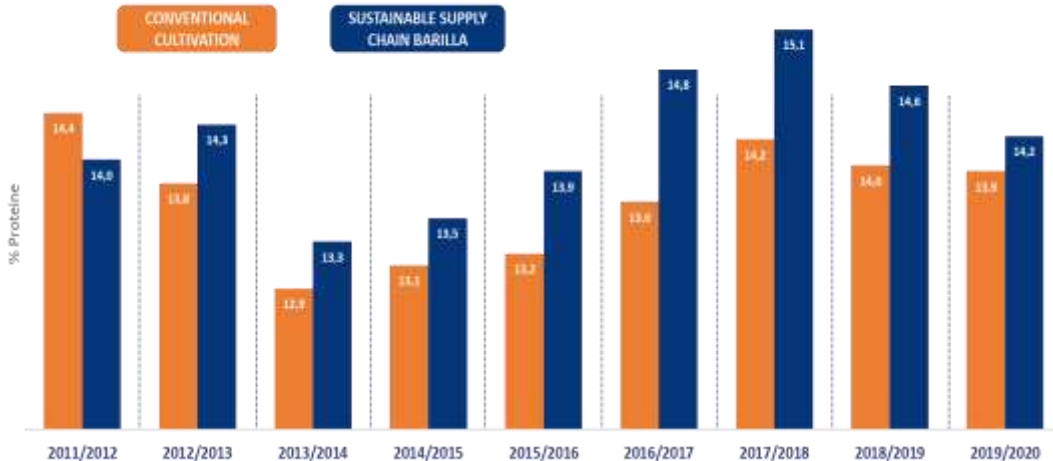
BSF main results consisting into suggesting farmers to adopt the **most suitable crop rotations** along with **sustainable cultivation practices**. The first part of the project was focused on identifying potential improvements in the most diffused cropping systems for the cultivation of Durum wheat in Italy, while **maintaining high levels of quality and food safety standards**. Results show that the well-known **low input agronomic practices are environmentally friendly and also often economically advantageous**.

For instance, implementation of dicotyledons into a cereal-only rotation allows a **reduction of environmental impacts** (- 36% Greenhouse Gases Emissions), a **significant reduction of the risk concerning the main mycotoxin which affects this cereal-chain (Deoxynivalenol – DON)** and finally an **increase in net income for farmers** (up to 31%).

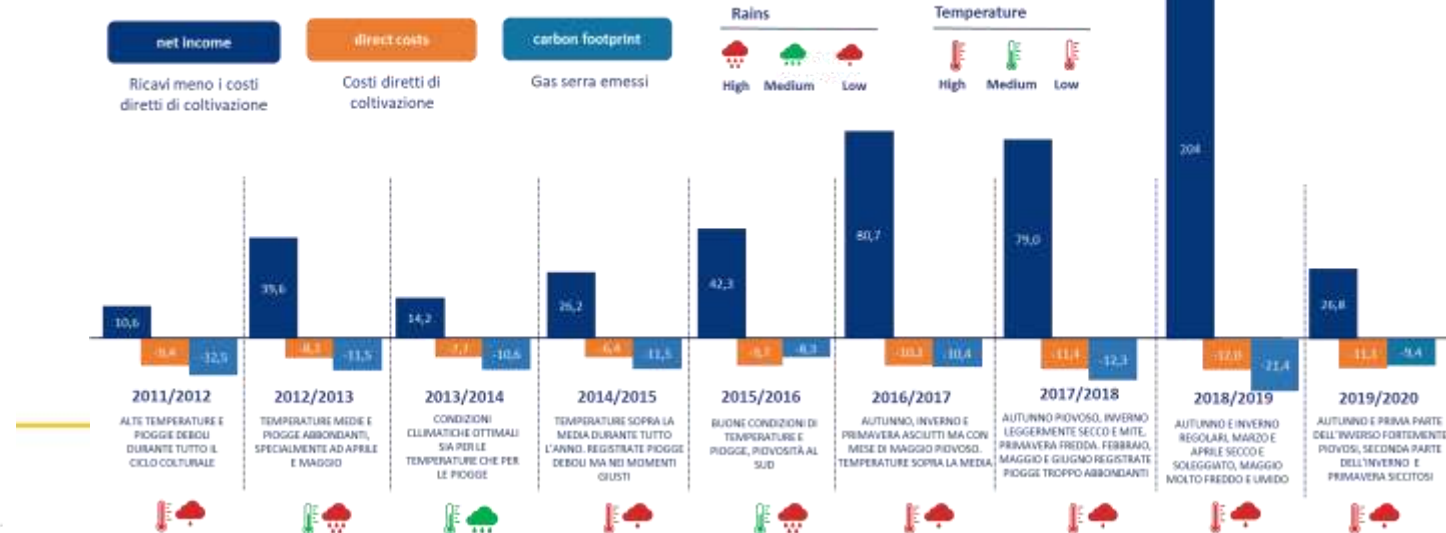
Table 6. Indicators calculated in Emilia Romagna

