



Growing the Cole Crops in the Home Garden

Stephen Reiners, Ph.D., Extension Specialist in Vegetable Crops & Peter Nitzsche, Program Associate

The cole crops or cruciferous crops are a group of cool season plants grown for their edible leaves, stalks and flowers. The cole crops include cabbage, cauliflower, broccoli, brussels sprouts, collards, kale, and kohlrabi. These crops are highly nutritious and contain high amounts of beta-carotene, calcium, and vitamin C.

General Growing Information

The cole crops are typically grown so they mature in the cool weather of the spring or fall. For spring crops, it's best to get a jump on the season by growing or buying transplants. Start seedlings in a greenhouse, by a sunny window, or under fluorescent lights, 4-6 weeks before planting outdoors. Don't subject cole crop seedlings to temperatures below 50°F for more than 10 days or the plant will flower prematurely. This can destroy the potential for a good harvest.

When buying transplants, look for seedlings which have 4-5 true leaves with a deep blue-green color. Avoid seedlings with yellow or purple tints which may indicate nutrient deficiencies. Also beware of seedlings which have overgrown their starting containers. These seedlings will not yield as well as medium size vigorously growing seedlings. A crop for fall harvest can be started in the summer with trans-

plants, or by seeding directly in the garden.

Soil Preparation

The cole crops require at least 6 to 7 hours of direct sunlight each day. If possible, plant in an area where cole crops have not been grown for at least two years. This will help to control soil-borne diseases.

Preparations for any crop should begin with a soil test. Test kits and soil sampling directions can be obtained at your county cooperative extension office (listed in the phone book as Rutgers Cooperative Extension under county government). The soil test will indicate the pH of the soil, it's level of fertility, and recommend the appropriate amendments. In the absence of a soil test, incorporate 3-4 pounds of a 5-10-10 fertilizer per 100 square feet of soil or add 2 inches of compost or rotted manure to the soil at least 3 weeks before planting. Adjust the soil pH to 6.2 to 6.5. A soil pH of 7.0 is recommended if you have the disease "clubroot" in the soil.

General Cultural Requirements

It is important to reduce the competition of weeds with shallow cultivation or mulch. Mulch-



ing also helps to conserve soil moisture and minimize plant stress. When watering these crops, it's better to slowly soak the soil once or twice a week rather than apply a small amount of water more frequently. This encourages deep, drought resistant roots. Supplement rainfall to ensure that the crops receive at least one inch of water per week. For specific insect and disease recommendations, contact your county cooperative extension office and ask for publication EO79, New Jersey Vegetable Pest Control Recommendations for Home Gardens.

Recommendations for the Specific Crops

Broccoli

Broccoli is grown for its edible flowers and stalks. The head of broccoli is actually a group of immature flowers. Broccoli should be planted in the garden 18 inches apart in 3 foot rows. Broccoli is best when harvested when the flower buds are still small and tightly compressed. It should be cut from the plant with a sharp knife just below the flower cluster. If the plant is left in the ground it will form side shoots which can extend the harvest.

Cultivars*

'Premium Crop' - 65 dt. AAS. Good for spring or fall crop. Large heads, produces many side shoots after the head is harvested.

'Packman' - 60dt. Early variety. Produces large quality heads 6-7" across.

'Green Comet Hybrid' - 55dt. AAS. Very Early. Good for spring or fall crop. Large heads, produces many side shoots after the head is harvested.

'Waltham #29' - 74dt. For fall crop only. Large heads, produces many side sprouts when head is harvested. Time of maturity varies and

this gives the gardener a long harvest period.

Broccoli raab - Italian type of sprouting broccoli. Harvest stalks and sprouts after buds appear, while still tender. Can be planted 6" apart in rows 18 inches apart.

Brussels Sprouts

Brussels sprouts produce small edible heads along it's stem. For best results, plant them in mid-summer 18 inches apart in 3 foot rows. To harvest brussels sprouts, remove the sprouts as they mature (1-1.5 inch diameter) from the bottom of the stem upward. As heavy frosts approach late in the season, pinch the growing tip so that the rest of the unharvested sprouts will enlarge before being frozen.

Cultivars

'Jade Cross E' - 90dt. Long dark green leaves, sprouts closely spaced on compact stems. Recommended as a fall crop. Will produce through December in most parts of New Jersey.

'Prince Marvel' - 95dt. Buds tight and creamy white in the center. Sweet with no bitterness.

