

## CONSERVATION PRACTICE SPECIFICATION

### Herbaceous Wind Barriers – 603

Herbaceous Wind Barriers - 603 shall be planned and installed in accordance with the NRCS Standard detailed in the Field Office Technical Guide (FOTG) – Section IV – Conservation Practices. This document provides conservation planners with additional parameters, procedures, and requirements for developing site-specific plans for this practice.

#### DESIGN PROCEDURES

##### Porosity

Is the practice being designed to control wind erosion or manage snow distribution? The purpose of the practice will influence the porosity needed. Refer to the standard for specific requirements.

##### Suitable crops for barriers

Crops suitable for barriers in North Dakota include corn, flax, and tall wheat grass. These crops are most suited to the criteria in the standard. Other crops may be used with prior approval of an NRCS agronomist.

##### Number of rows and planting rates

Barriers can achieve the necessary porosity by adjusting the planting rates and # of rows. The following table provides the necessary adjustments. The # of rows is limited to the choices on the table.

**Planting Rates for Barriers**

<i>50% Porosity for Erosion Control</i>				<i>75% Porosity for Snow Management</i>			
Corn	Plants/Ac	Plants/Ac	Plants/Ac	Corn	Plants/Ac	Plants/Ac	Plants/Ac
	<i>22 Inch Rows</i>	<i>30 Inch Rows</i>	<i>36 Inch Rows</i>		<i>22 Inch Rows</i>	<i>30 Inch Rows</i>	<i>36 Inch Rows</i>
1 Row	83,898	61,525	51,271	1 Row	41,949	30,763	25,636
2 Rows	41,949	30,763	25,636	2 Rows	20,975	15,381	12,818
3 Rows	27,966	20,508	17,090	3 Rows	13,983	10,254	8,545
4 Rows	20,975	15,381	12,818	4 Rows	10,487	7,691	6,409
Flax	lbs. PLS/Ac	lbs. PLS/Ac	lbs. PLS/Ac	Flax	lbs. PLS/Ac	lbs. PLS/Ac	lbs. PLS/Ac
	<i>6 Inch Rows</i>	<i>9 Inch Rows</i>	<i>12 Inch Rows</i>		<i>6 Inch Rows</i>	<i>9 Inch Rows</i>	<i>12 Inch Rows</i>
2 Rows	26	17	13	2 Rows	13	9	6
4 Rows	13	9	6	4 Rows	6	4	3
Tall Wheat Grass	lbs. PLS/Ac	lbs. PLS/Ac	lbs. PLS/Ac	Tall Wheat Grass	lbs. PLS/Ac	lbs. PLS/Ac	lbs. PLS/Ac
	<i>6 Inch Rows</i>	<i>9 Inch Rows</i>	<i>12 Inch Rows</i>		<i>6 Inch Rows</i>	<i>9 Inch Rows</i>	<i>12 Inch Rows</i>
2 Rows	14.7	9.8	7.4	2 Rows	7.4	4.9	3.7
4 Rows	7.4	4.9	3.7	4 Rows	3.7	2.5	1.8

### Barrier direction and spacing

Barrier direction and spacing is calculated using the critical period or management period of WEQ. Soil wind erosion losses, for the design soil, should not exceed T for the rotation. Spacing for barriers should be based on soil loss calculation not to exceed the maximum spacing.

<i>Crop</i>	<i>Height</i>	<i>Maximum Spacing</i>
Corn	based on 48 inch effective height	330 feet
Flax	based on 18 inch effective height	125 feet
Tall wheat grass	based on 36 inch effective height	250 feet

Soil loss tolerances are located in county specific interpretive tables in FOTG – Section II – Soil Information. Calculate predicted erosion rates for the planned crop rotation, and planned tillage system using data and instructions in the local FOTG – Section I – Erosion Prediction – Erosion Prediction PDF file. Other essential practices, which can be found in FOTG – Section IV – Conservation Practices, may include one or more of the following:

- Conservation Crop Rotation - 328
- Residue Management, Seasonal - 344
- Residue Management, No/Strip Till - 329A
- Residue Management, Mulch Till - 329B
- Residue Management, Ridge Till - 329C
- Cover & Green Manure Crop - 340
- Windbreak - 380