



## 5a. Conservation Crop Rotation – Small Grains

### Purpose

1. To encourage agriculture producers to establish a soil conserving small grain crop in a crop rotation.
2. To reduce sheet, rill, and wind erosion.
3. To reduce water quality degradation due to excess nutrients.
4. To increase cropping system diversity.

### Applicability

Applies to cropland acres in the 10-county program area. Acres receiving payment under any other county, state, or federal program (CSP, EQIP, H2Ohio, etc.) are not eligible.

### Specifications:

1. Small grains are winter annuals (wheat, barley, rye, etc.).
2. Crop must be harvested as a grain; crop cannot be harvested as a forage.
3. A cover crop or double crop is required to be planted following the harvest of the small grain crop.
  - a. Cover crop or double crop must be planted by October 15.
  - b. Seeding rates and dates for cover crops shall follow NRCS Appendix A (11-19-19) seeding table.
  - c. If an overwintering cover crop is used, the producer may also be eligible for the Overwintering Cover Crop practice.
4. All nutrients must be applied in accordance with approved VNMP.
  - a. No manure shall be applied following the seeding of the cover crop nor prior to March 15.
  - b. Fertilizer may be placed a minimum of two inches below the soil surface with a placement tool or by strip tillage providing cover crop residue is maintained outside the placement area.
  - c. No broadcast fertilizer applications are allowed during the time period the cover crop or double crop is required to be maintained.
5. Crop residue must be maintained until March 15, no fall or winter full width tillage is allowed

### Technical Responsibilities

#### Producer Responsibilities

1. Maintain an approved VNMP with the SWCD.
2. Provide acres and field maps where small grain and subsequent cover crop or double crops are established.
3. Provide seed tags (including: % purity, % germ., % weed seed, Ohio noxious weed content) and bills for the cover crop or double crop.

#### SWCD Responsibilities

1. Receive application from the producer and complete agreement.
2. Determine eligibility, excluding any existing acres where a small grains are already established, document plan on BMP Worksheet.
3. Enter all required information into Beehive.
4. Verify small grain is established and harvested as a grain.
5. Verify that a subsequent cover crop or double crop is established, and residue maintained until March 15, of the following year.
6. Process payment to producer.

### Participant Payments

Enrolled participants will receive \$35/ac payment after completion of all program requirements.

\_\_\_\_\_ Initials



Adapted from NRCS Appendix A - Seeding Tables. 11-19-19 – See Appendix A for additional guidance on establishment, maintenance, termination.

Species	Overwintering <sup>1</sup>	Seeding Rates in Pounds PLS (Percentage of Mix)					Seeding depth (in)	North
		100%	75%	50%	33%	25%		
Winter Rye	Yes	50	38	25	17	13	1	8-1 to 10-15*
Winter Barley	Yes	59	44	29	19	15	1	8-15 to 10-10
Winter Wheat	Yes	64	48	32	21	16	1	9-22 to 10-15*
Winter Triticale	Yes	60	45	30	20	15	1	8-1 to 10-15*
Spelt	Yes	64	48	32	21	16	1	9-22 to 10-15*
Annual Ryegrass	Yes	18	13	9	6	4	0.5	8-1 to 9-20
Oats	No	40	30	20	14	10	1	8-1 to 9-20
Oilseed Radish	No	NR	NR	NR	2	1.5	0.5	8-1 to 9-15
Rapeseed/Canola/Kale <sup>3</sup>	Yes	4	3	2	1.5	1	0.5	8-1 to 9-15
Mustards	No	4	3	2	1.5	1	0.5	8-1 to 9-15
Turnip	No	2.5	2	1	0.75	0.5	0.25	7-20 to 9-15
Alfalfa <sup>4</sup>	Yes	16	12	8	6	4	0.25	8-1 to 8-15
Red Clover	Yes	9	7	5	3	2	0.25	7-20 to 8-30
Yellow Sweet Clover	Yes	8	6	4	3	2	0.25	7-20 to 8-30
Crimson Clover	Yes	12	9	6	4	3	0.25	6-15 to 9-15
Winter Pea	No	40	30	20	14	10	1.25	8-1 to 9-15
Hairy Vetch	Yes	16	12	8	5	4	1	8-1 to 9-20
Sorghum-Sudangrass	No	24	18	12	8	6	1	5-15 to 7-5
Sudangrass	No	20	15	10	7	5	1	5-15 to 7-20
Pearl Millet	No	12	9	6	4	3	0.75	5-15 to 7-20
Japanese Millet	No	14	11	7	5	4	0.75	5-15 to 7-20
Buckwheat	No	NR	NR	12	8	6	1	6-15 to 8-15
Sunflower	No	NR	NR	NR	4	3	2	5-15 to 7-20
Cowpea	No	60	45	30	20	15	0.75	6-15 to 8-1
Sunn Hemp	No	12	9	6	4	3	1	6-15 to 8-1
Berseem Clover	No	11	8	5	3	2	0.25	5-15 to 8-15
Soybean	No	54	40	27	18	13	1.5	6-15 to 8-15

