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The Byzantine Garden. What to Plant in the Garden according to 12th Book of *Geoponica* by Cassianus Bassus?

Abstract. The main aim of this paper is to analyse the text of the 12th book of *Geoponica* for the purpose of identification of vegetable plants, which were described by Cassianus Bassus. The analysis will serve as the first step for further inquiries that will include the reconstruction of recipes that require some of the vegetables presented in the text.

The text of *Geoponica* is a basic source learn about the agriculture but also the culinary art of the Byzantine Empire, even though it is rather hard to read due to the complicated style and quite a large number of technical terms (i.e. botanical, agronomical or astrological to name just a few). As already mentioned, the first part of the analysis is to identify the plants mentioned by Bassus, which will allow me to take further steps, i.e. to reconstruct the culinary recipes, in which the plants mentioned by the Author can be found. Without this precise identification, the reconstruction of the recipes would not be possible at all.

In the 12th book of his *Geoponica* Bassus gave descriptions of several plants that should be taken into consideration while planning the garden, mostly for their medicinal or cooking properties. Amongst them, Author mentioned garlic, artichoke, melon, leek, radish, celery, and cucumbers. Having the rather big number of plants narrowed down will allow to demonstrate *in vivo* how they were served according to *De re coquinaria* by Apicius and present the practical usage of vegetables proposed by Bassus for cultivation. As Apicius' cookbook is the only one preserved from Antiquity, it will remain the major source of the recipes presented in this paper.

Keywords: *Geoponica*, Byzantine garden, garlic, artichoke, melon, leek, radish, celery, cucumbers, *De re coquinaria*, Apicius

The relative peace and stability of life in the first period of the resilient rule of the Macedonian emperors fostered a revival of science[1]. In a wider context, one can see the return to the achievements of the world, which has for long remained in the realm of memories, i.e. to the culture and the thought of Ancient Greece. On the initiative and under the supervision of Emperor Constantine VII

[1] O. Jurewicz, *Historia literatury bizantyńskiej. Zarys*, Warszawa 2007, p. 149.

Porphyrogenitus many encyclopaedic works were created[2], on all areas of life known at that time. One of them is the work of *Geoponica*, the authorship of which is attributed to Cassianus Bassus[3]. It is worth mentioning that the *Geoponica*, also known as *The Encyclopedia of agricultural knowledge* (Περὶ γεωργίας ἐκλογαί) that we have today is the new edition of the text from 6th c. A.D. that was initiated by the Emperor and later dedicated to him. The dispute, whether the 10th century text should be attributed to Bassus or how big impact the Emperor himself had in the new edition of the text, is not in my interest at this moment, as this issue is not that relevant to identifying of plants shown in this article. Although, I am fully aware of Bassus' doubtful authorship of the text that we have today, and despite the fact that scholars have been pointing out for a long period of time that for sure the 10th century edition of *Geoponica* had not come out from one's author hand, for the purposes of this article, all the references to the Greek text will be made in the name of Bassus[4].

Nevertheless, we should note that the significance of the reign of Constantine VII lies precisely in his scientific activities, though they had compilatory character, in the end, it led to preserving some of the outstanding texts. As Georgij Ostrogorski indicated, the purpose of the writing activity of that time was fully practical and didactic, so the compilations were to serve to the posterity[5].

The encyclopaedia itself consists of 20 books that give a rather wide view on agriculture of the (later) Antiquity in such spheres as astronomy and weather, the tillage, the calendar of works to be done throughout the year, the establishment and maintenance of vineyards, cultivation of the olive trees, fruit trees, decorative plants, cultivation of vegetables, breeding and herding of birds, cattle, horses, bees, fish and hunting. Considering the vast area of interest of the work, we can say that the vegetation takes up quite a lot of space in the text, but from the perspective of this article, the most interesting is the 12th book. Here the author gives some pieces of advice that concern the horticulture i.e. the growing of useful vegetables. Bassus names the plants that could be easily grown in the climate of Constantinople and have dietary meaning. It is worth stating here that the monthly sowing calendar, implemented in this part of the encyclopaedia, might be one of the indicators suggesting that the text was indeed re-edited in the Byzantine times[6].

