

SQUARE FOOT GARDENING

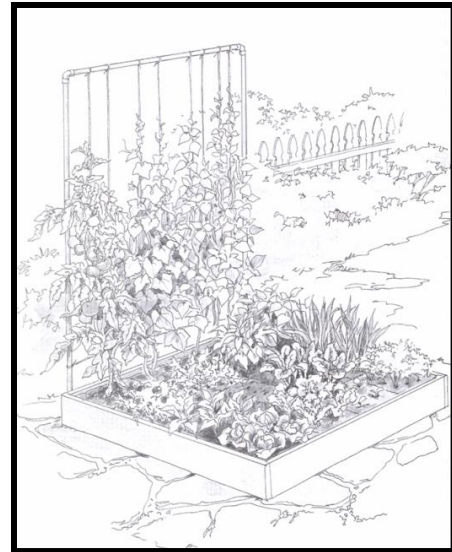
Mike Rose
Ward County Extension Agent

MINOT AREA TEAM WELLNESS GARDEN



SQUARE FOOT GARDENING

- ◉ Intensive culture maximizing available space for optimal production
- ◉ Attractive
- ◉ Grow more in less space
- ◉ A method to reduce issues from soil problems
- ◉ A simple system that adapts to all levels of experience and physical ability
- ◉ Saves space, water, and work
- ◉ Saves money?



LOCATION OF GARDEN

- Convenient
- Area that gets 6-8 hours of sunshine
- Stay clear of trees
- If in an area with problem soils (high water table) you may need a barrier on the bottom of the bed



DESIGNING THE RAISED BED

- New depth—6 inches
 - Easier
 - Cheaper
 - Less work
- Deeper bed--more than 6 inches
 - Carrots, potatoes
 - Maintains moisture longer
- Depth of bed depends somewhat on what is under the bed—poor soil, tree roots

DESIGNING THE RAISED BED

- Treated lumber

- Generally safe, becoming safer
- Cheaper
- Any size

- Commercial kit

- Trellis

- Do you need one?
- Type of crops to grow on it (heavy duty?)
- 5-6 feet tall



DESIGNING THE RAISED BED

- Do you want to extend the growing season?
 - Floating row covers?
 - Low tunnels?
 - Entire bed covered!



FLOATING ROW COVERS



FLOATING ROW COVERS

- ◉ Require no support—placed directly on crop
- ◉ Edges must be secured, but need room for expansion
- ◉ 70-80% water, air and light transmission
- ◉ Heavy cover will provide 2-4 degrees of frost protection in the spring -more in the fall
- ◉ Can be more weed pressure
- ◉ Tomatoes and peppers need support

LOW TUNNEL



LOW TUNNEL

- ⦿ Plastic covers supported by wire hoops
- ⦿ 1-1.5 mil plastic
- ⦿ 65-72 inch no 9 wire
- ⦿ Hoops placed about 4 feet apart
- ⦿ Black plastic mulch used for weed control
- ⦿ Low tunnel left in place 3 to 4 weeks
- ⦿ May have to open up during the day to prevent excess heat build up.

DESIGNING THE RAISED BED

- ◉ Do you need protection from Critters?
 - Light chicken wire cage over top
 - Even lighter plastic deer netting cage over top

DESIGNING THE RAISED BED

- Landscape fabric on the bottom
 - Slow tree roots from entering
- If high water table/salinity is an issue
 - Solid bottom with drainage on the side of bed or keeping the bed off the ground
 - Prevent salts from leaching up

DESIGNING THE RAISED BED

- Bed height can be adjusted for wheel chairs or people that cannot bend and care for a low garden
 - Slide under
 - Reach from all sides
 - Smooth path surface four feet wide



