

BF106 Vegetable Production for Small Scale Farming

Part II of III

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Vegetable Specialist

Tillage & Field Preparation



Shallow plow (3-4") to prevent bringing up more weed seeds









BCS Hand Tractor

Rototiller

Rotary plow

Power harrow

Flail mower

Sickle bar mower

Brush hog

Snow thrower

Chipper/shredder

Water pump

Pressure washer







Soil Compaction

Plow pan



Photo courtesy of Michigan State University

Deep Zone Tillage





Fuel Savings

Plow & harrow

4.5 gallons fuel

Zone-tiller

1.25 gallons fuel

Reduced fuel consumption by 72%-77%

Time Savings

Plow & harrow

1.5 hours @ 5 mph

Zone-tiller

0.5 hours @ 3.5 mph

Reduced field prep time by 66%- 83%







No-Till

Season Extension

- Plastic mulch
- Row covers
- Low tunnels
- Caterpillar tunnels
- High tunnels
- Greenhouses



Wide Row Covers







Low tunnels



Caterpillar Tunnels





























Cover Crops

- | | | |
|----------------------|--------------------|---------------------------|
| • Winter rye | Sept-October | cool soil germination |
| • Oats | August | Winter kills |
| • Tillage radishes | August | Winter kills/< compaction |
| • Sun hemp | before Aug | Winter kills/OM/N |
| • Pearl Millet | before mid-Aug | Frost sensitive/dry catch |
| • Sorgham-sudangrass | late spring/summer | winter kills/OM/smother |
| • Buckwheat | late spring/summer | winter kills/OM/smother |
| • Annual ryegrass | late spring/summer | very competitive/mow |
| • Clover | Spring | N-source |
| • Field pea | Spring | N-source |
| • Hairy vetch | Spring/summer | N-source |
- *NE SARE Pub. - Managing Cover Crops Profitably*