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[2] R. RODGERS, *Κηποποιΐα: Garden Making and Garden Culture in the Geoponika*, [in:] *Byzantine Garden Culture*, ed. A. LITTLEWOOD, H. MAGUIRE, J. WOLSCHKE-BULMAHN, Washington 2002, p. 160, 162.

[3] KASSIANUS BASSUS, *Geoponika. Bizantyńska encyklopedia rolnicza*, trans. I. MIKOŁAJCZYK, Toruń 2012, p. 9.

[4] Great analysis on the matter of possible authorship of the text is provided by M. DECKER, *The Authorship and Context of Early Byzantine Farming Manuals*, B 77, 2007, p. 106–115. His investigations on placing of the estate *Maratonumo* mentioned in the *Geoponica* should be very helpful for eventual archeobotanical research, that could shed some more light on the accuracy of identifying of plants.

[5] G. OSTROGORSKI, *Dzieje Bizancjum*, trans. H. EVERT-KAPPESOWA, Warszawa 2008, p. 283–284.

[6] Robert Rodgers is of the right opinion that the opening chapter of this book, alongside with the dedication to the Emperor and the linguistic analysis, is one of many 10th century additions, taken perhaps from an unknown calendar, R. RODGERS, *Κηποποιΐα…*, p. 169.

The 12th book of *Geoponica* consists of 41 chapters and can be easily divided into 2 parts. The first one includes the first 11 chapters, which contain the instructions and the useful pieces of information about the horticulture, i.e. how to keep the garden tidy, without worms, with blossoming flowers, what is the best fertilizer to be used, what kind of soil is good for cultivating the vegetables, and how to have them grow in dry places. The author even gives a short remark on how to hurt the gardener (Πρὸς τὸ κηπουρὸν ἀδικῆσαι) by spraying some goose feces[7]:

> Χηνῶν ἀφόδευμα ἅλμῃ λυσας ῥαῖνε τὰ λάχανα[8]
>
> [To hurt the gardener] spray the vegetables with goose feces diluted in water[9].

The second botanical part starts with chapter 12 and ends with 41. Among them Bassus cites 26 kinds of vegetables, presenting more or less precise descriptions of their medicinal properties. In the later parts of this paper, I will focus on 6 of them, i.e. the cucumber, the melon, the radish, the celery, the leek, and the artichokes. The analysis of the text of *Geoponica* will help me in reconstructing some of the culinary recipes held in Apicius' cookbook *De re coquinaria libri X*.

It has to be stated here that even though the names of the plants sound familiar and the plants themselves have been well-known for millennia, the cultivation process that was taking place over the centuries, and also genetic engineering in recent times, changed not only the look of most of the vegetables described by Bassus, but most of all their properties. One needs to have this remark in mind, when translating the text of *Geoponica* or reconstructing the culinary recipes, as in case of this article, as we are not discussing exactly the same plants. Still, reconstructions given in this text could help to shed some light on alimentation and cuisine of the late Antiquity and Byzantium.

Each name of the identified plant is presented with English and taxonomical name. It needs to be remarked that the botanical name (called *binomen*, binominal name) needs to be in the Latin language and at the level of species always consists of two parts: the first part of the name is the generic name, which is always considered as a noun and the first letter has to be written in capitals; the second part is an epithet, which is always considered as an adjective and has to be a one word only. The Latin name is followed by the abbreviation of the creator of the name, i.e. the first person who correctly published the systematical description. In case the epithet would need to consist of two words then it has to be written with a hyphen e.g. the scientific name of maidenhair fern is *Adiantum capillus-veneris* where *Adiantum* is the generic name, but the epithet *capillus-veneris* is written with hyphen

[7] Probably the quote was taken from Julius Africanus, R. Rodgers, *Κηποποιΐα…*, p. 170.
[8] *Geoponica sive Cassiani Bassi Scholastici de re rustica eclogae*, XII, 11, rec. H. Beckh, Lipsiae 1984 [= BSGR] (cetera: *Geoponica*).
[9] All the translations form *Geoponica* or other Classical texts that are quoted in this paper, if not indicated differently, were made by the author.

as per the rules of the *International Code of Nomenclature for algae, fungi, and plants*[10]. The rules of the Latin grammar and orthography may not be followed, as it always depends on how well Latin was known to the botanist who created the name.