THE SOIL MIX

- ◉ 1/3 peat moss
- ◉ 1/3 vermiculite
- ◉ 1/3 blended compost

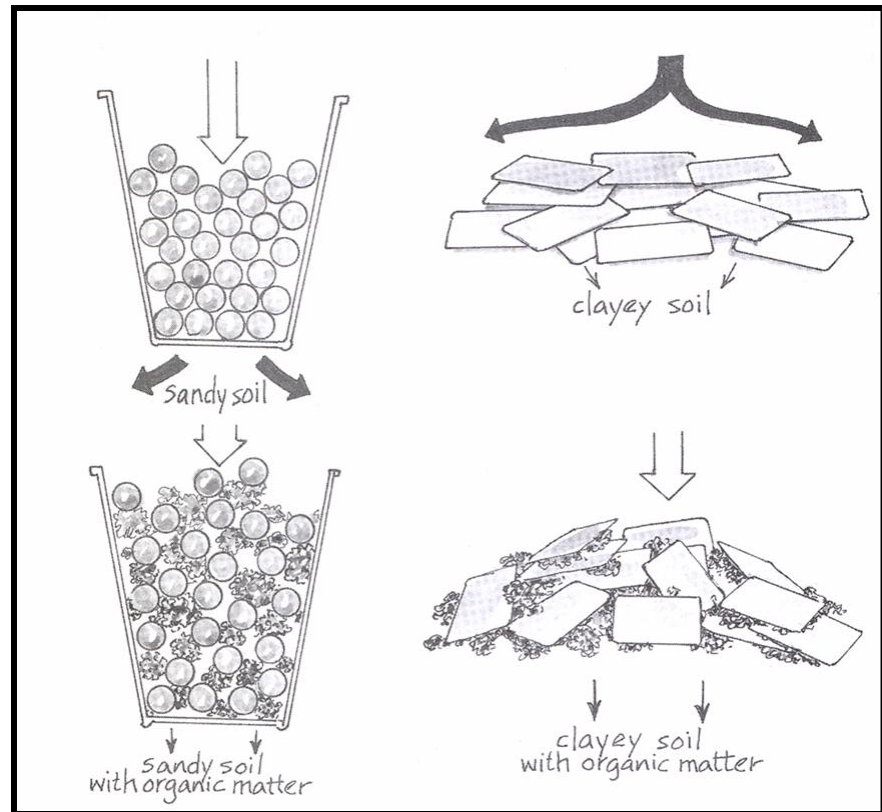
*This mix will have good drainage, warms up faster in the spring, and easier to work

*No compaction from walking, because there is no walking on it on it

*Refresh each spring

SOIL STRUCTURE

- Well drained
- Fertile
- Easy to work
- Good water holding capacity



THE SOIL MIX

◉ Compost

- Clean, crumbly, rich organic matter
- It is the process of breaking down plant material that is no longer growing through a decomposition process
- Aerobic process of composting
 - No odor and get hot and is fast
 - Mix, mash, moisten, and move
- Anaerobic process of composting
 - Smells, is messy, and is slow
 - “Rotting”
 - The lazy way to do it!



THE SOIL MIX

⊙ Peat Moss

- Naturally occurring from decomposing plant material
- Only added when garden is established?

⊙ Vermiculite

- Mined out of the ground
- Holds water and makes the soil friable and loose

PLANNING THE GARDEN

- Select vegetables
 - Golden Rule: always plant vegetables that you like to eat
- Select varieties
- Develop a plan where vegetables will be planted
- Consider:
 - How large will plant get
 - Early or late maturity
 - Cool or warm season
 - Vine plant or bush plant



This garden is filled with easy-to-grow veggies.

tomato	cucumber	pole beans	pole beans
broccoli	broccoli	pepper	pepper
beets	cabbage	spinach	parsley
onions	leaf lettuce	carrots	radishes

MINOT AREA TEAM WELLNESS GARDEN



Planted 5-18-10

Picture taken 6-9-10

PLANT SPACING

- One per square foot
 - Broccoli, cabbage, pepper, tomato
- Two per square foot
 - Cucumber
- Four plants per square foot
 - Head lettuce, swiss chard, potato
- Nine plants per square foot
 - Bush beans, spinach, lettuce, beets
- Sixteen plants per square foot
 - Carrots, radish, onion
- One plant per two square feet
 - Squash, melons

MINOT AREA TEAM WELLNESS GARDEN



Picture taken 9-13

MINOT AREA TEAM WELLNESS GARDEN



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Picture taken 9-13

TRAINING PLANTS

- ◉ Twist main stem around twine once a week
- ◉ Pinch out suckers that form in leaf axis
- ◉ If left unpruned, suckers will grow into new vines



GOOD CHARACTERISTICS FOR VEGETABLE VARIETIES

- Early maturing (100 days or less)
- High yields
- Resist diseases
- Resist stress (heat and drought)
- Outstanding flavor
- Special appearance

North Dakota State University

Home Garden Variety Trials



Home

Our Project

Varieties

Catalog

Order Info

2009 Results

Contact Us

2010

Welcome



North Dakota State University is looking for gardeners to test varieties in their backyard gardens. Our goal is to identify the best varieties for gardeners in North Dakota.

