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1

Edible Wild Plants

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THE WILD FOOD ADVENTURE SERIES

Edible Wild Plants

Wild Foods from Dirt to Plate

JOHN KALLAS, PHD

Contents

Family: *Brassicaceae*
Species: *Brassica rapa*

Field Mustard

A fantastic mustard green, better than the one you can buy in the supermarket

Field mustard, a prolific, great-tasting plant fond of cultivated fields and your garden. It has two forms at different stages of growth: a rosette of leaves at ground level (shown here) and, later, a reproductive stalk producing flowers and seeds.

FIELD MUSTARD

For a plant that is so common, you would think that it would get more attention than it does. In fact, the few times it seems to be mentioned, it is as the less-loved brother of black mustard (*Brassica nigra*), a domesticated plant that grows wild in North America. Black mustard shares field mustard's range.

Brassica rapa has a confusing array of varietal offshoots and cultivated brothers and sisters. They all have the same species name, yet most are dramatically different in appearance and flavor. The reason I bring this up is that if you decide you want to investigate this plant on your own, you had better hope that the papers you read specify exactly which *Brassica rapa* they are talking about. No other wild plant I know of has this confusing a name problem. For instance, if you are looking up nutrient tables and one of the plants covered is *Brassica rapa*, which one are they referring to? Mustard spinach greens? Field mustard greens? Bok choy? Unless they specify which *Brassica rapa*, you may misinterpret whatever they've discovered.

Children (Varieties) of wild *Brassica rapa*

- *Brassica rapa* var. *rapa* L.: birdrape, common mustard, field mustard, rape
- *Brassica rapa* var. *amplexicaulis* Tanaka & Ono: field mustard, rape, rape mustard
- *Brassica rapa* var. *dichotoma* (Roxb. ex Fleming) Kitam: toria
- *Brassica rapa* var. *silvestris* (Lam.) Briggs: Colza
- *Brassica rapa* var. *trilocularis* (Roxb.) Kitam: Yellow sarson

Estimated Range

Official Species Name:
- *Brassica rapa* L.

Synonyms (Historical Names):
- *Brassica rapa* var. *campestris* (L.) W.D.J. Koch
- *Brassica campestris* L.
- *Brassica campestris* var. *rapa* (L.) Hartman
- *Caulanthus sulfureus* Payson

Common Names:
- Field mustard
- Wild mustard
- Bird's rape
- Rape
- Wild turnip
- Turnip rape

An herbaceous weed naturalized from southern Europe, field mustard is widespread and abundant in North America, primarily where humans have invaded and where soil has been disturbed.

Other common large-leaved wild mustards you might find are charlock (*Sinapis arvensis*), black mustard (*Brassica nigra*), and brown mustard (*Brassica juncea*). Brown mustard and black mustard are cultivated for their seed. In addition, brown mustard is cultivated for greens. Cultivation helps expand the wild spread of seeds beyond farmland they are planted in. Field mustard, black mustard, and charlock are more common than brown and share similar ranges.

Brassica napus, the source of canola or rapeseed oil is nearly identical in appearance to field mustard. It is less widespread than the other wild mustards. We'll talk about *napus* later in this chapter.

I believe the greens in the produce section of the supermarket are probably brown mustard (*Brassica juncea*). Of course, the packaging never specifies the species or variety used. Whatever they are, the mustard greens I've purchased can have a harsh flavor relative to field mustard. You can also buy turnip greens, another mustard that, confusingly, is one of the cultivated forms of *Brassica rapa*. Turnip greens have a stronger pepperiness than field mustard.

As far as I can tell, the nutritional value of field mustard is unknown. The USDA has values for two different mustard greens: mustard spinach, a Japanese cultivar of *Brassica rapa*, and domesticated brown mustard (*Brassica juncea*). Because of their close relationship, field mustard might be somewhat comparable to mustard spinach, brown mustard, or turnip greens for conventional nutrients. Those three have their nutrients listed in the USDA nutrient database. In addition, because it is in the mustard family, field mustard is likely to have indols, isothiocyanates, glucosinolates and other phytochemicals.

Field mustard is commonly found along roadside embankments, waste areas, farmland (growing amongst crops), and anywhere else the soil has been disturbed. Being a cold-weather plant, it is possible that field mustard could be found anywhere within the range of the maps I've designed. The range I've shown does not account for deserts and mountain ranges—which will have little field mustard only because humans aren't bringing it in and making the habitat (gardens, farms, etc.) for it.

Farmland widely covered with adult field mustard. This is in the early spring sometime between early April and early May, depending on where you are in North America. These plants typically get their start in the fall, store energy in their root, overwinter, and bolt into quick growth in the spring.