1. Σίκυος – cucumber, *Cucumis sativus* L. (the other forms σικυός, σίκυς)[11]

In chapter 19. entitled Περὶ κολοκυντῶν καὶ σικύων[12] – *Concerning gourds and cucumbers*[13] Bassus uses the form σίκυος for the cucumber. He says that there are two ways to avoid the seeds in the cucumber: 1. the first stem of the plant should be dug in the soil so only the top of the stem would be visible, when the stem grows up it is covered with the soil once again and this needs to be repeated three times; 2. the same result getting soaked the seeds in sesame oil three days before sowing. Bassus here also gives a rather interesting solution for the fevering infant. According to the text, when the baby has a fever, one needs to place the cucumbers of equal length next to it during sleep. This, as Bassus says, will recover the baby quickly, because the cucumbers would absorb the fever. Dried root mixed with sweet wine, or water with honey is the best remedy for sickness. To obtain purgative cucumbers one needs to soak the root of the wild plant for two or three days in the water and then use it to water the plants for five days (this should be repeated five times). The other way to have even stronger purgative cucumbers is to dig a hole around the roots, when they give the first stems, and put there few hellebore twigs and then bury them again.

The cucumber – *Cucumis sativus* belongs to the family *Cucurbitaceae*, is thought to be native to India, however, the evidence is just circumstantial as the plant has never been observed in the wild (not for certain, maybe *C. sativus* var. *hardwickii*?)[14], furthermore some suggestions were being made in the 19th century that the plant could have been cultivated for over 3 000 years in India[15]. All in all, the cucumbers were widespread and loved in Ancient Greece and Rome, probably the seeds were brought to Greece from Egypt and further to Sicily by the Greeks. The Romans used to grow cucumbers like grape wine. It was also said that they were fond of growing them in different shapes, putting the vegetable into a reed or specially made baskets[16].

[10] Cf.: https://www.iaptglobal.org/icn.

[11] *LSJ*, p. 1598; this dictionary proposes the identification with *Cucumis sativus*, Jacques André did not agree with this. J. ANDRÉ, *Les noms de plantes dans la Rome Antique*, Paris 2010, p. 80, 238.

[12] *Geoponica*, XII, 19, 1–19.

[13] In his analysis Robert Rodgers suggests referring to the Greek κολοκύντη as pumpkin. I would be personally very cautions with this as the pumpkin was unknown to Ancient world and was brought to Europe after Christopher Columbus' expeditions, R. RODGERS, *Κηποποιΐα*…, p. 168.

[14] J. ROBERTS, *Powab jabłka. Fascynujące dzieje owoców i warzyw*, Warszawa 2004, p. 136.

[15] *Evolution of Crop Plants*, ed. N.W. SIMMONDS, London 1976, p. 65, 67.

[16] J. ROBERTS, *Powab*…, p. 136.

2. Μηλόπεπον – the melon, *Cucumis melo* L.[17]

The next plant from the same family *Cucurbitaceae* is the melon from chapter 20 Περὶ μηλοπεπόνων[18] – *Concerning melons*. Here Bassus says that melons are very refreshing and antiemetic, they remove the phlegm, help to increase the salivation, clean the head, and also help to cut the thirst caused by a fever. To make them have the rose aroma one should plant the seeds with dried roses. To obtain sweet melons the seeds should be soaked in milk with honey, then dried before sowing. In this chapter, Bassus also warns menstruating women against approaching the plants because the melons would either wither or become bitter.

The melon τὸ μηλόπεπον – *Cucumis melo* from the same family *Cucurbitaceae* is a plant of major economic importance. It appears to be native to Africa, still, truly wild species were being reported in eastern tropical Africa only, somehow the plant was rather a latecomer to man's list of crops. Its cultivars were dispersed rapidly throughout Europe[19]. When not grown in monoculture, melons tend to have good resistance against the powdery mildew caused by *Sphaerotheca fuliginea*[20].

