KHORASAN WHEAT in four episodes:

1 episode: khorasan wheat and its known origin

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Without doubt this is the cereal that opened the way to the return of the ancient grains and the growing interest of consumers for these miracles of nature. For this reason, we believe that it deserves to be known more in depth and so we will ty to give a more technical description that may also be of consumers' interest. While some informations are absolutely sharable with our American colleagues, we feel obliged to correct other concepts and propose the version that our history has handed down to us.

1 episode: Khorasan wheat and its known origin

According to a scientific model, Khorasan cultivation would have started in the Middle East and would have expanded to Europe about 9500 years ago. Penetrating one km per year through the coasts of the Eastern Mediterranean, it arrived in Italy only a thousand years later.

This brief and introductory historical-scientific framework is to say that the three progenitor genetic lines of modern cereals were already spread throughout the Mediterranean area. Indeed, the triticum turgidum turanicum (Khorasan) is one of the countless varieties of tetraploid grains that evolved over time but, according to the criteria of modern intensive agriculture, it was economically less advantageous -because of lower yield, so it was then abandoned and subsequently recovered for its nutritional qualities.

Moreover, the two species T. turgidum and T. polonicum -which are often referred to when talking about Khorasan wheat- were already well known since the end of 1700. Indeed, since then, many authors have always confirmed the existence of these two species. Speaking of Khorasan, it is right to say that this grain is valued today for peculiar nutritional characteristics.

All this have been said to avoid attributing unfounded origins with the impossible finds of ancient seeds in Egyptian tombs. Indeed, if nowadays, with modern techniques, a well preserved seed vacuum can maintain itself maximum 30 months, it is impossible that it would have been preserved for 3000 years!

Thus, traces of Khorasan have not been found in the tombs of Ancient Egypt, even if in part it was cultivated also in the regions of Anatolia and in marginal zones of Asia and North Africa.

The origins of the Khorasan wheat is still uncertain, just as for more in general the Triticum. Already in 1651 it is described as a grain with particularly large and long caryoxides, but only in 1681 it began to be called as T. polonicum. Initially, Khorasan was wrongly attributed to T. polonicum and since 2009 is attributed to T. turgidum turanicum by the USDA -United Stetes Departments of Agricolture.

In reality, according to the publications of Professor Percival (1921), there is a third variety associated with turgidum turanicum. This is defined as oriental wheat and places its origin in the Iranian region of Khorasan. The morphological characteristics of this species are different from that of T. turgidum and T. polonicum, but it is good to follow the disposition of USDA. Among all the varieties of wheat, the oriental wheat is the one which appeared more recently because there is no evidence of its existence before the first half of the seventeenth century.

2 episode: Its origins from bibliographic research

In a publication dated 1921, one of the most esteemed botanists of all time described and painted with indian ink what were the varieties and the origins of Khorasan different species. We then learned that these varieties were three:

- Polonicum: from Northern Europe and associated with the first registration of the Kamut® mark in 1989;
- Turanicum: from Southern Europe (Sicily?) and currently in our kitchens as khorasan;
- Oriental Wheat: from the Khorasan region.

We cannot exclude that the Turanicum arrived in Sicily from the Middle East as consequence of the many dominations suffered over the centuries and how these have contributed to agricultural development and cultural influence that still partially survive today.

Thanks to market evolution, in recent decades khorasan has come to light as an hidden treasure; hidden behind the imaginative local names that farmers give to it in their dialect: Strazzavizazzi, Farro Lungo, Farru, Farrone, Gnolu, Perciasacchi, Perciavisazzi, Vittorio Emanuele -to cite those recognized by the Decree of 17/10/2014 and published with G.U. n. 257, Seven hundred years -to name one still unknown to non-experts and evocative of its longevity.

A curiosity about the origin of the name Perciasacchi -literally hole sacks- is that it was so called because the pointed shape of its caryopsis used to pierce sacks of jute during transport. The Decree instead confirms that the origin of this durum wheat are the provinces of Palermo, Catania, Enna, Caltanissetta, Syracuse and Messina; which is to say a vastness of territories very different with climatic conditions but all in the Sicilian territory.
Curious to know that the best production happened in 2017 when the snow fell in February. After that snowfall, no more water was seen until the harvest and, observing the fields in spring, it seemed that wheat had just awakened from winter hibernation.
This explains why the cultivation of khorasan wheat has found optimal conditions in North America and Canada. Thanks to the skillful American marketing action using the name Kamut®, our national market was invaded by a cereal that we already had at home but no one had considered.
Khorasan wheat lends itself well to organic cultivation as it is a crop that has adapted over the centuries to Sicilian environment and does not require the help of chemical fertilizers. The stature of its stem (1,5-1,8m) can easily fight the onset of weeds without having to resort to chemical herbicides.
Not having undergone genetic alterations, the taste, the aromas and the nutritional contents of this precious wheat have been preserved unchanged over time.

3 episode: The selection of an "Italian" seed

Starting from an intuition of a "caretaker farmer", we managed to do something extraordinary.
Thanks to the technical support of Arcoiris –a 100% organic seed farm associated with the Rural Seed Network, we wanted to make one of the most remote principles of organic farming applicable: give to the earth what it once gave us. As mentioned, the real problem was to standardize this wheat and give it a single name which was officially recognized by the institutions, the market, the processors and the consumers. This led us to apply to the CREA for the registration of the variety with the trade name that had once been assigned by the FDA and that should be used to be recognised on the market: khorasan wheat. The application for registration was accepted and we were finally able to give life to an industrial chain project with an Italian cartelinate seed.

4 episode: The chain project

Thanks to the coordination of BIOLOGISTIC -a company dedicated exclusively to organic raw materials and supply chain projects- as well as the availability of different industrial structures and the will of a well-known distributor, we have created something unique in Italy and perhaps in Europe: departing from the

core (germplasm) and following its evolution until the finished product on large and specialized retail shelves. This type of organisation allows us to ensure processors a tracebility that goes back to the seed. Another important fact to protect the khorasan wheat is that a cartelinate seed is always provided during sawing and, thus, there is no re-use of the produced seeds. The guarantee of a serious commitment of the farmers is confirmed by multiannual agricultural supply chain contracts for khorasan wheat with AGEA registration; thanks to which on one hand we are pleased that farmers can receive additional contributions, and on the other we have the guarantee that they are bound to the sector with the penalty of loosng their contributions.