

# What makes a seed truly organic?

The European Regulation on Organic Production of Agricultural Products stipulates the general requirements for organic seed certification. But given the complexity of our current agricultural and economic context, these criteria clearly fall short of the needs of many groups and individuals who would like the term "organic seed" to be associated with certain values that are not yet covered by the European rules. In this article, the author proposes a ten-point manifesto.

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What is an organic seed? It seems like a simple question, but it's quite hard to answer when you stop to think about it. First of all, there is no official definition of the term. We have to turn to the dictionary rather than the legislation governing seed production (Spanish Law 30/2006, of 26 July 2006, on seeds, nurseries, and phytogenetic resources<sup>1</sup>), to discover what a seed is.<sup>2</sup>

To find out what "organic" means, we can refer to European Council Regulation no. 834/2007, of 28 June 2007, on organic production and labelling of organic products<sup>3</sup>.

Having reached this point, all we know is that an organic seed is "an embryonic plant in a latent state that serves to propagate the species; and that the parent plant (specifically the female) must have been produced in line with the precepts of organic production, and therefore cannot derive from a genetically modified organism (GMO)."

But from the start, it is clear that this definition is unsatisfactory for many of the individuals and groups who work with organic seeds.

The correct term for seeds that strictly meet this definition would be "seeds authorised for organic production", while "organic seeds" should be reserved for varieties that have genuinely been obtained through organic systems of conservation and improvement.

At Esporus, we believe that organic seeds are all this and much more. We believe that organic seeds must be produced in an agroecological context, and, on this basis, the concept should evolve to encompass a range of production and social factors that will contribute the necessary systemic approach.

In light of this, at Esporus we have prepared a ten-point manifesto for truly organic seeds:

1. "Article 3. Definition of seeds, nursery seedlings, and plant varieties: Seeds are understood to mean elements that are botanically or commonly referred to as such, the function of which is to reproduce the species or to establish crops, as well as any tuber, bulb, or any living vegetable organs and materials used for such purposes."
2. An embryonic plant in a latent state
3. "Article 9: Prohibition on the use of GMOs. Genetically Modified Organisms (GMOs) and products produced from or by GMOs shall not be used as food, feed, processing aids, plant protection products, fertilisers, soil conditioners, seeds, vegetative propagating material, micro-organisms and animals in organic products." "Article 12: Plant production rules. Section i) for the production of products other than seed and vegetative propagating material only organically produced seed and propagating material shall be used. To this end, the mother plant in the case of seeds and the parent plant in the case of vegetative propagating material shall have been produced in accordance with the rules laid down in this Regulation for at least one generation, or, in the case of perennial crops, two growing seasons;"

## 1 Unpatented varieties

Seeds from varieties covered by patents or plant breeder's rights must be removed from organic production systems for two reasons: the ethical issues raised by the appropriation of living beings and processes, and the concentration of corporate power that results from this kind of intellectual property.

## 2 Active participation

Public and private entities engaged in the development and improvement of traditional varieties for organic production must implement mechanisms to facilitate the active participation of end users, both farmers and consumers.

## 3 Support of farmers' rights

The seed production system used must actively contribute to the conservation and sustainable use of phytogenetic

### Further reading and useful documents

- ECO-PB (2013). Position paper on organic plant breeding <https://www.fibl.org/en/homepage.html>
- Red de Semillas (2013a). "La agrobiodiversidad en el contexto de la PAC: situación y perspectivas." Paper presented at the 21st technical conference of the SEAE. Rural Development, Agroecological Innovation, and Organic Agriculture in the CAP. Madrid.
- Red de Semillas (2013b). The use of seeds authorised for organic production in Spain. "Impactos sobre la biodiversidad agrícola y propuestas". Report by the Red de Semillas, "Resembrando e Intercambiando". Madrid. [http://www.redsemillas.info/wp-content/uploads/2012/08/120731\\_informe\\_rds\\_semillas\\_eco\\_biodiversidad\\_espana.pdf](http://www.redsemillas.info/wp-content/uploads/2012/08/120731_informe_rds_semillas_eco_biodiversidad_espana.pdf)

01. Different types of beans from the Esporus project.

resources and promote farmers' rights to conserve, use, exchange, and sell seeds and propagating material saved in farms.

## 4 Soil fertility conservation

Varieties derived from organic seeds must conserve soil fertility and vitality, allowing the optimum and sustainable use natural resources and ensuring the provision of nutrients in sufficient quantity and quality to the population (animal and human).

## 5 Promotion of varietal diversity

Varieties produced from organic seeds must be highly adaptable to local pedoclimatic and cultural conditions, and to organic farming with a low level of external inputs, in order to increase and promote intra- and interspecific and varietal diversity.

## 6 Respect for the genome

Organic seeds must not be obtained through microbiological improvement strategies (OJEU, 1998). Seed selection and improvement must respect the genome as an indivisible entity and avoid artificial invasion (through transmission of isolated DNA, RNA, proteins, or through artificial mutagenesis). The cell must also be respected as an indivisible functional entity, avoiding invasion into an isolated cell on growth media (digestion of the cell wall, destruction of the cell nucleus through cytoplasmic fusions, etc.).

## 7 Selection and improvement by farmers

Seed selection and improvement must be carried out using means that are readily available to farmers, and promote the interaction between the cultivated plants and all other organisms in the system. These improvement methods must give rise to varieties that are able to reproduce sexually and vegetatively, without restrictions. Examples include massal, pedigree, and forced selection, ear-bed method, and testcrosses.

## 8 Fair production

Organic seed production must be a tool used to guarantee food sovereignty and autonomy, and must support local culture and the development of rural areas in line with the principles of gender equality, equity, and the social economy, and fairness to farmers. As such, it must promote artisan microenterprises based on organic seeds and local varieties.

## 9 Respect for cultural heritage

The selection and improvement of varieties for organic production must respect the cultural and agronomic heritage that has remained part of the base material during the period of agroclimatic adaptation, and thus also the criteria used by the farmers who have conserved it.

## 10 Fair and affordable price

The price of seeds must be affordable to consumers, and at the same time provide seed producers with sufficient income to allow them to implement a system that is sustainable over time and guarantees a selection of local, organic varieties adapted to the agroclimatic and cultural characteristics of the geographical area of production.

All of these conditions can help us to recognise, understand, and respect the intrinsic value of plants, independently of human interests. We must learn to find our place in the agrosystem: it is undoubtedly an important one, but it should never be the centre.