3. Ῥαφανίς – the radish, *Raphanus sativus* L. nowadays described as *Raphanus raphanistrum* subsp. *sativus* (L.) Domin[21]

Not only cucurbits were in the interest of Bassus. In the 12th book of *Geoponica*, chapter 22 Περὶ ῥαφανίδων[22] – *Concerning the radish* author, as in the previous chapter, quotes Florentinus, however, it seems that Columella Moderatus and Palladius also should be taken into consideration. Here, Bassus brings up both the ways to cultivate the vegetable and its medicinal properties. According to the text, the radish is good in treating phlegm and different kinds of kidney diseases, eaten with honey would be a cure for cough, and dyspnoea can be treated by eating roasted seeds also with honey. Radish given to women in labour is supposed to increase lactation. Moreover, the vegetable was seen as a general remedy for different venoms: eaten on an empty stomach the radish frees it from all toxins, drinking the radish juice with water is also an antidote. Needless to say, Bassus quotes that anyone who would spread the radish on his hands, would be able to catch vipers and the plant itself placed on the scorpion would cause its death. Last but not least, ground radish should heal the wounds, remove freckles, and prevents alopecia. When eaten after the meal is a good carminative.

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[17] *LSJ*, p. 1566; J. André, *Les noms…*, p. 215.
[18] *Geoponica*, XII, 20, 1–5.
[19] *Evolution…*, p. 67.
[20] *Ibidem*, p. 65.
[21] *LSJ*, p. 1127; J. André, *Les noms…*, p. 158.
[22] *Geoponica*, XII, 22, 1–11.

In the text we can see the form ῥαφανίς, ῥαφανίδος (and its derivates) – the radish from the family *Brassicaceae* (= *Cruciferae*), *Raphanus sativus* and its varieties *radicula*, *niger*, with the probable wild species is *R. raphanistrum*. According to G. Becker[23] the black variety was known in Ancient Egypt and this could imply that the Mediterranean was the source of the crop[24]. The *niger* type is older than the *radicula*, while the white, long-form appeared in Europe maybe in the 16th century AD.

4. Σέλινον – celery or parsley, *Apium graveolens* L.[25]

Another useful plant presented by Bassus is τὸ σέλινον form chapter 23 Περὶ σελίνων – *Concerning celery/parsley*[26]. The word σέλινον is usually used in Ancient Greek for celery, but sometimes it can also indicate parsley (cf. Theocritus, Odyssey Calypso's cave), though for the latter the Greek language had separate term πετροσέλινον. The problem is that both plants belong to the same family *Apiaceae* (= *Umbelliferae*) and are not always that easy to distinguish, what is even more, in the wild they often are being confused with other, nonrelated species, that share the same look. Yet, most of the times τὸ σέλινον is identified with celery.

Bassus quotes that to obtain a big celery three pinches of seeds should be wrapped in a cloth, then spread with fertilizer and watered. One can get the same result by digging a hole around the root and covering it around with chaff. To obtain more curly plants the seeds should be crushed before sowing. In the later part of the chapter, Bassus presents few pieces of information about the properties of the plant. According to the text, celery is strictly forbidden for nursing mothers as it can cause milk loss and arouses passion. On the other hand, the celery can be used to refresh the breath, and as Bassus says the actors used this plant for this purpose. Eaten with bread it can cure rubella and the decoction used for a sitz bath can treat the urinary tract and kidneys.

Celery σέλινον can be identified with *Apium graveolens* from family *Apiaceae* (= *Umbelliferae*) occurs in the wild mostly in Eurasia. The modern cultivated plant is derived from by selection for size and succulence of the petioles. Probably, was used first by the Greeks as a medicinal and later as a cooking plant, the domestication is assumed to take place in the Mediterranean Basin[27]. It is worth mentioning that Pliny the Elder distinguished cultivated and wild celery[28].

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[23] G. BECKER, *Rettich and Radies (Raphanus sativus)*, [in:] *Handbuch der Pflanzenzüchtung*, Berlin 1962, p. 23–78.
[24] *Evolution…*, p. 60.
[25] *LSJ*, p. 1590; J. ANDRÉ, *Les noms…*, p. 234.
[26] *Geoponica*, XII, 23, 1–5.
[27] *Evloution…*, p. 322–323.
[28] *NH*, XIX, 46.

