Radish

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Varieties
Altaglobe, Black Spanish, Champion, Cherriette, Cherry Belle, Chinese White Winter, Early Scarlet Globe, Easter Egg, French Breakfast, Sparkler, Summer Cross, White Icicle

Daikon: Misato Rose Red Meat, Myashige

Soil Preferences
Radishes prefer light, sandy loams with pH 6.5 - 7.0, but will tolerate a wide range of soil types. Soils with pH below 6.5 may require liming.

Optimum Growing Conditions
Radishes are a cool season crop, preferring temperatures between 40-70°F. Optimum temperature range is 60-65°F.

Establishment Methods

Planting Method	Direct seeded
Optimum Time	Spring - soil temperature above 40°F Fall - soil temperature below 95°F
Seeding rate	10-20 lbs/acre
Approx seed/oz	2,000-3,000
Seeding depth	0.25 - 0.5"
Seedling spacing	2 row band approximately 8" apart on 38-40" beds

Fertility/Fertilization
Rates presented as actual lbs/acre N_2, P_2O_5, and K_2O (base actual rates applied on soil test results).

Generalized rate: 50 - 50 - 100 lb/acre	
N*	40-60; 1/2 applied pre-plant Top or side dress the remainder when rapid growth flush initiates

P	50-80 banded approximately 1-2" below seed at planting
K	70-120 applied with first nitrogen application

* Ammonium nitrate is very stable and least likely to evaporate. Urea and ammonium sulfate evaporate if not incorporated.

Water/Irrigation
Very low requirement: 5-6". Peak demand is during rapid growth and development stage.

Pest Management

Radish Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Damping-off	Fludioxonil, Thiram	
Downy mildew	Copper Sulfate, Potassium Phosphite	*Bacillus pumilus, Bacillus subtilis*, Clove, Rosemary and Thyme Oil, Extract of *Reynoutria sachalinensis*, Neem Oil, *Streptomyces lydicus*
Leaf spot (bacteria)	Copper Sulfate	Clove, Rosemary and Thyme Oil, Neem Oil
Nematode	1,3-Dichloropropene, Chloropicrin, Metam-Potassium, Metam-Sodium, Sesame Oil	Azadirachtin
White rust	Azoxystrobin, Pyraclostrobin	Copper Hydroxide

Radish Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Bifenthrin, Diazinon, Imidacloprid, Malathion, Petroleum Oil, Potassium Salts of Fatty Acids, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Neem Oil, Peppermint and Rosemary Oil, Pyrethrins
Cabbage Looper	Deltamethrin, Malathion, Methoxyfenozide, Spinetoram, Zeta-Cypermethrin	Azadirachtin, *Bacillus thuringiensis*, Pyrethrins, Spinosad
Flea Beetle	Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Deltamethrin, Diazinon, Imidacloprid, Malathion, Spinetoram,	Azadirachtin, Kaolin, Spinosad

	Thiamethoxam, Zeta-Cypermethrin	

Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Metam-Potassium, Metam-Sodium, Trifluralin	Corn Gluten Meal
Preemergence	Oxyfluorfen, Pelargonic Acid	
Postemergence	Carfentrazone-Ethyl, Clethodim, Glyphosate, 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	20-35 days
Normal method	Hand pulled and bunched
Grades	Based primarily on external appearance: U.S. #1 U.S. Commercial
Packaging/Handling	*Bunched:* 24-48 count bunches (6-9 radishes/bunch) per carton *Topped:* • 15 lb cartons containing 30 film bags (6 oz each) • 11.5 lb cartons of 30 film bags (6 oz each) • 25 lb loose packed film bags

Transit Conditions

32°F and 95-100% RH

Storage

Bunched - 1 week at 45°F and 95-100% RH

Topped - 3-4 weeks at 40°F

Comments/Production Keys

- Topped radish has a longer shelf life than bunched due to perishability of tops of bunched radishes
- Very short season crop which lends itself well as a mix load shipping item or direct sales marketing
- 2-3 year rotations suggested to reduce incidence of club root
- Club root more persistent in soils with pH below 6.5
- When storage temperature is higher than 32°F, low oxygen level(1%) is beneficial in reducing tip and root growth and softening