**ON-FARM RESEARCH PROJECT** **TEAM GRAIN**

**Year:** 1998/1999

**Title:** Evaluation of Seeding Establishment Success with Winter Rye as a Cover Crop Following Corn Silage

**Purpose:** Soil and water losses are a concern following corn silage harvest where conservation tillage is not in place on erosion prone slopes. The purpose of this project was to compare establishment success with winter rye seeded after corn silage using several variations of broadcast and drill seeding.

**Cooperating Agent/Coordinator:** Scott Hendrickson/Tolif Hunt

**Cooperating Farmer:** Jay Fitzgerald

**Location:** Manitowoc County

**Previous Crop:** Corn

**Soil Type:** Kewaunee

**Soil Test:** pH - 7.5
P - 43 ppm
K - 236 ppm

**Tillage:** Fall moldboard, spring field cultivate (1x)

**Planting Date:** May 22

**Hybrid:** Pioneer 39F06

**Population:** 33,000

**Row Spacing:** 30"

**Fertility Program:** 120 lb/A nitrogen as urea
100 lb/A 9-23-30 at planting

**Herbicide Program:**

| Material | Rate | Method | Date |
|---|---|---|---|
| North Star | 4 oz/A | postemergence | June 22 |
| Accent | .33 oz/A | postemergence | June 22 |

**Harvest Date:** September 15

**Treatments:** 1. Broadcast: Chisel plowing with sweep attachments followed silage harvest. Rye was broadcast at 150 pounds/A with a Tyler commercial fertilizer spreader.

2. Broadcast: Following silage harvest, rye was broadcast at 150 pounds/A and then chisel plowed with sweep attachments.

3. No-Till Drill: Rye was drilled at 150 pounds/A with a John Deere no-till drill following silage harvest.

**Plot Design:** RCB, three replications

**Results:**

**Table 1. Winter Rye Canopy Cover Comparisons on 11/2/98 and 4/15/99 Using Several Variations of Broadcast and Drill Seeding, Manitowoc, WI**

| Treatment | Planting Date | Winter Rye canopy cover, 11/2/98 | Winter Rye canopy cover, 4/15/99 |
|---|---|---|---|
| | | % | % |
| 1. Broadcast | September 18 | 22 | 82 |
| 2. Broadcast | September 18 | 22 | 82 |
| 3. No-Till Drill | September 18 | 29 | 88 |
| Mean | | 24 | 84 |
| Canopy cover CV (%) | | 1.8 | 2.2 |
| LSD 5% | | 3.2 | 4.1 |

Winter rye canopy cover using the no-till drill was significantly greater than the broadcast treatments. All treatments provided successful establishment.

**Winter rye no-till drilled at 150 lbs/A after corn silage harvest**