5. Πράσον – the leek, *Allium ampeloprasum* L. (= *Allium porrum* L.)[29]

The next plant that found its place the *Geoponica* is τὸ πράσον – the leek presented in chapter 29 entitled Περὶ πράσων – *Concerning the leek*[30]. Bassus from the beginning of this chapter states precisely that he is quoting Sotion, and according to his source there are three ways to grow a magnificent plant: 1. the seeds should not be watered till the fourth day after sowing, also they should be trampled; 2. a shell or flat stone should be placed upon the seeds, without any watering; 3. the head should be pierced with twig or reed and then the seeds should be placed so they stick to each other and give more glamorous plant. There is also another way involving some fertilizer: three pinches of seeds need to be rolled into linen, then covered with fertilizer and water. This is supposed to make the seeds come together to create a magnificent plant. Bassus also provides some information about the medicinal properties: grounded leek cures bites (of tarantula and reptiles), cooked leek eaten with honey helps in all kinds of cardiovascular diseases, and the decoction mixed with sweet wine cures the urinary tract. The leek juice drunk with water and the leek wrap help to cure animal bites. According to the text, this plant might have been a remedy for nearly everything, however, Bassus adheres that the constant consumption may weaken the eyesight and harm the stomach. All in all, to get the best from this plant it needs to be eaten very fresh and it is also as nutritious as meat.

The word πράσον is identified with *Allium ampeloprasum* L. from the family *Amaryllidaceae*, till 1981 it was classified under the *Liliaceae*, but at the turn of the 20th and 21st centuries, phylogenetic research has established the current valid classification. It belongs to the same botanical genus *Apium* together with chives, onion, and garlic, the latter two are also mentioned in *Geoponica*.

According to Vavilov the centre of origin of the leek would be the Near East and the Mediterranean[31]. References to onion, garlic, and leek can be traced back to the 1st Egyptian dynasty, the biblical accounts of Exodus, and by the time of Greek and Roman authors from Hippocrates to Pliny the Elder several cultivars were named. The leek was also well known in Europe in the Middle Ages, prized for different qualities.

[29] *LSJ*, p. 1460; J. André, *Les noms…*, p. 207.
[30] *Geoponica*, XII, 29, 1–10.
[31] N.I. Vavilov, *Origin and Geography of Cultivated Plants*, trans. D. Loewe, Cambridge 1992, p. 121–124.

6. Κινάρα – the artichoke, *Cynara cardunculus* var. *scolymus* L.[32]

The last plant selected for this paper is κινάρα the artichoke form chapter 39 Περὶ κιναρῶν – *Concerning the artichokes*[33]. Bassus says that the best time to plant artichokes is November, because during the spring the plants will bear fruits, if it is planted in spring they will not be able to flourish. To achieve any aroma the seeds need to be soaked in the rose, lily or bay juice before sowing, however, the other way to obtain the same result according to the text is to put the seed into the laurel berry. If the plant is to grow without any spikes if the seeds need to be either blunted with stones, or put into the pieces of lettuce root, and then planted. Sweet artichokes can be obtained by sowing dried seeds that were earlier soaked in milk with honey.

The artichoke *Cynara carduculus* from the family *Asteraceae* is a native plant of the Mediterranean Basin and Canary Isles. Tall, perennial thistle with large and fleshy, edible *capitula* (the chokes). The plant was domesticated and spread in the Old World, grown and appreciated by the Greeks and Romans[34]. The best artichokes were delivered from Cordoba and Cartago. The Romans used to associate the plant with erotica and one of the proofs is the fresco from *Domus Vettii* in Pompeii.

This concludes Bassus' list of the vegetables and their properties. The plants were not only meant to be planted for aesthetic reasons, but primarily, as a source of culinary ingredients.They were supposed to be served either as the side dishes, in the company to different kinds of meat, or separate appetizers or main courses. Fortunately, there is an Ancient cookery book that has been preserved to our time, containing ca. 450 recipes, a rather wide and interesting collection from the 1st c. AD till 4th c. AD. This compilation called *De re coquinaria*[35], attributed to Apicius, but not edited entirely by him, is the oldest cookery book of the West and serves as the example of the invention and decadence of the Romans from the Imperial period[36]. All of the six plants described earlier were also used by Apicius, and since the 12th book of *Geoponica* corresponds with the 3rd book of *De re coquinaria* entitled *Cepuros. De holeribus – Concerning the vegetables*, this is not a surprise as both treat about the vegetables. This is the reason, why all of the reconstructed recipes are taken from the 3rd book of Apicius'. The main issue with his formulas, however, is that they usually do not contain any proportions and it is all in the hands of the person, who is trying to recreate the dishes, to put all his/her knowledge of cooking to achieve any edible results.