Winter rye

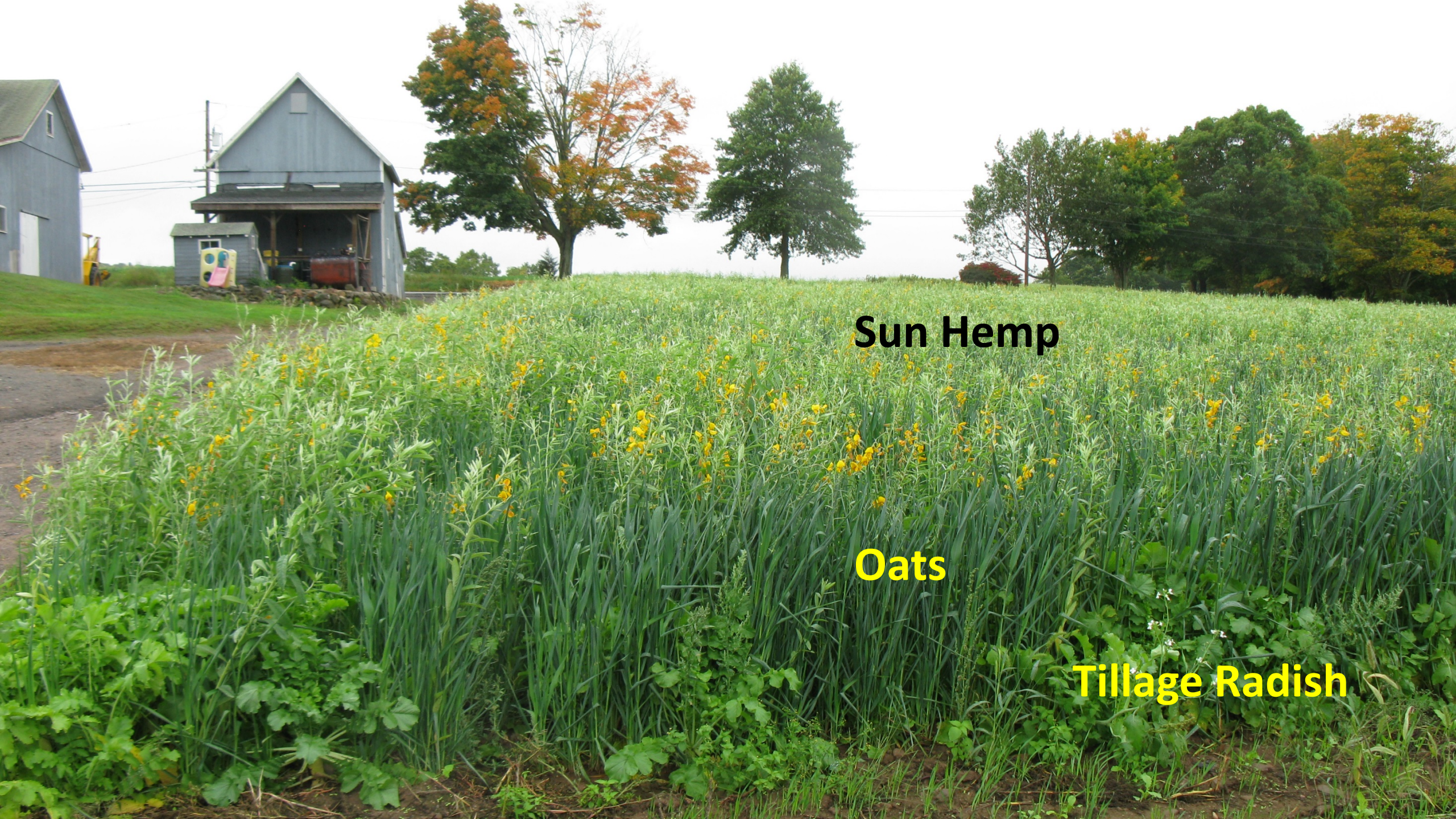


Pearl Millet





oats



Sun Hemp

Oats

Tillage Radish

Buckwheat





Field pea



**Field pea and
buckwheat**

Red clover





Mustard



Equipment Wish List



“Before” Mitchel’s repair job



“After” Mitchel’s repair job!





Manual Mulch Layer





Drop Spreader

Drop seeder with rollers



Brush Hog





ATHENS

55

ATHENS

55















ABB
DC MOTOR SPEED CONTROL
MENA 1 / IP 30
ABB

ABB

ABB
MENA 1 / IP 30
ABB









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Griswold Research Center

Tool and Equipment Needs 06/24/08

Garage Tools – Sears, Northern, Grainger

Tool chest
Bin cabinet for nuts, bolts etc.
225 amp battery charger
Trickle charger
Grease gun
Extension cords
½ plug-in drill
Cordless drill
4-in. hand held disk grinder
Circular saw
Jig saw
Sawzall
Bench grinder
Bench vice
Tap and die set – metric, english
½ drill press
Chop and draw table saw
Power washer
Hand truck
Furniture dolly
Air compressor
Air tools – sockets, hammer
*Electric arc welder
*Acetylene bronze welder
Heavy jack stands
Hydraulic jack
Aluminum ramps

* Can hire welder

Outside tools

Shovels
Rakes
Sledge
Hoes
Pruning tools
Posthole digger
Post pounder
Rock bar
Chainsaw
Weedwacker
Gas hedge trimmer
Lawn mower
rototiller
Measuring tape –
100' and 300'

Irrigation supplies

Pump
Lay flat
Drip tubing
Filter assembly
Fertilizer injector
sprinklers

Flammables

Gas cans
Motor oil
Grease
Waste oil, antifreeze containment
Diesel tank
Paint, spray paint
Flammable cabinets
Plastic spill containment

Chemicals

Locked chemical cabinet
Disposable measuring
Lab scale
Personal protective equipment
Safety signage
Backpack sprayers – SP systems
Separate herb and insect
Wands and nozzles
Boom sprayer – three point, PTO
driven

Tractor and field prep

40 to 50 HP, 4WD Tractor
Quick release bucket
pallet forks
Cultivating tractor
2 bottom moldboard plow
Disk harrow
Field conditioner – cultamulcher?
Subsoiler – single shank
8' drop spreader/spin spreader?
PTO rototiller
Brushhog
Separate insect./herbicide sprayers
Bed-maker/plastic layer

4WD Truck

Field work

Seed planter – no-till?
Transplanter
Harvest baskets
Field scale
Harvest knives
Plot markers

BE
GOOD
TO THE
LAND AND
THE LAND
WILL BE GOOD
TO
YOU