

Some Unknown in Europe Vegetables Originated from China

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Abstract. At present, vegetables play a key role in the Chinese kitchen. There are over 100 species of them commercially grown. Some of them can be relatively easily introduced in Europe. They are nutritious, have active compounds, which may be used in natural medicine or for biological enforcement. Some of them do not have certain chemical components, which in turn make them useful for different human diets or natural toxins removal. The paper presents some of them of the Chinese origin, unknown to Europeans or known but not as edible plants. These are: *Momordica charantia* L., bitter guard, *Phaseolus angularis* (Wild.) W.F.Wright), adzuki bean, *Brassica campestris* L. ssp. *chinensis* var. *utilis*, flowering Chinese cabbage, *Brassica campestris* L. ssp. *chinensis* var. *communis*, Chinese mustard, *Chrysanthemum morifolium* Ram., edible chrysanthemum, *Amaranthus* spp., amaranth. Their possible use for Europeans is presented.

Keywords: *Momordica charantia* L., bitter guard, *Phaseolus angularis* L., adzuki bean, *Brassica campestris* L. ssp. *chinensis* var. *utilis*, flowering Chinese cabbage, *Brassica campestris* L. ssp. *chinensis* var. *communis*, Chinese mustard, *Chrysanthemum morifolium* Ram., edible chrysanthemum, *Amaranthus* spp., amaranth

INTRODUCTION

Whoever comes from Europe to China is shocked by the number of vegetables commercially grown in the country. Chinese actually on the day-to-day basis eat more often vegetables than rice. Chen and Zhang (1996) specified over 100 species of vegetables commercially grown in China. Some of them can be relatively easily introduced in Europe. When so, a big benefit can come out of it. They are nutritious, have various active compounds, which may be used in natural medicine or for biological enforcement. Some of them do not have certain chemical components, which in turn make them useful for different human diets or natural toxins removal (Niewiński, 1977; Hołubowicz and Bralewski, 2006, 2007).

MATERIALS AND METHODS

The selection of the unknown in Europe species of the Chinese origin was based on their commercial use in China and potential possibilities of wide use in Europe. That came out from visits paid to the local vegetable markets, both retail and wholesale in Beijing, Jinan and Shenzhen. In a few cases, their medical use (commonly applied by Chinese) was crucial in the decision to take them under consideration. In this area, information came also from plant breeders working in the leading vegetable production areas in China such as provinces: *Hebei*, *Henan*, *Sichuan* and *Shandong*. The vegetable institutes in Beijing and Jinan as well as botanical gardens in Beijing, Nanjing, Shanghai and Wuhan also provided the information.

Other sources of information were Chinese seed companies, over 30 of which being visited by the author in the 1995-2007 periods.

RESULTS AND DISCUSSION

Bitter guard, *Momordica charantia* L. The species belongs to the *Cucurbitaceae* family and it is commonly grown and eaten all over China. Its biggest potential use in Europe comes from one character of the fruit: practical lack of any sugars and typical bitter taste. For this reason, its fruits have been used in China in diabetic people diet for many years. The species has a big future and preliminary trials carried out in Poland proved that it can be grown for both fruit and seeds. The tested cultivars also differed in the degree of bitterness, what is an interesting challenge for plant breeders in seed companies.

Adzuki bean, *Phaseolus angularis* (Wild.) W.F.Wright. The species belongs to the *Fabaceae* family and its seeds have been commonly eaten both in China and in Japan. The adzuki seeds have many nutritious compounds and are used by fitness trainees and sportsmen. When regularly eaten they also help to reduce in people's body too high blood pressure, act as natural diuretic to reduce human overweight and are used by supermodels to remove toxins and improve overall skin texture. The species has a big market potential in Europe. The preliminary trials carried out in Poland proved that it could be grown for both fruit and seeds.

Flowering Chinese cabbage, *Brassica campestris* L. ssp. *chinensis* var. *utilis*. The species belongs to the *Brassicaceae* family and is one of the most commonly grown and eaten vegetables in China. It does not form a head and it is eaten as an early blooming seedling. For this reason, it is not so commonly known in Europe, although met in some Chinese restaurants there. Its biggest advantage over traditional Chinese cabbage is its taste, when stir-fried or boiled, completely different and therefore outstanding. The species has a big market potential in Europe. The preliminary trials carried out in Poland proved that it could be grown for both fruit and seeds.

Chinese mustard, *Brassica campestris* L. ssp. *chinensis* var. *communis*. Another species of non-head Chinese cabbage commonly grown and eaten in China. It is worth propagating and promoting in Europe due to its short production cycle (it is available in China all-year round in a fresh state) and delicious outstanding taste. Mostly served after short stir-frying on the oil usually with the hirmeola (black) mushrooms. It gives an excellent composition and splendid dish.

Edible chrysanthemum, *Chrysanthemum morifolium* Ram. The species is well known in Europe but as an ornamental plant. In China, its young side branches with leaves are eaten until the plant starts to bloom. Its fresh flowers and young leaves are oil-stirred and add to soup to create a new, interesting taste. The dried flowers of the plant are also used to add to mixtures of some green teas in China. In this case we actually do not have to introduce this plant into Europe. We have already had it. All we need is to learn how to use it in our kitchen.

Amaranth, *Amaranthus* spp. The species is well known in Europe as a common weed. However, in China it is also selected and cultivated as a leafy vegetable. It has been cultivated there since ancient time. In this group, there are 28 edible species of amaranth. It is a highly nutritive plant. Moreover, it has been used to help people with detoxification and fight down high fever in traditional Chinese medicine. The young plant shoots and leaves can be stir-fried in oil or marinated.

The presented selected species of vegetables are grown on in China on large areas (Hołubowicz and Bralewski, 2007) and their use for human beings has been proved for many years (Niewiński, 1977). It is obvious that when introduced in Europe they could diversify

interestingly our diet and help people with some health problems. As source of many natural active compounds, they may also create an alternative possibility to numerous chemical drugs and traditional medicines applied so far. It is our common business to popularize the new species of vegetables and medicine plants from other parts of the world including China.

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