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[32] *LSJ*, p. 951–952; J. ANDRÉ, *Les noms…*, p. 66.
[33] *Geoponica*, XII, 39, 1–9.
[34] *Evolution…*, p. 305.
[35] APICIUS, *L'art culinaire*, ed. J. ANDRÉ, Paris 2017 (cetera: APICIUS).
[36] M.G. DE RUBEIS, *La Cucina dell'Antica Roma. Ingredienti, ricette, fonti*, Roma 2020, p. 14–20.

Apicius gives only three recipes for cucumbers and all of them should be classified as appetizers, in my opinion. The basic recipe is as follows: peel the cucumbers, sprinkle with pepper and *garum*/*liquamen* or *oenogarum* (fish sauce with wine)[37]. Apicius gives a notable remark there that they are easy to digest and do not cause vomiting or any sickness[38]. The second recipe requires brains, cumin, celery seeds, a bit of honey, fish sauce, olive oil, eggs and pepper[39]. The last recipe is easier to reconstruct as it does not call for brains and the taste of the fish sauce is reduced by the mint:

> Aliter cucumeres: piper, puleium, mel vel passum, liquamen et acetum. Interdum et silfi accedit[40].
>
> Cucumbers in a different way: in the mortar grind pepper, pennyroyal, honey or passum, fermented fish sauce and vinegar. Sometimes some silphium is added.
>
> Ingredients:
> 2 long cucumbers (or more smaller ones)
> 1teaspoon of peppercorns
> 1tbs of chopped mint
> 2tbs of honey
> 1tbs of fish sauce
> 1teaspoon of vinegar
> pinch of asafoetida (*silphium* has been extinct since Nero!)
>
> Peel the cucumbers, chop them into long pieces. In the mortar grind the pepper, chop the mint. In the jar mix honey, asafoetida and fish sauce till the honey dissolves. Add the vinegar and stir. Add the mint and pepper, pour the mixture over the cucumbers and serve them quickly. The cucumbers will give some juice as the fish sauce contains salt.

In the same 3rd book, chapter 7 there is only one recipe for melons, also to be included in the group of appetizers, and it is a fruit salad. It is nearly the same as the 3rd recipe for cucumbers:

Pepones et melones: piper, puleium, mel vel passum, liquamen, acetum. Interdum et silfi accēdit[41].

> Melons or watermelons: you shall take some pepper, pennyroyal, honey or raisin wine, fish sauce, vinegar. Sometimes some silphium is added.

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[37] For further reading cf.: P. Matusiak, *Some Reflections Concerning the Usage of liquamen in the Roman Cookery*, SCl 6, 2006, p. 57–67; M. Kokoszko, *Sosy w kuchni greckiej. Garum i pochodne*, VP 26, 2006, p. 289–298.

[38] Apicius, III, 6, 1.

[39] Apicius, III, 6, 1.

[40] Apicius, III, 6, 3.

[41] Apicius, III, 7.

Ingredients:
1 melon (Canatloupe)
1teaspoon of peppercorns
1tbs of chopped mint
2tbs of honey
1tbs of fish sauce
1teaspoon of vinegar
pinch of asafoetida

Chill the melon. Chop it into mediocre cubes. In the mortar grind the pepper, chop the mint. In the jar mix honey, asafoetida and fish sauce till the honey dissolves. Add the vinegar and stir. Add the mint and pepper, pour the mixture over the chunks. Serve as salad or side dish.

The next plant from the *Geoponica* is the radish. Apicius gives only one recipe in the chapter entitled *Rapas sive napos*:

Raphanos: Raphanos cum piperato, ita ut piper cum liquamine teras[42].

Radishes: Radishes you will prepare with pepper sauce that you will make from the fermented fish sauce with ground peppercorns.

Ingredients:
1 bunch of radish
1teaspoon of pepper
1tbs of fish sauce

Wash the radish and separate them, cut off the stems. Cut the radish into desired shapes: slices, quarters or cut artistically into halves. Grind the pepper in the mortar, mix with fish sauce. Put the radish in a plate and pour over the sauce.