Crop rotation	Yield (t/ha)	Carbon footprint	Water footprint	Ecological footprint	Net Income	NUE	DON risk
	t/ha	t of CO ₂ -eq/t of d. wheat	t of water/t of d. wheat	global ha/t of d. wheat	€/t of d. wheat	kg of d. wheat/kg of N	-
1	7.3	0.51	328	0.40	141	32.5	7.9
2	7.5	0.41	315	0.38	157	42.2	2.3
3	7.5	0.36	315	0.38	151	47.1	1.7

DURUM WHEAT, THE DSS ALSO SUPPORT QUALITY: PROTEIN (%)



DURUM WHEAT: SUSTAINABLE CULTIVATION WITH DSS VS CONVENTIONAL CULTIVATION (%)





THANK TO ALL

Read more on:

- Ruini L., Ferrari E., Meriggi P., Marino M., Sessa F. (2013) "Increasing the Sustainability of Pasta Production through a Life Cycle Assessment Approach", Conference paper, *IFIP International Conference on Advances in Production Management Systems*, DOI: 10.1007/978-3-642-41263-9_48
- Blasi E., Monotti C., Ruini L., Landi C., Avolio G., Meriggi P. (2014) "Eco-innovation as a driver in the agri-food value chain: an empirical study on durum wheat in Italy." *Journal on Chain and Network Science* 15.1 (2014): 1-15;
- Blasi E., Ruini F., Monotti C. (2017) "Technologies and new business models to increase sustainability in agro-food value chain". *Agro FOOD Industry Hi-Tech* vol. 28(6);
- Pancino B., Blasi E., Rappoldt A., Pascucci S., Ruini L., Ronchi C. (2019) "Partnering for sustainability in agri-food supply chains: the case of Barilla Sustainable farming in the Po Valley" *Agricultural and Food Economics* (2019) 7:13,
- Blasi E. Cicatiello C. (2019) "Farmers' conflicting relation with management software. Evidences from durum wheat-pasta value chain in Italy" – Sinergie-SIMA 2019 Conference Management and sustainability: Creating shared value in the digital era 20-21 June 2019 – Sapienza University, Rome (Italy) DOI 10.7433/SRECP.FP.2019.13
- Rossi E.S., Blasi E., Pancino B., Agostinelli S. (2019) "The up-stream agro-food value chain actors relationship role in crop diversification adoption. A case from the Italian food valley" Crop Diversification Conference – Budapest 18-21 September 2019 – book of abstract
- Farina R. Pennelli B., Blasi E., Rocca D. (2019) "Building diversification and inputs reduction in intensive arable farms in Italy: main concepts and experimental co-design" Crop Diversification Conference – Budapest 18-21 September 2019 – book of abstract
- Comunicato Stampa "Per un'agricoltura italiana più sostenibile - L'esperienza della filiera del grano duro di alta qualità" (2018)
<https://www.crea.gov.it/-/world-pasta-day-pasta-italiana-buona-e-pi%C3%B9-sostenibile-con-il-progetto-icafrud-presentato-al-mipaaf>
- European Union's Horizon 2020 Programme for research & innovation under grant agreement no 728003 - Crop diversification and low-input farming cross Europe: from practitioners' engagement and ecosystems services to increased revenues and value chain organization - DIVERFARMING
See Case Studies number 5-6-7 & 7bis.
<http://www.diverfarming.eu/index.php/en/>; <http://www.diverfarming.eu/images/casestudy/CS5.pdf> ; <http://www.diverfarming.eu/images/casestudy/CS6.pdf> ; <http://www.diverfarming.eu/images/casestudy/CS7.pdf>
<http://www.diverfarming.eu/images/casestudy/CS7b.pdf>
- Report "Good for You, Good for the Planet" report is the tool used to share with all of society the path undertaken by Barilla, consistently with the United Nations' Sustainable Development Goals, part of the 2030 Agenda.
https://www.barillagroup.com/sites/default/files/200807_GYGP%20Report_short_ENG_caricamento%20sharepoint_0.pdf