GIANT CURLED MUSTARD

Yuma is home to roughly 50 acres of Giant Curled Mustard, and primarily grown in the region as a seed crop. Mustard (also known as mustard greens, spinach, leaf mustard and white mustard), is a quick-to-mature, cool-season vegetable for greens or salads.

The Giant Curled Mustard (*Brassica juncea*), which resembles a headless cabbage such as Kale, but with a distinct horseradish-mustard flavor. The crop is also known as green mustard cabbage.

Mustard can be grown 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.

Giant Mustards are used to remove heavy metals 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.

The leaves, the seeds, and the stem of this mustard variety are edible. The plant appears in some form in African, Indian, Chinese, Japanese, and Soul food cuisine. Cultivars of mustard are grown as greens, and for the production of oilseed. The leaves are used in African cooking, and leaves, seeds, and stems are used in Indian cuisine. 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 *Brassica juncea* is called brown mustard and its leaves are used in many Indian dishes.

*Brassica juncea* is more pungent than the closely-related *Brassica oleracea* greens (kale, cabbage, collard greens) 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.

Also known as mustard greens, mustard is especially popular in southern states. Mustard is a member of the cruciferous vegetable family. It shares the same cancer-preventing benefits of broccoli, cabbage and kale. Mustard is a pungent winter vegetable, abundant when other vegetables are not in season.

Mustard greens can be eaten raw or cooked. The whole plant can be cut at once or individual outer leaves can be picked for a cut-and-come-again harvest. The young leaves, four to five inches long, are mild-flavored and can be eaten raw in salads. The older leaves taste better when prepared as cooked greens. Avoid yellow, over mature mustards with seeds or yellow flowers attached.
Store unwashed mustard greens in a plastic bag within the crisper drawer of the refrigerator. They will keep for about three days. Wrap in moist paper towels for longer storage, up to five days. The flavor may intensify in the refrigerator during the longer five day storage.

A member of the cruciferous vegetable family, mustard contains large amounts of beta carotene and vitamin C that are important antioxidants. Although scientists do not fully understand how, these vegetables seem to have cancer-preventive properties. Mustard greens are also a source of calcium that can be important to lactose intolerant individuals. Mustard greens also contain a significant amount of iron.

Freezing is the best way to preserve an over abundance of mustard greens. Like other vegetables, mustard greens must be blanched before freezing. Blanching is simply the emersion into scalding water then into an ice water bath before freezing.

Mustard greens and Collard greens are both members of the same family along with broccoli, Brussels sprouts, kale and kohlrabi.

Mustard greens are members of the cabbage family and are grown as an annual crop. The term mustard greens refer to a single species of *Brassica juncea* however taxonomists have identified as many as seventeen subgroups that can differ in flavor and appearance. Mustard greens can range in color from lime green to burgundy, from smooth to prickly and from spicy to fiery.

Mustard greens are used in both Southern and Asian cooking. They are usually always blanched or boiled because of their bitter pungent taste. Young tender leaves are often used in salad mixes. In southern cooking they are generally cooked for a long period of time and flavored with ham hocks. In Asian cuisines they are stir-fried, pickled or stewed. Mustard greens are extremely high in both vitamins and minerals.

Mustard greens do not produce well in very hot weather. In fact, long days and warm weather can cause seeding and the development of strong flavor. Mustard greens intercross freely with other *brassica* crops as well as themselves, so they should be isolated for seed production.

Scientists have discovered that some mustard varieties might replace chemical fumigants to control soil borne pests. Research has shown that mustard green manures can suppress certain nematodes, some diseases such as common root rot and can suppress certain weeds.

One of the unique features of mustard greens is that they are an excellent source of three notable antioxidants: vitamin E, vitamin C and vitamin A. Together these antioxidants team up to scavenge free radicals.

Mustard greens may offer great benefit to individuals with conditions ranging from asthma, arthritis, colds, depression, heart disease as well as menopausal symptoms.
Mustard greens contain goitrogens which can interfere with the functioning of the thyroid gland. Individuals with already existing and untreated thyroid problems may want to avoid mustard greens for this reason.

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