



Turnips

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Varieties

Greens: All Top, Purple Top

Roots: Royal Globe, White Lady

Roots and Greens: Hakurei, Just Right, Purple Top White Globe, Shogoin, Tokyo Cross

Soil Preferences

Deep, friable, sandy loam with pH 5.5 - 7.5. Will tolerate wide range of soil types with proper management. Avoid excessively heavy soils, which can cause root malformation.

Optimum Growing Conditions

Cool season crop with tolerance to frost and light freezes. Temperatures above 75°F for prolonged periods can depress growth and reduce quality.

Establishment Methods

Planting Method	Direct seeded
Optimum Time	Spring - seed zone temperature > 40°F Fall - seed zone temperature < 105°F
Seeding rate	1-2 lbs/acre
Approx seed/oz	15,000
Seeding depth	0.25 - 0.5"
Seedling spacing	Double plant rows on 38-40" wide raised beds with 2-4" in-row spacing

Fertility/Fertilization

Rates presented as actual lbs/acre N₂, P₂O₅, and K₂O (base actual rates applied on soil test results).

Generalized rate: 50 - 70 - 100 lb/acre	
N*	35-80 lbs 25-40 lbs pre-plant 10-40 lbs side-dressed 25 days after planting
P	50-120 lbs banded 2" below seed at planting

K	70-120 lbs applied pre-plant with N (normally not required in most areas of Texas)
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* Ammonium nitrate is very stable and least likely to evaporate. Urea and ammonium sulfate evaporate if not incorporated.

Water/Irrigation

10-15" uniformly available throughout growing season.

Pest Management

Turnip Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Downy mildew	Copper Sulfate, Dimethomorph, Mefenoxam, Potassium Phosphite	<i>Bacillus pumilus</i> , <i>Bacillus subtilis</i> , Copper Hydroxide, Cuprous Oxide, Neem Oil, Potassium Bicarbonate, <i>Streptomyces lydicus</i>
Leaf spots		Neem Oil
Nematode	1,3-Dichloropropene, Chloropicrin, Metam-Potassium, Metam-Sodium, Sesame Oil	Azadirachtin

Turnip Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Bifenthrin, Dimethoate, Imidacloprid, Malathion, Permethrin, Zeta-Cypermethrin	Azadirachtin, Neem Oil, Peppermint and Rosemary Oil, Pyrethrins
Armyworm	Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Esfenvalerate, Spinetoram, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Pyrethrins, Spinosad
Cabbage Looper	Beta-Cyfluthrin, Cyfluthrin, Emamectin Benzoate, Indoxacarb, Malathion, Methomyl, Methoxyfenozide, Permethrin, Spinetoram, Tebufenozide, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Pyrethrins, Spinosad
Flea Beetle	Bifenthrin, Carbaryl, Esfenvalerate, Imidacloprid, Zeta-Cypermethrin	Azadirachtin, Kaolin, Pyrethrins
Mites		Azadirachtin, Neem Oil, Pyrethrins

Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Metam-Potassium, Metam-Sodium	Corn Gluten Meal
Preemergence	DCPA, Oxyfluorfen, Pelargonic Acid	
Postemergence	Carfentrazone-Ethyl, Clethodim, Clopyralid, Glyphosate, Paraquat Dichloride, Pyraflufen Ethyl, Sethoxydim	Cinnamon and Clove Oil, Clove Oil, D-Limonene

* The above is a partial listing of controls intended as examples. Some labels may have been revoked since the publication of this guide. Refer to product labels for specifics and use accordingly. Ensure that products with one of the listed active ingredients are registered for the crop it is to be used on. Failure to do the above may result in crop injury, death and/or citation for law violation. Humans, animals and the environment may also be adversely affected by misuse.

** As stated in §205.206 of the National Organic Standards, pest management decisions should follow a hierarchical approach, which should be defined in a farm's organic systems plan. Please ensure that you have followed the appropriate steps and any product to be used in certified organic production systems has been approved by your certifying agent.

Harvest

Days after planting	40-60 days
Normal method	Hand or machine
Containers	Bushel baskets or bulk (machine harvest)
Grades	Grading of Roots dependent on defects, uniformity roots, and diameter > 1.75" U.S. #1 U.S. #2
Packaging/Handling	Greens: Fresh market - bunched, 24 lb cartons holding 24 1 lb film bags Processing - bulk sold by ton Roots: Topped roots - <ul style="list-style-type: none"> • 25 lb film bags • 50 lb film and mesh bags • 24 lb carton holding 24 1 lb bags Processing - bulked-sold by ton
Anticipated yield/acre	Greens Fresh market - 500 cartons Processing - 5-6 tons Roots - 3-4 tons/acre

Transit Conditions

32°F at 95% RH; shelf-life 4-5 months.

Comments/Production Keys

- Temperatures near freezing 3-4 weeks prior to harvest increases quality
- Temperature above 75°F during the above time frame decreases yield and quality
- Refrigerate harvested leaves as soon as possible to prevent loss of quality
- Place in high humidity conditions to prevent shriveling