

BAKING UPDATE

Practical technology from Lallemand Inc.

Regulatory Aspects of Organic Yeast

In recent years, regulations have changed in Europe and the US in regard to organic yeast. Production guidelines were updated, and now organic yeast has to be taken into account in baking recipes.

USA: USE ORGANIC YEAST FOR AN ORGANIC BREAD

The United States Department of Agriculture (USDA) has ruled that, effective October 21, 2012, "When used as food or a fermentation agent in products labeled as 'organic,' yeast must be organic if its end use is for human consumption; nonorganic yeast may be used when organic yeast is not commercially available." (*Federal Register*, Vol. 77, No. 109/Wednesday, June 6, 2012/ Rules and Regulations, page 33292, section 205.605).

Since October 21, 2012, a baker must use organic yeast in a yeast-containing food product if it is to be labeled as organic. If a product is labeled as made with organic ingredients, or if no marketing claim is made, then conventional yeast may be used. Previously, the USDA made allowance for

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CERTIFYING A BAKED GOOD AS ORGANIC

To sell bread or baked goods labeled as organic, bakers must go through a certification process, which varies by country. Besides using organically grown ingredients, requirements for organic certification generally involve a set of standards for production, processing, storage, packaging, and shipping.

Details on obtaining organic certification can be found at these websites for the US, EU, and Canada:

- <http://www.ams.usda.gov/services/organic-certification/>
- <http://ec.europa.eu/agriculture/organic/>
- <http://www.inspection.gc.ca> (search: *organic*)

The Organic Food Movement

THE BREAD AISLE has seen an explosion of new products with better-for-you claims, including 'whole grain,' 'natural,' 'no trans fats,' 'non-GMO,' and 'organic.' What does 'organic' mean, and how is it different from the other claims?

Organic foods are thought of as those produced without the use of pesticides, fertilizers, herbicides, hormones, antibiotics, bio-engineering, or ionizing radiation. Moreover, the International Federation of Organic Agriculture Movements (IFOAM) defines organic agriculture around the principles of health, ecology, fairness, and care.

THE ORGANIC TREND

Organic products are becoming mainstream in North America and in many countries in Europe. Selections once found only in health food stores are now widely available in supermarkets, club stores, big-box stores, and at other food retailers. Many retailers have introduced private-label lines of organic products, and manufacturers continue to introduce large numbers of new organic products.

The 2014 USDA Economic Research Service report, *Organic Market Overview*, states that "Organic sales widen in all food categories and the consumers are increasingly mainstream. Organic foods are consumed at least occasionally by a majority of the Americans." This trend is also reflected in the total global organic market, which has grown significantly in the last fifteen years, from US\$15.2 billion in 1999 to US\$72 billion in 2013, according to data published by Organic Monitor.

"In 2014, organic food claimed almost 5 percent of the total food sales in the US, and has consistently far outshone the 3 percent growth pace for the total food industry," reported the Organic Trade Association in 2015.

A 2014 survey of the OrganicDataNetwork in Europe revealed that "bread and bakery products have high importance in the organic product range, with around 10 percent in Switzerland, the Netherlands, France, Finland, Sweden and Germany."

THE ORIGIN OF ORGANIC AGRICULTURE

In the first half of the 20th century, an organic farming movement started in Europe and India and later spread to other countries.

The term 'organic farming' was first defined by Lord Northbourne in his 1940 book, *Look to the Land*, out of his conception of "the farm as organism." Northbourne described a holistic, ecologically balanced approach to farming—in contrast with what he called "chemical farming," which relied on "imported fertility" and "cannot be self-sufficient nor an organic whole."

WHY BUY ORGANIC?

A 2014 survey by the British Soil Association reported consumers' top reasons for buying organic products:

- Contained fewer pesticides and other chemicals
- Understood to be more natural and unprocessed
- Believed to be healthier for themselves and their families
- Concern for the environment
- Claimed they taste better

Other considerations that motivated consumers to purchase organic foods were animal welfare, avoiding GMOs, food safety, and ethics.

Many other studies have been conducted of "the organic consumer," and correlations with urbanization, education, and income have been found. Recently, a Danish study in press for the *NJAS - Wageningen Journal of Life Sciences* concluded that consumers buying more organic products tend to eat more healthy as defined by the official dietary recommendations.

