


Brassica juncea

This article is about the plant. For other uses, see Mustard.

<i>Brassica juncea</i>	
	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Brassicales
Family:	Brassicaceae
Genus:	<i>Brassica</i>
Species:	<i>B. juncea</i>
Binomial name	
<i>Brassica juncea</i> (L.) Vassiliĭ Matveievitch Czernajew (1796 – 1871)	

Brassica juncea, **mustard greens**, **Indian mustard**, **Chinese mustard**, or **leaf mustard** is a species of mustard plant. Subvarieties include southern giant curled mustard, which resembles a headless cabbage such as kale, but with a distinct horseradish-mustard flavor. It is also known as green mustard cabbage.

Uses

Food

The leaves, the seeds, and the stem of this mustard variety are edible. The plant appears in some form in African, Italian, Indian, Chinese, Japanese, Korean, and soul food cuisine. Cultivars of *B. juncea* are grown as greens, and for the production of oilseed. In Russia, this is the main variety grown for production of mustard oil, which after refining is consideredWikipedia:Avoid weasel words one of the best vegetable oils. It is widely used in canning, baking and margarine production in Russia, and the majority of table mustard there is also made from this species of mustard plant.

The leaves are used in African^[1] cooking, and leaves, seeds, and stems are used in Indian cuisine, particularly in mountain regions of Nepal, as well as in the Punjab cuisine of India and Pakistan, where a famous dish called *sarson da saag* (mustard greens) is prepared. *B. juncea* subsp. *tatsai*, which has a particularly thick stem, is used to make the Indian pickle called *achar*, and the Chinese pickle *zha cai*. The mustard made from the seeds of the *B. juncea* is called brown mustard. The leaves (*raai* in Gujarati) are used in many Indian dishes.

The Gorkhas of Darjeeling and Sikkim prepare pork with mustard greens (also called *rayo* in Nepali). It is usually eaten with relish with steamed rice, but could also be eaten with *chapati* (griddle breads).

Brassica juncea is more pungent than the closely related *Brassica oleracea* greens (kale, cabbage, collard greens, et cetera), and is frequently mixed with these milder greens in a dish of "mixed greens", which may include wild greens such as dandelion. As with other greens in soul food cooking, mustard greens are generally flavored by being cooked for a long period with ham hocks or other smoked pork products. Mustard greens are high in vitamin A and vitamin K.

Chinese and Japanese cuisines also make use of mustard greens. In Japanese cuisine it is known as *Takana* and is often pickled and used as filling in onigiri or as a condiment. A large variety of *B. juncea* cultivars are used, including *zha cai*, *mizuna*, *takana* (var. *integlofolia*), *juk gai choy*, and *xuelihong* (雪里红 or 雪里蕻; var. *crispifolia*). Asian mustard greens are most often stir-fried or pickled. A Southeast Asian dish called *asam gai choy* or *kiam chai boey* is often made with leftovers from a large meal. It involves stewing mustard greens with tamarind, dried chillies and leftover meat on the bone.

Food supplement

B. juncea can hyperaccumulate cadmium and many other soil trace elements. Specially cultured, it can be used as a selenium, chromium, iron and zinc food supplement.



Fried mustard green dish from Assam, India



Cantonese-style braised mustard greens, with wolfberries

Green manure



A bunch of fresh mustard greens from the United States

Mustard greens, cooked, boiled, drained, without salt

Nutritional value per 100 g (3.5 oz)	
Energy	110 kJ (26 kcal)
Carbohydrates	4.51 g
Sugars	1.41 g
Dietary fiber	2 g
Fat	0.47 g
Protein	2.56 g
Vitamins	
Vitamin A equiv.	(77%)
beta-carotene	618 µg
lutein zeaxanthin	(69%)
	7400 µg
	10400 µg
Thiamine (B1)	(4%)
	0.041 mg

Riboflavin (B2)	(5%) 0.063 mg
Niacin (B3)	(3%) 0.433 mg
Pantothenic acid (B5)	(2%) 0.12 mg
Vitamin B6	(8%) 0.098 mg
Folate (B9)	(2%) 9 µg
Vitamin C	(30%) 25.3 mg
Vitamin E	(12%) 1.78 mg
Vitamin K	(564%) 592.7 µg
Trace metals	
Calcium	(12%) 118 mg
Iron	(7%) 0.87 mg
Magnesium	(4%) 13 mg
Phosphorus	(6%) 42 mg
Potassium	(3%) 162 mg
Sodium	(1%) 9 mg
Zinc	(2%) 0.22 mg
Link to USDA Database entry ^[2]	
<ul style="list-style-type: none"> • Units • µg = micrograms • mg = milligrams • IU = International units 	
Percentages are roughly approximated using US recommendations for adults. Source: USDA Nutrient Database ^[3]	

Vegetable growers sometimes grow mustard as a green manure. Its main purpose is to act as a mulch, covering the soil to suppress weeds between crops. If grown as a green manure, the mustard plants are cut down at the base when sufficiently grown, and left to wither on the surface, continuing to act as a mulch until the next crop is due for sowing, when the mustard is dug in. In the UK, summer and autumn-sown mustard is cut down from October. April

sowings can be cut down in June, keeping the ground clear for summer-sown crops. Wikipedia:Citation needed One of the disadvantages of mustard as a green manure is its propensity to harbor club root.

Phytoremediation

This plant is used in phytoremediation to remove heavy metals, such as lead, from the soil in hazardous waste sites because it has a higher tolerance for these substances and stores the heavy metals in its cells. The plant is then harvested and disposed of properly. This method is easier and less expensive than traditional methods for the removal of heavy metals. It also prevents erosion of soil from these sites preventing further contamination. Wikipedia:Citation needed

References

Sources

- [1] Grubben, G.J.H. & Denton, O.A. (2004) Plant Resources of Tropical Africa 2. Vegetables. PROTA Foundation, Wageningen; Backhuys, Leiden; CTA, Wageningen.
- [2] <http://ndb.nal.usda.gov/ndb/search/list?qlookup=11271&format=Full>
- [3] <http://ndb.nal.usda.gov/ndb/search/list>

Further reading

- Everitt, J.H.; Lonard, R.L.; Little, C.R. (2007). *Weeds in South Texas and Northern Mexico*. Lubbock: Texas Tech University Press. ISBN 0-89672-614-2

External links

- PROTAbase on *Brassica juncea* (http://database.prota.org/dbtw-wpd/exec/dbtwpub.dll?AC=QBE_QUERY&BU=http://database.prota.org/search.htm&TN=PROTAB~1&QB0=AND&QF0=Species+Code&QI0=Brassica+juncea&RF=Webdisplay)
- Brassica juncea (http://www.hort.purdue.edu/newcrop/duke_energy/Brassica_juncea.html)
- Multilingual taxonomic information from the University of Melbourne (http://www.plantnames.unimelb.edu.au/Sorting/Brassica_juncea.html)
- Mustard Green Manures: Washington State University Extension paper on cover crops. (<http://cru.cahe.wsu.edu/CEPublications/eb1952e/EB1952E.pdf>)

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