Please join us!

We are testing 106 different vegetable varieties, some of which have never been grown here before. The trials are simple and fun! Over 350 families participated in 2009 and we are hoping for more in 2010.

Everyone is welcome. This year we are offering free seeds to children who help to manage a trial!

Download our [catalog](#) (1,850 KB) or [brochure](#) (164 KB). We are shipping seeds now!

IRRIGATION AND MULCH

- Hand watering
- Drip irrigation reduces water requirements
 - No watering over the top
- Grass clippings(without herbicide residue)
 - Keeps plants cleaner
 - Conserves water

FALL SALAD GARDEN

- Plant cool season vegetables in early fall
- Asian Greens
- Radish
- Spinach
- Swiss Chard

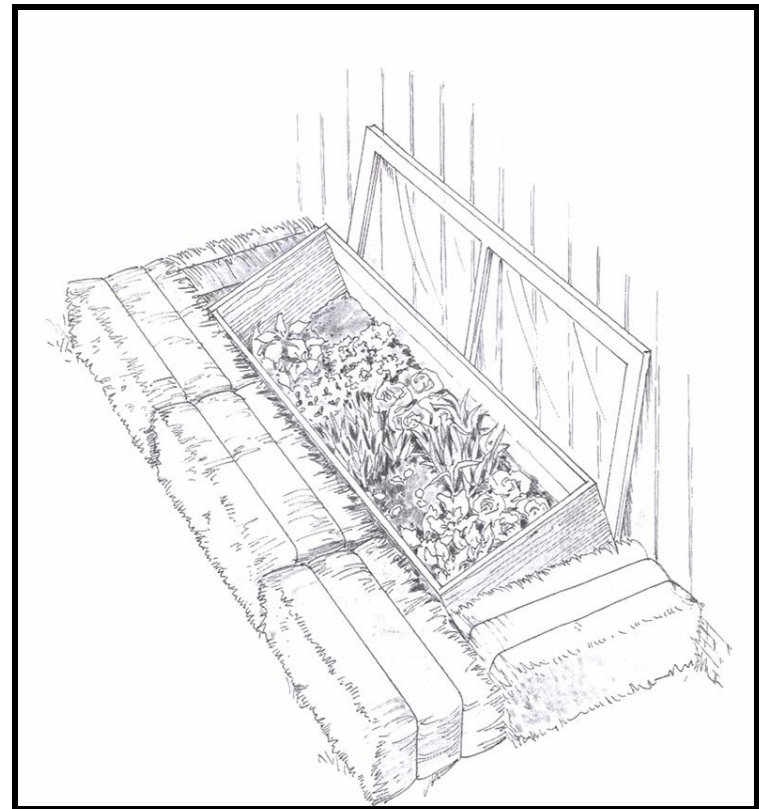
ASIAN GREENS

- Flower Buds
 - Hon Tsai Tai
- Mizuna
- Red Mustard
 - Red Giant
- Mustard Spinach
- Pac Choi
- Tatsoi

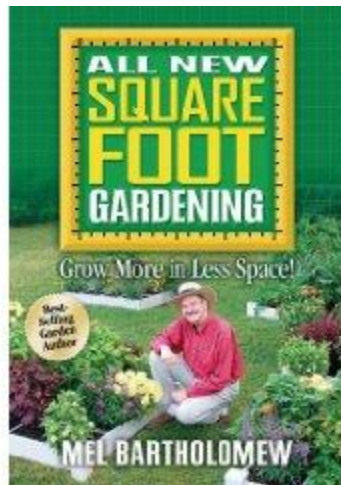


WINTER SALAD GARDEN

- Can dramatically extend the growing season for cool season salad vegetables
- Some supplemental heat required
- Insulation



SOURCE OF INFORMATION



and

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HORTICULTURE MAILING LISTS

- E-mail
- Postal

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857-6444