The mustards, in general, have a rich history and a variety of uses. While I focus on greens, mustards are most known for their seed, which is made into the yellow or brown condiment that people squirt onto their hot dogs. For an interesting and comprehensive overview of the uses of mustard plants, check out Cheatham, Johnston, and Marshall's book, *The Useful Wild Plants of Texas*, Volume 2. They cover many of the uses as foods, spices, food additives, preservatives, medicines, effects on livestock, weaponry, use as cover crops, spiritual uses, history, and more—a fascinating read.

The major use of field mustard is to add varying degrees of pungency to a dish of other foods. Some people might like it enough to make it the featured food of a dish.

Knowing Field Mustard

The first sighting you'll have of field mustard will probably be from your car in the spring. In a field, by the roadside, or on farmland, you'll see bright yellow flowers

Young field mustard. Here, the first true leaves have overtaken the cotyledons in size and are still growing.

Young field mustard. The largest leaves here are about 5 inches. Note how the later leaves are different from the first and second pair. More character is expressed from the fifth leaf onward. At this point, the leaves start to show their dimples—bumps on the surface that are characteristic of field mustard.

towering above the grass, crops, or other weeds. These are the flower stalks of the adult plants.

If the plants you locate are indeed field mustard, try some, take some home, experiment with it. If it is already producing seed, throw some in your garden.

Field mustard is an annual

Field mustard that germinates in spring or summer can grow a stalk and go to seed within a couple of months, which makes field mustard an annual. The summer heat and/or the long days cause mustard to bolt (grow a stem). This is likely to happen in a garden or on a farm, where the soil is turned over throughout the year and watered. Field mustard can only germinate in the summer if the ground is disturbed and enough sustained water is available.

Field mustard is a biennial

Without summer watering, wild mustard seed will wait in the soil until the fall rains begin. By that time in the year, the days are shorter and the temperature is cooler. Field mustard will then sprout and grow its basal leaves, but will not bolt. Winter's arrival has several effects on the plant. First, the leaves stop growing and eventually die from the cold. Second, its root goes through physiolgical changes to survive winter's freezing temperatures. These plants will come alive again in the spring.

Germination and life patterns

LEAVES: As with most plants, the first two leaves that emerge from within the seed (embryonic leaves = cotyledons) do not appear like the older leaves. The first two leaves of all members of the *Brassica* genus, including field mustard, tend to look like a person's posterior pressed against a pane of glass. Sorry for the image, but if you can come up with a better description, let me know.

Field mustard grows quickly after germination. The first true leaves differ from the cotyledons in both shape and size. They begin taking on characteristics of the leaves that follow.

As more leaves develop, they begin to show much more character. The margins are irregular and often wavy. Leaves start dividing into lobes. Bumps occur all over the leaves.

Taking on a decidedly mustard family appearance, the leaves eventually crowd around the growth point of the root in what is called a basal rosette (*basal* referring to base or ground level and *rosette* referring to all the leaves radiating out from a single point, like petals on a rose).

Once the plant is established, its leaves can be anywhere from eight to twenty inches long, depending on soil moisture and competition from other plants. The photos here only represent good healthy growth. Stunted growth produces smaller, fewer, less-luxurious, slower-growing leaves.

Field mustard seedling with its two fat embryonic leaves (cotyledons). The first two true leaves are just beginning to emerge. Field mustard seeds germinate anytime outside of a frozen winter that the soil is turned and watered.

TAPROOT AND CORM: As the leaves develop, so does the taproot and the corm. A corm is an enlarged base of the stem just below the ground and above the taproot. The corm is barely noticable most of the time, barely thickening at all. But, at other times, it can get rather fat. Whatever size the corm and root are, they store energy and provide support for the plant.

If the plant germinated early enough in the year it will send up a flower stalk within the same growing season. If it germinated in the fall the plant will overwinter.

As winter ends and spring arrives, the root and corm use their stored energy to produce a new basal rosette of leaves. This new set will not be as grand as those from the previous autumn

Mango Mustard Seed Sauce

Adapted from *Joy of Cooking* (1997 edition). This sauce is designed to go with grilled chicken or fish.

INGREDIENTS:

- 1½ tablespoons field mustard seeds
- 2 ripe mangos, peeled and cut into small cubes
- 1 medium ripe banana, chopped
- 2 tablespoons peeled and finely minced fresh ginger
- 1 teaspoon finely minced garlic
- ½ teaspoon curry powder
- ½ cup grapefruit juice
- 1 teaspoon sherry vinegar
- 1½ teaspoons hot chili oil
- 1 teaspoon honey, or to taste
- Salt and ground black pepper, to taste

DIRECTIONS:

Place mustard seeds in a small dry skillet over medium heat and toast until they just begin to pop. Remove from heat and combine with remaining ingredients in a blender; process briefly to produce a smooth sauce. Serve immediately, or cover and store in the refrigerator for up to 3 days.

Contents