

## THE BOOK OF AGRICULTURE OF IB-AL-AWAN (KITAB AL FALAHAH) TREATISE ON AGRICULTURE TRANSLATED BY J J CLEMENT-MULLETT 1864

Two hundred years ago (approx 1750) the "Kitab al-Falahah" or "Book of Agriculture" of Ibn-al-Awam was rediscovered in the Royal Spanish Library of San Lorenzo del Escorial and hailed as the greatest of all medieval treatises on agriculture.

Ibn al-Awam was an Arab agriculturist who flourished at Seville in Spain about the end of the 12th century. He wrote a treatise on agriculture in Arabic called Kitab al-Falahah (English: Book on Agriculture), which is the most comprehensive treatment of the subject in medieval Arabic, and one of the most important medieval works on the subject in any language. It was published in Spanish and French translations in the 19th century. The edition in French, from which this extract is taken, is about 1350 pages.

Chapter 24 article II gave instructions and advice on "Sowing and cultivation of root crops, including carrot, turnip, horse-radish, onion, leek, garlic, sekakul, colocasia, and others."

**Extract from the above French work translated into English by the World Carrot Museum, January 2014**

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*Chapter 24 Article II - Sowing and cultivation of root crops, including carrot, turnip, horse-radish, onion, leek, garlic, sekakul, colocasia, and others.*

There is, following Abou'l Khair and others, the cultivated carrot and the wild carrot, and a third male species which grows a substantial base (*root*). [1] Following Ibn-Hedjadj, one sows the carrot during August, the fairest month, until the first few days of September [2]. It is one of the vegetables which prefers the cold season and spring. The heat doesn't suit the carrot in any way; the heat causes loss of its good taste and it becomes acrid.

Following Ibn-el-Façel and others, the soft soil suits the carrot, like weak soils, those which are sandy, in the black earth; [3] the carrot prefers to grow down in the loose (rough) soil, not too compact, because firstly if rooted in compact soil, secondly it is not easy to uproot. The carrot likes fresh water. The soil must be cultivated with great care; requiring a lot of work because the trenches must be deep, because carrots need a soft soil and depth so that it can dive, extend and expand.

One prepares for carrots in (the suitable soil) the "tiles" (*plots or trenches?*) of the dimension shown, in which one plants the seed in the second half of July and during August, in the same way that one plants turnip seeds; one sprays with water from wells immediately following the planting, taking great care to ensure that the seed is pushed well down also. One stops watering/spraying until the need arises; then one waters once a week in the evening.

When the rains of autumn fall without interruption, water more rarely, [without "cabin fever" = disdain?] cease entirely the use of well water, because it makes the carrots very receptive to corrosion as well the two species of turnips, the round and the long; these vegetables have the same need for this water, if they do not receive the rare and accidental storm water.

[1] “tiges du pied” could refer to a “foot”, “stem” or “base”].

[2] d'eileul = is a francization of an Ottoman name for the month of September (Ayl I – (

[3] “les noires meubles” in modern French this translates to “black furniture” however the only association with farming I found was in: Sutières, Sarcey de, Agriculture expérimentale, à l'usage des agriculteurs, fermiers et laboureurs. (Paris: Claude Herissant, 1765), p. 63.

In summary, one treats the carrot the same as the long turnip when it has been sown in a watered and amended (*fertilised?*) soil, it will show its buds. Be careful not to destroy young shoots (even accidentally), because, [sion les laissait monter if they were left mounded?], the carrot would grow thin and pointed and would not give any benefit.

The quantity of seed employed during the planting is the same as that for the long turnip. If one wishes that rod (*root*) of the carrot lose its covering and the thin hairs (that usually occur) [literally “that the carrot wears usually”] and that it is smooth, it must be watered with pure water during December when the frosts strike, and then we will have the result sought. One should pull the seed of the vigorous and better rooted carrots, that is on the left side of the trenches, near the irrigation ditches, where they are likely to form their seed (?). One detaches this seed, make sure it is well dried and placed in reserve in new clay vases, for use when needed.