Cabbage

The edible leaves of cabbage come in various shapes, sizes and colors, yet all of these varieties are grown similarly. Cabbage should be planted 12-18 inches apart in 3 foot rows. For spring plantings, early or mid-season varieties should be used. These varieties mature rapidly but don't store for long periods of time. Late varieties are best for summer plantings because they form very tight heads which can be stored for several months during the winter. The splitting of cabbage heads can be a problem when the heads mature. Splitting is caused by excess water and can be reduced by severing some of the cabbage's roots with a spade when the head reaches full size.

Cultivars

'Golden acre' - 65dt. Standard early variety. Medium-size, 3-4 lbs.

'Stonehead' - 67dt. Early variety. Very solid medium size heads. Stands without bursting.

'Market Prize' - 75dt. Mid season variety. Yellows disease resistant. Medium-size solid head. Stands up under wide range of growing conditions.

'Savoy King' - 80dt. Late variety. Crinkled leaf, superior flavor, especially when grown in cool weather. Heads large and flattened, not as solid as other types.

'Ruby Ball' - 70dt. AAS. Dark red cabbage, very solid head with little core. Will stand without bursting. Very good for coleslaw.

Chinese Cabbage

'Michihli' - 75dt. Best when seeded for fall maturity. Firm heads 18" long, 4" thick. Blanches white inside. Spicy flavor.

'Jade Pagoda' - 72dt. Hybrid Michihli. Slow to bolt extra uniform.

'Blues' - 65dt. Early Napa type with good disease resistance.

Cauliflower

The edible portion of cauliflower is actually a form of undeveloped flowers. Cauliflower can be planted 18 inches apart in 3.5-4 foot rows. The flower cluster of cauliflower should be harvested when the buds are still tightly compressed and are bright white color. In order to achieve the white color of cauliflower most varieties require blanching. Blanching involves shielding the bud cluster from light and should begin when the head is the size of a teacup. The easiest method of blanching is to tie the outer leaves of the plant over the head with clothes pins or a thick rubber band. This should be done when the cluster is dry to prevent trapping moisture, which could result in rotting. Some of the newer varieties of cauliflower are self-blanching

with very long outer leaves which shade the cluster.

Purple cauliflower is a cross between cauliflower and broccoli which requires no blanching and turns green when cooked. Cauliflowers is typically started in early summer for harvest in the fall.

Cultivars

'Snowball' strains - 50-60dt. Some variation among strains.

'Snow Crown' - 50dt. AAS. Adapted for home gardens. Heads about 8" across. Good raw, fresh cooked, or frozen.

'Candid Charm' - 60dt. Produces large dome shaped 7-9" heads. Large leaves cover heads well.

Collards

Collards are a leafy crop which has been very popular in the southern U.S. and is slowly gaining acceptance in the north. Collards should be planted 6 inches apart in 18-24 inch rows about two months before the expected fall frost. The leaves should be harvested at the base of the plant without disturbing the central growing tip.

Cultivars

'Vates' - 75d. Nutritious greens. Large leaves. Plants 2-3' high. Best flavor when grown to mature in the fall.

'Champion' - 78d. Vates type with dark green leaves and longer standing ability. Plants 1-1 1/2' high.

Kale

Kale is a leafy green. Plant 12 inches apart in 2 foot rows in late summer. Kale can withstand heavy frosts and can be harvested thru January with protection. Recently ornamental kale has become popular. Many of these are every bit as edible as the traditional varieties.

Cultivar

‘Vates’ - 55d. Nutritious greens. Leaves finely cut and dark blue-green color. Excellent flavor. Best when grown to mature in the fall.

Kohlrabi

Also called “stem turnip” Kohlrabi can be planted in the spring or fall 4 inches apart in 12-18 inch rows. Kohlrabi is best when harvested before the stem is the size of a tennis ball (3" in diameter).

Cultivars

‘Grand Duke’ - 55dt. AAS. Uniformly smooth “bulbs”. Delicate flavor, delicious when used raw or cooked and served with a sauce.

‘Early White Vienna’ - 60dt. Delicate flavor.

*** ABBREVIATIONS**

AAS - All America Selections award. Given in recognition of one or more outstanding characteristics.

d - Approximate number of days required from seeding to maturity. Will vary with season. It indicates the maturity of a given variety hybrid as it relates to others.

dt. - Days to maturity from transplanting.

Notes