SERVICE IN ACTION

COLORADO STATE UNIVERSITY COOPERATIVE EXTENSION

Commercial vegetable production: green bunching onions

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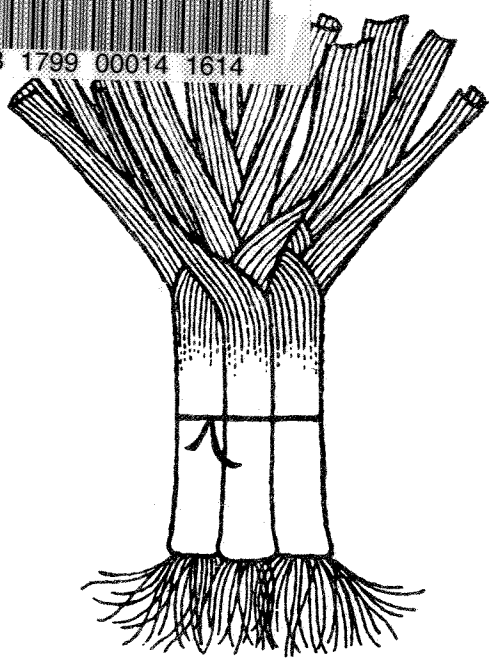
no. 7.620



Quick Facts

- A green bunching variety should produce a nice white shank with no bulb.
- There are three herbicides recommended for onions in Colorado: Dacthal, Brominal and Goal.
- Green onions are planted to a final stand which obviates the need for thinning.
- Cultivation begins as soon as onions can be rowed by the tractor operator.

Colorado produces 350 acres of green bunching onions with more than 60 percent produced near Denver and the remainder in the Pueblo area.

The most popular green bunching varieties are White Lisbon and Tokyo Bunching followed by Beltsville and White Knight. The variety selected should produce a nice white shank with no bulb.

Fertilizer

A soil test is required to accurately determine the nutritional status of the soil. A fertilizer recommendation for production of green bunching onions will be returned with the soil report. If no soil test is taken, 100 pounds each of N and P_2O_5 per acre are recommended.

All of the phosphate and half of the nitrogen should be applied before planting. This may be done by broadcasting over the surface and disking or banding 2 inches below and 2 inches to the side of the seed row. The remaining nitrogen should be applied two weeks before harvest.

Bedding

For ease of culturing, green bunching onions are often planted on beds. To take advantage of the frost action in developing a loose friable soil, the ground is plowed in the fall, fertilized and worked down with a mulcher or disk before being listed into rough beds.

In the spring, just prior to planting, the rough beds are smoothed with a bed shaper or dragged off and planted. Bed width may be 40 inches for twin rows or 20 inches for single row beds.

Whether beds are made in the fall, spring or not at all, the soil must be left in such a state that it does not blow.

Herbicides

There are three herbicides recommended for onions in Colorado: Dacthal (DCPA), Brominal (bromoxynil), and Goal (oxyfluorfen). Fusilade has been used under a section 18 exemption.

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Dacthal—7.5 to 10 lbs. actual ingredient/A. Apply Dacthal after planting and soil incorporate 0.5 to .75 inches deep. Use equipment that provides thorough soil mixing of the chemicals. Flower-of-an-hour *(Hibiscus spp.)* and possibly sunflower, appear resistant to Dacthal. Use higher rate on heavier textured soil.

Onion varieties appear to vary with respect to Dacthal tolerance. The amount of Dacthal onions will tolerate without serious injury may vary with soil pH and soil type.

Brominal—0.25 to 0.38 lb. actual ingredient/A. Apply Brominal on a broadcast basis in 50 to 70 gallons of water per acre when onions have two to five true leaves. Some crop injury may occur. It should be applied during bright sunlight when the foliage is dry, humidity low, and temperature near 80° F.

Goal—0.12 to 0.25 lb. actual ingredient/A. Apply Goal to onions with two or more true leaves, when broadleaf weeds are small. Use 50 or more gallons of water per acre. Repeat applications may be necessary. Apply no more than 0.5 pound per acre total per season.

Planting

Green bunching onions are planted in rows approximately 20 inches apart. When two rows are planted on a 40-inch bed they are generally 12 to 18 inches apart. Seed are planted one inch deep and 0.75 inch apart. Seed requirement is calculated after the spacing is determined and will range from 6 to 8 pounds per acre.

