

MSU, U.P. Experiment Station
Chatham, *MI*

Crop Rotation Program
Paul Naasz, Farm Manager

Farm Background

- Farm established in 1899
- Total Farm Acreage: 1262 acres + 448 leased acres
 - 609 tillable
 - 481 wooded
 - 359 permanent pasture
 - 261 farmsteads, buildings, ponds
- Cattle: 308 total head
 - 75 milk cows (64 milking) – RHA 21,959 lbs
 - 62 head young stock
 - 145 Beef Cattle
 - 26 Beef Replacement Heifers

Crops Grown

- Alfalfa
- Corn silage
- High Moisture Corn Grain
- Oats or Barley (primarily for straw bedding)
- Winter Wheat

Overall Rotation Plan

- Corn Grain
- Small Grain
- Corn Silage
- Alfalfa – 5 years

Rotation Details

■ CORN Grain

- Previous fall application of 2 qts. Glyphosate + 1 qt. 2,4-D Ester
- 6,000 gal. liquid manure
- 4 gal. 5-18-10-1 liquid fertilizer/a starter
- Early maturing variety (<80 d RM) planted at 30,600 kernels/a
- JD 7300 Max-Emerge No-till planter
- Lumax herbicide pre-emergent
- PSNT soil test and side-dress 28% N as needed
- Average yield = 100 bu./a

Rotation Details

■ Small Grain

- Spring burndown with 1 qt. Glyphosate
- 6,000 gal. liquid manure or 150# 46-0-0
- Seeded with 10' Lilliston No-till drill at 120#/a
- 1 pt. 2,4-D Amine post-emergent

Rotation Details

■ CORN Silage

- 6,000 gal. liquid manure
- 4 gal. 5-18-10-1 liquid fertilizer/a starter
- BMR Corn Variety planted at 30,600 kernels/a
- JD 7300 Max-Emerge No-till planter
- Apply 1 qt. Glyphosate, 2,4-D Ester and Lumax herbicide pre-emergent and burndown
- PSNT soil test and side-dress 28% N as needed
- Average yield = 15 ton/a

Rotation Details

- **ALFALFA** - Stands typically 5 years
 - 60% stand left
 - 6,000 gal. liquid manure, previous fall
 - Spring Burndown with 1 qt. Glyphosate
 - 20 lb/a alfalfa seed w/disease rating index of 30/30, excellent winter hardiness, fall dormancy, cutting recovery, forage quality w/high yield ratings
 - Post emergent application of broadleaf herbicide

Alfalfa Details (cont.)

- Planted with 10' Lilliston No-till drill
- 3 cuttings per year
- Average yield of ~3.0 tons/a on all fields combined
- Fertilize according to soil test

Comments for a Successful No-Till Operation

- Good planters are necessary to achieve adequate seed to soil contact
- Always use a spring burndown herbicide
- Calibrate spraying equipment
- Seed bed preparation is critical for legume and grass seedings – Utilize crop rotation to maximize seeding success

Thank You!