

In recent years, the Barilla group has progressively been penetrating the sector of first-stage tomato processing. Here are three of the main stages of this process that began in 2013.

March 2017: Italy: Barilla enlarges its pasta sauce business Processing, Plants & Equipment



Italian food company Barilla is to spend around EUR 50 million (USD 53 million) on increasing production of pasta sauces to meet rising demand from consumers.

Under the investment plan, the company intends to expand the group's dedicated plant in Rubbiano, near Parma, making it the largest producer of pasta sauces in Europe, with up to 122 000 tonnes a year.

August 2014: A "sustainable agriculture" agreement between Barilla and Casalasco

The Barilla group, a leader in the sectors of pasta, sauces and baked confectionery products, has signed a horizontal industry agreement with the Casalasco Consortium, already a Barilla partner, for the development, production and packing of tomato-based products.

This is the fourth agreement between the two companies, and it implies interaction between the "tomato" and "durum wheat" sectors within a larger sustainable agriculture project initiated



by Barilla, which has already seen two agreements signed this year in the sectors of wheat, sugar beet, rapeseed and sunflower.

The Casalasco Consortium, headquartered in Cremona, includes more than 300 growers, mostly located in the provinces of Parma, Piacenza, Cremona and Mantua, who plant tomatoes on about 4 500 hectares. Total production amounts to 350 000 tonnes of raw tomatoes and spans the entire industry, from seed breeding to finished products.

December 2013: Barilla: 40 million invested in tomato sauce plant

Extensive quality controls from the field to the final package

Until the opening of its new EUR 40 million (approximately USD 53 million) plant, inaugurated in October 2012 in Rubbiano di Solignano, near Parma, Barilla relied on an external tomato supplier and co-packer to produce its sauces for the Italian market as well as for 100 other countries (excluding the U.S.). As Rubbiano plant director Marco Sacchelli explains, by internalizing the production of its sauces, Barilla now has more control over the quality of the product and a greater opportunity to expand its recipes and capacity. From raw materials through to packaging, every step in the process has been engineered to result in the highest-quality product that most closely resembles homemade sauces made in the Italian tradition.

Before building the plant, Barilla used "only one line and one technology, and adapted that to the specific recipe," says Sacchelli. With the new equipment, there are "two lines for the production of two different kinds of products. We also have the space for future development, and we will be able to acquire new equipment and technologies as they become available to help us produce the best-quality product." The facility's two lines each include dedicated processing, filling, and packaging equipment, with one line producing tomato-based sauces, and the other producing

pesto. While the processing parts of the lines differ according to the sauces' requirements, the packaging lines mirror one another, with equipment selected for minimal stress on the product and packaging, traceability for each jar on the line, and the reduction of water for sustainability purposes, among other things.



The plant, with 105 employees, produced 9000 tonnes of sauce in its first year and was scheduled to produce more than 35 000 tonnes in 2013. By extending the

number of days and shifts when the plant is operational, it has the capacity to reach 60 000 tonnes/year. The construction of the plant also allows for an additional 10 000 m² (3300 sq ft) of space in which two more lines could be added.

From the beginning of the process, Barilla takes an active role in every aspect of the business. For the sourcing of its raw ingredients for its sauce products, Barilla defines the technical approaches to growing the tomatoes and basil. During the tomato-growing season, Barilla has the capability to map the production of growers each hour in order to choose the best quality raw ingredients. "During the last tomato campaign, we did more than 10 000 quality tests on the raw material from the tomato producers," Sacchelli says. Barilla has also worked with the University of Piacenza to study the rotation practices of fields to allow for more sustainable and productive farming that requires less intervention and less pesticides.

For its tomato sauces, Barilla uses a 42-head rotary volumetric filler that normally runs at 400 bottles/min on each line. After considering fillers from three equipment suppliers, the company chose one with a valve system that provides maximum dosing accuracy with the least mechanical stress on the product. A vacuum-capping machine applies the metal twist-off closures, which are then laser-coded with lot number and use-by date. Barilla uses two jar sizes (400 and 500 g), from proprietary suppliers, for tomato-based sauces.

The Barilla plant currently produces seven pesto varieties and seventeen red tomato sauces. According to Sacchelli, because the two packaging lines have been optimized around several jar sizes, changeover time for container size is minimal. To change over the line from one recipe to another takes approximately 30 minutes and involves adjusting the parameters for the pasteurizer and rinsing the line for 90 minutes. By strategically scheduling the sequence of the sauces packaged—for example, starting with plain tomato-based and moving to those with more ingredients—Barilla is able to reduce the frequency of total sanitization of the line. In this way, Sacchelli says the plant can produce up to five different recipes per week.



The tomato sauces typically have a 21-month shelf life, while the pesto can last for 18 months. Neither variety uses preservatives.

Some figures:

The new pasta sauce plant

- *Completed in 2012.*
- *Surface: plant 15 000 m² (49 000-sq-ft), whole complex 60 000 m².*
- *Production capacity: 60 000 tons/year – at launch 35 000 tons/year.*
- *80% of the equipment is sourced locally.*
- *Average daily production: 150 tonnes of tomato based sauces, 50 tonnes of pesto.*
- *32% less CO2 emissions and 47% less water consumption than average sauce plants.*
- *Raw material – tomato and basil – are 100% Italian, and around 75% of all the ingredients used are Italian.*
- *Employment: 120 people when fully up and running (almost 100 at launch).*
- *Number of products: 24 different Barilla recipes.*
- *Number of tests: more than 138 000 tests every year. About 11 jars per hour of production (more than 260 jars/day) are kept by Barilla for quality control purposes.*



Barilla group:

- *Employment: more than 13 000 people in the world.*
- *41 production sites (13 of which are in Italy).*
- *2 500 000 tonnes of food products are made every year.*
- *Net sales: more than EUR 3.9 billion in 2011.*
- *Exports: to more than 100 countries.*
- *170 000 kilometers of spaghetti turned out every day in Parma.*