Onion seed may be planted any time after the first of January; however, they will not germinate until April in most locations. Therefore, there is little to be gained by planting before March.

Culture

It is generally necessary to send a hoeing crew through the field at least once to eliminate weeds which escaped the herbicides. Green onions are planted to the final stand which obviates the need for thinning.

Cultivation begins as soon as onions can be rowed by the tractor operator. Many types of equipment are used for cultivating; however, the standard method uses disks, knives, duck feet and furrow openers. The disks are placed on either side of the onion rows to cut the crust. A knife is mounted behind each disk to undercut weed on either side of the row and fill in the furrows made by the disks. A single duck foot might be centered in the furrow to undercut weeds, followed by a furrow opener which reforms the ditch for the next irrigation.

Insect Control

Onion thrips feed on developing onion leaves causing scarring and heavy populations, can reduce yields. Some strains of thrips have proven to be resistant to organophosphorus insecticides.

Diseases

Botrytis Blight *(Botrytis* spp.): White specks form on foliage late in the season.

Downy Mildew *(Peronospora destructor):* White to purplish mold develops on older leaves during cool moist weather.

Nematodes: Poor root development, deformed basal plates and outer seales and yellow, stunted plants.

Pink Root *(Pyrenochaeta terrestris):* Roots turn yellow, pink to brown and die throughout the season.

Fusarium basal rot *(Fusarium oxysporum cepae):* Roots and basal plate rot, and plants wilt and die.

Purple Blotch *(Alternaria porri):* Brown to purplish lesions with a dark margin and yellow zone on leaves.

Irrigation

Green bunching onions have shallow root systems and must obtain moisture principally from the upper foot of soil. Irrigation schedules are being developed for onions and will be available soon. Irrigation need never be a factor in reduced yield if the soil moisture is checked regularly by an experienced irrigator and water applied when it appears to be needed.

Harvest

Green bunching onions are harvested when their diameter is 0.25 to 0.50 inch at the base. At this time they should have 2 inches of white shank. They are hand pulled, generally without under cutting, and bunched with rubber bands. In the packing shed they are washed, the tops are cut to a standard height, and 48 bunches are packed into a box. The boxes are then hydrocooled, iced and shipped.

Marketing

There is not a big market for green onions relative to the dry onion; however, the market is increasing with the popularity of salad bars which often feature green onions. Since the markets are mainly local, it is best to check with prospective buyers and see what their specific requirements are.

Table 1: Insecticide recommendations.

Thrips Control	Days to Harvest	Rate	Remarks*
mevinphos (Phosdrin)	1	0.25-0.5	R, O
methomyl (Lannate, Nudrin)	7	0.5	R, O
Diazinon	10	0.5	O
methyl parathion (Penncap-M)	15	0.5	R, O
ethyl parathion	15	0.25	R, O
Guthion	28	0.5-0.75	R, O

*R—restricted, C—carbamate insecticide, O—organophosphorus insecticide

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Table 2: Disease control recommendations.

Pesticide	Rate (acre)	Application Frequency (days)	Days to Harvest	Remarks
Botrytis blight				
Bravo 500	2.25-4.25 pt	7-10	14	3 times max
Bravo W75	1.5-3 lb	7-10	14	3 times max
Dyrene 50	2-3 lb	4-10		
Downy mildew				
Bravo 500	2.25-4.25 pt	7-10	14	3 times max suppression only
Bravo W75	1.5-3 lb	7-10	14	3 times max suppression only
Captan 50	2.0 lb	7-10		
Phaltan	4.0 lb	7	14	
Purple Blotch				
Bravo 500	2.25-4.25 pt	7-10	14	3 times max
Bravo W75	1.5-3 lb	7-10	14	3 times max
Captan 50	2.0 lb	7-10		
Dyrene 50	2-3 lb	4-10		
Phaltan	4.0 lb	7	14	
Nematodes				
Telone C-17	10-17 gal	preplant, aerate 7-14 days		
Telone II	9-15 gal.	preplant, aerate 7-14 days		
Vapam	40-100 gal.	preplant, aerate 7 days		
Vorlex	12.5-20 gal.	preplant, aerate 14 days		
Pink root				
Telone C-17	24-27.5 gal	preplant, aerate 14 days		
Vorlex	12.5-20 gal	preplant, aerate 14 days, suppression only		