The recipe for mashed celery is in the next chapter, i.e. 15th *Holus molle – Vegetable puree*. Apicius gives four formulas there for different purees, one of which consists of celery (the second one):

Aliter holus molle: apium coques ex aqua nitrata, exprimes et concides minutatim. In mortario teres piper, ligusticum, origanum, cepam, vinum, liquamen et oleum. Coques in pultario, et sic apium commisces[43].

Vegetable puree in a different way: you shall cook the celery in water with some sodium bicarbonate, then rinse and chop it finely. In the mortar grind peppercorns, lovage, oregano, onion, wine, fish sauce and oil. You shall cook this in the pot and add the celery.

Ingredients:
1 big celeriac
1tbs of sodium bicarbonate

[42] APICIUS, III, 14.
[43] APICIUS, III, 15, 2.

1teaspoon of peppercorns
2tbs of olive oil
½ bunch of lovage
½ bunch of oregano
½ of big onion
½ of a cup of dry wine
2tbs of fish sauce

In a pot boil water, add sodium bicarbonate. Clean and peel the celeriac, cut it into big chunks. Add to the boiling water and cook until soft. Chop finely or mash.

Sauce: grind the pepper in the mortar, add lovage, grind, add oregano, grind, add the olive oil and pulp everything. Chop the onion finely, add to the spices, grind and add the fish sauce and a bit of wine. Pour the rest of the wine into the pot, add the mixture from the mortar. Bring to a boil and reduce for 5–7 minutes (let it simmer). Add the celery, mix together and serve. It contains wine and should be eaten the same day as it might get acidy or bitter.

As far as it concerns the leek Apicius gives four recipes in chapter 10 *Porros – The leeks*, all of them cooked. To me the most appealing is the first one for mature leeks:

Porros maturos fieri: pugnum salis, aquam et oleum: mixtum facies et ibi coques et eximes. Cum oleo, liquamine, mero et inferes[44].

Cooking the mature leeks: you shall take a handful of salt, water and oil. Mix it and cook the leeks in it. Rinse the leeks and pour with oil, fish sauce, clear wine and serve.

Ingredients:
2 leeks (much of white and light green needed)
2tbs of olive oil (for water)
handful of salt
sauce:
2tbs of olive oil
1tbs of fish sauce
1–2tbs of white wine (dry)

Boil the water in a pot with salt and olive oil. Clear the leeks and chop them cut lengthwise or into slices. Put the leeks into the boiling water and parboil till soft (al dente), but do not overcook. Drain off, put into a plate.

Sauce: olive oil, wine, fish sauce put into a jar and mix (or shake) until you get the vinaigrette. Pour over the leeks, mix and serve.

Last but not least is the artichoke. Needless to say that Apicius gives much attention to the artichoke, the most of all of the vegetables analysed in this paper. In chapter 20[45]. *Sphondyli vel fundili – The artichoke inflorescens* Apicius presents six recipes and advises to serve them either cooked or fried in fish sauce, usually

[44] Apicius, III, 10, 1.
[45] Apicius, III, 20, 1–6.

combined with olive oil, wine, *garum* and herbs like rue/herb-of-grace or fresh coriander. It is worth mentioning that the last recipe of the chapter has nothing in common with artichoke and probably was put here by complier by mistake (the term *sphondyli* is also used for oysters). Two of the recipes were the subject of reconstruction:

> Aliter: sphondylos elixos perfundes amulato infra scripto: apii semen, rutam, mel, piper teres, passum, liquamen et oleum modice. Amulo obligas, piper asparges et inferes[46].
>
> The other recipe: cooked hearts of the artichoke you shall cover with the starch sauce, that you shall make according to the following recipe: you will grind celery seeds, rue, honey, peppercorns, raisin wine, fish sauce and a bit of oil. You shall thicken it with starch, then sprinkle with some pepper and serve.
>
> Ingredients:
> 160–200g of cooked artichokes' hearts
> 1teaspoon of celery seeds
> 1ts of rue herb
> 1tbs of honey
> ½ ts of peppercorns
> ½ ice wine or raisin wine
> 1tbs of fish sauce
> 2tbs of olive oil
> 1½ts of wheat starch (or if you want to be less accurate Maizena)
> pepper to sprinkle
>
> Grind seeds and herbs in the mortar. In the pot combine the wine, honey and fish sauce. Add the olive oil and leave it on a low heat to boil. When it starts boiling, add the herbs and spices and reduce for ca. 5 minutes. Dissolve the starch in a small amount of water, add to the sauce and bring to boil whisking. When the sauce thickens, remove it from the heat. Pour the sauce over the artichokes.
>
> Aliter: sphondylos elixatos praedurabis, mittes in caccabum oleum, liquamen, piper. Passum colorabis et obligas[47].
>
> The other way: pre-fry cooked hearts of the artichoke. In the pot, you shall pour the oil, fish sauce, add some pepper. Tinge the dish with raisin wine and serve.
>
> Ingredients:
> 200–250g of cooked artichokes hearts
> ¼ts of peppercorns
> 1tbs of fish sauce
> 2–3tbs of olive oil (1tbs for frying)
> ¼cup of wine
> 1ts of wheat starch