LABELING A FOOD AS ORGANIC

The United States, Canada, and the European Union have comprehensive organic legislation, and the term 'organic' may be used only by certified producers.

United States. In the US, federal legislation defines three levels of organic foods. Products made entirely with certified organic ingredients and methods can be labeled '100% organic.' Products with at least 95 percent organic ingredients may be labeled 'organic.' Both of these categories may also display the USDA Organic seal. The third category contains a minimum of 70 percent organic ingredients and may be labeled 'made with organic ingredients' but may not display the USDA Organic seal. Products may also display the logo of the certification agent that approved them. Products made with less than 70 percent organic ingredients cannot be advertised as organic but can list individual organic ingredients as such in the product's ingredient statement.



EU. Council Regulation (EC) No 834/2007 defines organic production and labeling in the EU. The certification is handled on member-state level. The use of the EU organic logo for organic products made in the EU has become mandatory since July 2010. A product can be labeled organic if it mainly contains ingredients from agricultural origin and a minimum of 95% of these are derived from organic agriculture. Additionally, the product also needs to comply with the production rules laid down in the EU organic regulations. The certifying body's code number and the EU or non-EU origin of the agricultural products needs to be indicated next to the organic logo as well. If less than 95% of the agricultural ingredients are organic, the term can be used in the ingredient list only.



Canada. Organic certification was implemented at the Canadian federal level on June 30, 2009. Certification is mandatory for agricultural products represented as organic in import, export, and interprovincial trade or that bear the federal organic logo. In Québec, provincial legislation provides government oversight of organic certification within the province, through the Québec Accreditation Board (Conseil D'Accréditation Du Québec).



There are equivalence agreements between different countries, meaning that organic products made and certified in one country are recognized also in another country. For instance, organic products made in the EU can also be labeled, represented, and sold in Canada, the US, and certain other countries.

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noncertified minor ingredients in products labeled as organic. The National Organic Standards Board was petitioned for change in 2003 by a commercial party.

EU: YEAST NEEDS TO BE TAKEN INTO ACCOUNT IN ORGANIC FOOD RECIPE

Since December 31, 2013, yeast has been considered an ingredient of agricultural origin [Commission Regulation (EC) No 1254/2008]. In the EU, a product can only be called 'organic' if a minimum of 95% of its ingredients derived from agricultural origin are in fact organic. Therefore, the yeast now has to be taken into account in the recipe of the organic product. The EU regulation does not allow mixing of organic and conventional yeast [Council Regulation (EC) No 834/2007 and Commission Regulation (EC) No 889/2008]. Certain private organic standards go beyond the EU regulation and ask the bakers to use organic yeast for all recipes using yeast since it is available.

HOW IS YEAST MADE?

The production of organic yeast in the EU is regulated in the Council Regulation (EC) No 834/2007 and Commission Regulation (EC) No 889/2008 in their current versions. In the US, the National Organic Program (7 CFR 205) lays down the rules for organic production.

In principle, organic yeast is grown by fermentation on substrates derived from organic agriculture. Yeast has complex nutrient needs to grow. Besides sugar and nitrogen, it also needs vitamins and minerals. In organic yeast production, these needs are met by organic plant-derived ingredients such as molasses, cereals, or leguminous crops. There is a short list of permitted processing aids that can be used in low amounts, up to 5%, and producers try to minimize their use. Through careful processing and a growing phase longer than that of conventional yeast, a high-quality and well-performing organic yeast can be produced.

Lallemand Offers Organic Bakers Yeast

LALLEMAND organic bakers yeast products include fresh organic yeast, sold under the Wienering Bio and Malteserkors® brands, and dry organic yeast, an addition to the Instaferm® family. All of these organic products are produced in Lallemand's organic-certified plants in the EU.

Both the organic fresh yeast and the organic dry yeast are available for commercial bakers and for consumers. The organic fresh yeast is available as 500-gram blocks and 42- and 50-gram cubes. The organic dry yeast is available as 20-kilogram, 10-kilogram, and 1-kilogram packages for commercial bakers and as a 9-gram sachet for consumers.



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