CHRYSANTHEMUM

Grower's Guide

SECOND GENERATION SEEDS

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ABOUT US

Second Generation Seeds is a collective of Asian American growers devoted to helping communities of the Asian diaspora discover and deepen their cultural heritage through seeds. Together, we are reclaiming the narrative around Asian crops and our foodways.

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CULTURAL CONTEXT & HISTORY

Glebionis coronaria, edible chrysanthemum, is a much beloved vegetable with a flavor that is irreplaceable. The crisp and tender stalk and aromatic leaves are eaten raw in salads or cooked in stir fries and soup. Chrysanthemum's mineral, sweet, and grassy flavor leaves it somewhere between a leafy green and a fresh herb. The aromatic flavors of chrysanthemum pair well with strong flavored dishes like fish and stews, or as a palate cleansing side dish blanched and served on its own. Perhaps one of the most common Chinese applications of chrysanthemum is in hot pot, where its herbaceous flavor stands out amongst the other brassica greens.

In the Bay Area, many chefs utilize chrysanthemum in delicious salads that are representative of their own Californian Asian American identity. On menus around the bay you can find chrysanthemum tossed with persimmon, pomelo or mandarin on the plate with delicata squash and radicchio, dressed in sesame or olive oil, to make one of the most delicious local winter salads.

BOTANICAL OVERVIEW

Names:
Glebionis coronaria, Shungiku/春菊, Ssukgat/쑥갓, Tản Ô, Tong Hao/Tong Ho/茼蒿

Climate & Seasonality:
spring/fall; can be grown in summer/winter in mild climates

Growth Habit & Plant Structure:
fast growing leafy green that matures into a multi branched daisy-like flower.

Beneficial insects/role in agroecosystem: chrysanthemum lends multiple benefits to the garden. The abundant flowers play host to many beneficial insects like pollinators and parasitic wasps, and the mature seed heads provide a food source for birds.

One of the most amazing benefits of chrysanthemum is the potential for intercropping in fields with root knot nematodes. The root exudates of chrysanthemum contain lauric acid which, in small concentrations attract and kill nematodes, and in large concentrations will act as a repellent.

GROWER'S GUIDE

GETTING STARTED

There are three approaches to seeding chrysanthemum, each with their own benefits and challenges:

1) Direct seeding:

Seed densely in rows, 24-36 seeds/foot, barely covering. On our farm we would use an Earthway seeder with the radish seed plate, taping off every other hole. This has been my preferred method of propagation since chrysanthemum germinates readily and dense plantings lead to more tender stems. The downside of direct seeding is increased hand weeding and competition with weeds, but once established the dense rows will outcompete future weed pressure.

Chrysanthemum germinating, along with many weeds at the same stage.

2) Transplanting:

Seed 4-6 seeds/cell into 200 cell plug trays for commercial growing. Increase seed count/cell for the home gardener if using larger 6 pack cells or small pots. Transplant to the field once there is adequate root knit (all of the soil in the cell will be held together by the roots without crumbling). Space transplants 6" apart in all directions. Transplanting can be helpful to get a jump in early spring when the soil is too wet to work, it will also give you more vigorous plants that will be ahead of any potential weeds.

3) Self Seeding:

For the lazy gardener, like myself, chrysanthemum is an excellent opportunistic vegetable. Once you have finished harvesting, allow the plant to complete its life cycle (see below for seed growing information). Chrysanthemum will readily volunteer itself season after season in your garden as long as you keep it watered. On the farm I would plant my chrysanthemum seed crop on a field edge every year so after harvest and mowing it would create a hedgerow the subsequent year to host beneficial insects.

Whichever route you pick, you should plan to plant every 3-4 weeks if you desire the highest quality greens to pick year round.

GROWING STAGE

Irrigation:
Once established, keep chrysanthemum watered regularly but not oversaturated. The soil should remain as moist as a wrung out sponge. Underwatering will result in increased bitterness and tough/stringy stems.

Fertility:
Chrysanthemum will grow in even the most depleted soils. I have seen wild outcroppings pop up in windswept beach parking lots and steep, eroded red clay slopes. However there is a difference between surviving and thriving. As with any leafy green nitrogen will be the biggest consideration in plant performance. Although not necessary to pull off a crop, a pre-plant application of organic fertilizer will help produce larger leaves. Increased nitrogen will also result in a darker green leaf that will prevent predation from cucumber beetles which are attracted to lime green colors.

Pest Management:
Compared to many of the other cool season greens, chrysanthemum is one of the least pest susceptible crops. Occasionally cucumber beetles with nothing else to eat will nibble the more nitrogen starved plants, but rarely have I experienced enough pest pressure to deem a crop unharvestable. If needed, protect with floating row cover. At seed stage net small plantings to prevent bird predation, or plant enough to share.

HARVESTING

Perhaps my favorite thing about chrysanthemum is the variety of harvest opportunities it provides to the home or commercial grower.

Below is a timeline of the greens harvest stages:

11-20 days - microgreens
20-40 days - baby greens
40-50 days - bunching greens (harvest high for cut and come again)
~120 days - cut flowers/edible flowers

CROP ENTERPRISE BUDGET

For the commercial grower, here's a crop enterprise budget I did with a bed of chrysanthemum in 2020:

Potential Revenue

Revenue potential for 1000':

First cut, baby green (~250 lb @ $10/pound) = $2500
Second cut, bunching (~750 bunches @ $3/bunch) = $2250
Cut flower harvest (~100, 10 stem bunches @ $10/bunch) = $1000
Edible flower harvest (~100 ¼ pint clamshells @ $7.50) = $750
Total potential revenue for 1000': ~$6,500

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Potential Expenses

Expenses for 1000 row feet:

Seed cost (seeds ~1000 row feet): $9/oz
Planting labor (direct seeded): negligible <1 hour @ $20
Hoeing/hand weeding labor (~3 hours) = $60
Irrigation materials and labor (assuming free water): ~$40
Harvest labor (30 hours) = $600
Packaging: $150
Total expenses for 1000'= ~$879
(doesn't capture rent/general operating expenses, only crop related expenses

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***Potential net: $5,621/1000 row feet**

*If you can sell it, and at retail prices, and assuming minimal crop loss, and assuming farming is easier than it really is.

SEED HARVEST

Once seed heads have fully formed and foliage begins to die back, cut water. Chrysanthemum seed is ready to harvest once the plants have totally desiccated and the seed heads readily crumble in your hands. For minimal cleaning, crumble seeds directly into a bucket. For larger plantings cut entire plants, windrow on a tarp or hang to dry further before whacking plants onto a tarp or into a storage bin. Winnow with a box fan and use screens to sift out chaff. Store in an airtight container in a dark area with minimal temperature fluctuations.

For self seeding, wait until seed heads are fully mature and flail mow in place, or cut entire plants and distribute in piles where you want future chrysanthemum patches.