[46] APICIUS, III, 20, 3.
[47] APICIUS, III, 20, 5.

On the frying pan put 1tbs of olive oil, heat properly and place the artichokes. Fry the artichokes up on all sides till golden brown, when fried place them on the plate. Pour the rest of the oil into the pan (1–2tbs). Ground the pepper in the mortar. Pour the fish sauce on the pan, whisk vividly, add pepper and fry for a second. Pour the wine, stir and reduce for 2–3 minutes. Dissolve the starch in a small amount of water, pour into the sauce, whisk vividly. Bring to boil. Pour the sauce over the artichokes.

All the plants presented in this paper have been valued for centuries for their medicinal and culinary properties. It is indeed a blessing from the Olympians that these two texts the great and precious encyclopaedia by Bassus and the Roman cookbook by Apicius were preserved. The *Geoponica* as the significant compilation of all the Ancient knowledge on agri- and horticulture, containing various, sometimes lost, Hellenistic and Roman-period Greek agriculture and veterinary authors, and *De re coquinaria* as the only cookery book from ancient times, with all its variety of recipes that gives us the opportunity to take a look for a little while the Roman banquet. We can only imagine how much harder would it be for scholars and researchers if these two texts would not have survived to our time, especially when we take into consideration that the corpus of Greek agricultural works is almost entirely lost.

Bibliography

André J., *Les noms de plantes dans la Rome Antique*, Paris 2010.

Apicius, *L'art culinaire*, ed. J. André, Paris 2017.

Becker G., *Rettich and Radies (Raphanus sativus)*, [in:] *Handbuch der Pflanzenzüchtung*, Berlin 1962, p. 23–78.

Decker M., *The Authorship and Context of Early Byzantine Farming Manuals*, "Byzantion" 77, 2007, p. 106–115.

Evolution of Crop Plants, ed. N.W. Simmonds, London 1976.

Geoponica sive Cassiani Bassi Scholastici de re rustica eclogae, rec. H. Beckh, Lipsiae 1984 [= Bibliotheca scriptorum Graecorum et Romanorum Teubneriana].

Jurewicz O., *Historia literatury bizantyńskiej. Zarys*, Warszawa 2007.

Kassianus Bassus, *Geoponika. Bizantyńska encyklopedia rolnicza*, trans. I. Mikołajczyk, Toruń 2012.

Kokoszko M., *Sosy w kuchni greckiej. Garum i pochodne*, "Vox Patrum" 26, 2006, p. 289–298, https://doi.org/10.31743/vp.8215

Liddell H.G., Scott R., Jones H.S. et al., *A Greek-English Lexicon*, 9Oxford 1996.

Matusiak P., *Some Reflections Concerning the Usage of liquamen in the Roman Cookery*, "Scripta Classica" 6, 2006, p. 57–67.

Ostrogorski G., *Dzieje Bizancjum*, trans. H. Evert-Kappesowa, Warszawa 2008.

Roberts J., *Powab jabłka. Fascynujące dzieje owoców i warzyw*, Warszawa 2004.

Rodgers R., *Κηποποιΐα: Garden Making and Garden Culture in the Geoponika*, [in:] *Byzantine Garden Culture*, ed. A. Littlewood, H. Maguire, J. Wolschke-Bulmahn, Washington 2002, p. 159–175.

de Rubeis M.G., *La Cucina dell'Antica Roma. Ingredienti, ricette, fonti*, Roma 2020.

Vavilov N.I., *Origin and Geography of Cultivated Plants*, trans. D. Loewe, Cambridge 1992.

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