The Author says: “The early carrot is planted in the second half of August.”

Following Syrian agriculture (Nabataeans), the cultivated carrot is a plant where one eats the root and not the leaves. There are two species, one a red colour, that is very succulent and agreeable to the palette, and the other which is a greenish-yellow; it is larger than the first. The carrot is also one of the plants whose root develops in the interior of the soil and is edible and nutritious. It is eaten raw or cooked, always observing however that being cooked it is lighter, more profitable, and has a better taste. Sow the carrot in the climate of Babylon during the last five days of August, during the whole of September, or the during the first five days of October exclusively.[4]

[4] d'Ab = is a francization of an Ottoman name for the month of August (Ab – ;( Tischerin = Tišr.n al-Awwal (October)

One must irrigate without interruption until the seed should be harvested (lifted?), and, when it is not being given more water than the proportion followed for other root plants.

The carrot is a diuretic plant; it augments the appetite and enhances one's energy; at the same time it brings joy to the heart. What works best for the turnip should also work well for the carrot, such as the cool weather, irrigation with fresh water, the repeated action of the north wind. The carrot does not suffer from the snow; it is even favourable, giving it strength, and encouraging a larger size.

It culminates with carrot food preparations when we eat [carrots] with vinegar, brine, olive oil, and certain vegetables or seed. It can also be a medicinal powder mixed with honey [5] and “dibs” which is a date syrup, and with sugar; one gets in this case a great result which ranks in the class of jams.

The poor also use the carrot in place of bread, that, for them, in a few cases, because it soothes hunger and the silent (*little known?*) fact, that it provides a healthy and nutritious diet. Lambouschad (contemporary with Plutarch... Boeotia, Greece?) recounts that the people of his country were making bread with carrots. They ground the carrots in dry pieces, added a certain quantity of wheat flour, barley, rice or millet. They completed the plan (*process*), and obtained a bread of good quality, healthful and nourishing.

It can also be eaten with sugary preparations (jams) and salted products; only its flavour was more agreeable with tea first; it was more nutritious and more suitable for the body. There is one species of wild carrot; the latter is rather used in medicine, while the cultivated species is more often used as food than a medicine. (3)

[5] Médicament, remède: A powdered drug mixed with honey or sugar (mainly given to animals); Date syrup was known to the ancient Greeks.

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*Chapter 29 (?) preserving fruit and nuts*

One can also preserve in vinegar carrots, turnips, eggplant and gherkins in the following manner. We take the bigger carrots and soft turnips, the eggplants which we find at the end of the season; we make so much of the cucumbers and gherkins. We cut these carrots, turnips and the eggplants in pieces, either we split them in pieces, either leaving them together or separating them by group, we plunge them into hot water, then we remove them, then we press [1] out this water very slowly, then we arrange these vegetables separately in large vases, the carrots and turnips in the same vase, the eggplants in a separate vase.

[There appears to be a note in the text here but I think there may be a couple of digitization errors:

“Il est ait navet donz poar rexclosion des radis.”

I believe that “donz” should be “donec” and that “rexclosion” should be “éclosion” and I am not sure what “poar” is. “Polar” in French is “polaire”.

So, my translation is:

The turnips therefore take on the [poar?] appearance of radishes.]

They are covered (*“plunged”*) by good quality vinegar, then we add a dose of olive oil of good quality. We coat the vase or jars well with Foriflce [2] or with gypsum of good quality; these preserves (“cans/jars”) are consumed during the winter. Thus, one can make pickles with the vegetables for which you have an affinity by following the instructions herein as applied to similar vegetables.

[1] Exprimer: the action or process of assimilating, taking into solution, or taking in liquid; the taking up of fluid by a colloidal system resulting in swelling.

[2] Foriflce appears to be a product name. I was unable to track down anything except that it must act like a seal. It was referred to in French gynecological papers and a British patent document. I’m guessing that it is sealant.

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