\* Dates adapted to meet program seeding requirements

1. Overwintering only when planted during the fall dates and establishment. Winter kill may occur.

2. Do not plant until after the Hessian fly free date; date varies from Sept 22 in northern Ohio to Oct 5 in southern Ohio. Wheat and spelt cover crops can be planted up to 20 days past the fly free date. See the Ohio Agronomy Guide for specific county dates.

3. Fall planted varieties planted in the fall are “non-winter killed”; spring planted varieties planted in the fall or spring are winter killed.

4. In order to meet the intent and definition of cover crops (seasonal vegetative cover) alfalfa must be terminated and managed as an annual. Alfalfa planted to provide forage for Conservation Crop Rotation – Forages must be maintained for a minimum of 2 years and meet guidelines for that program.

\_\_\_\_\_ Initials



## 5b. Conservation Crop Rotation – Forages

### Purpose

1. To encourage agriculture producers to establish a soil conserving forage crop in their crop rotation.
2. To reduce sheet, rill, and wind erosion.
3. To reduce water quality degradation due to excess nutrients.
4. To increase cropping system diversity.

### Applicability

Applies to cropland acres in the 10-county program area. Existing cropland acres where forage crops are established are not eligible for payment. Acres receiving payment under any other county, state, or federal program for (CSP, EQIP, H2Ohio, etc.) are not eligible.

### Specifications:

1. Perennial forages must be established in the rotation.
2. Seeding rates for forages shall follow NRCS Appendix A seeding table or OSU Agronomy Guide, 15<sup>th</sup> ed.
3. Manure and/or fertilizer applications, following the approved VNMP, are permitted between March 15 and October 15.
4. Practice must be maintained a minimum of two years from the date of practice installation.
5. Residual forage height must be a minimum of four inches height by October 15 each year.
6. Residual forage must be maintained during the non-growing season.
7. Grazing according to a Grazing Management Plan between March 15 and October 15 is permitted.
8. Producer may apply for a minimum of two years and no more than three years of funding for this practice.

### Technical Responsibilities

#### Producer Responsibilities

1. Maintain an approved VNMP with the SWCD.
2. Provide acres and field maps of forage established.
3. Provide seed tags (including: % purity, % germ., % weed seed, Ohio noxious weed content) for forages.

#### SWCD Responsibilities

1. Receive application from the producer and complete agreement.
2. Determine eligibility, excluding any existing acres where a forage crop is already established, document plan on BMP Worksheet.
3. Enter all required information into Beehive.
4. Verify overwintering forage crop is established and maintained, annually for the life of the practice.
5. Process payment to producer.

### Participant Payments

Participants will receive \$35/ac payment annually, for up to three years, when verification of all program requirements are met.

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H2Ohio-WLEB Expansion

All Practice Standards-06/22/21



Plant Species	Pure Live Seeding Rate (lb/ac)					Seeding depth (in) <sup>1</sup>	Seeding Dates <sup>2</sup>	
	Pure Stand	3/4	1/2	1/3	1/4		Northern	Southern
<b>Cool Season Growth<sup>3</sup></b>								
Non-Legumes								
Fescue, Tall <sup>5,6</sup>	15	11	8	5	4	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Festulolium	25	19	13	8	6	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Garrison Creeping Foxtail	6	5	3	2	2	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Kentucky Bluegrass	10	8	5	3	3	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Meadow Fescue	16	12	8	5	4	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Orchardgrass	10	8	5	3	3	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Perennial Ryegrass	24	18	12	8	6	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Reed Canarygrass <sup>5,6</sup>	10	8	5	3	3	1/4 in	3-15 to 5-1	3-1 to 4-20
Smooth Bromegrass	16	12	8	5	4	1/4 in	3-15 to 5-1 or 8-1 to 9-25	3-1 to 4-20 or 8-1 to 9-25
Timothy	8	6	4	3	2	1/4 in	3-15 to 5-1 or 8-1 to 9-15	3-1 to 4-20 or 8-1 to 9-15
Forage Chicory	6	5	3	2	2	1/4 in	4-1 to 5-1 to 8-1 to 8-20	3-15 to 4-20 or 8-1 to 8-30
Legumes								
Alfalfa	15	11	7	5	4	1/4 in	4-1 to 5-1 or 8-1 to 8-15	3-20 to 4-25 or 8-1 to 8-30
Alsike Clover	9	7	5	3	2	1/4 in	2-1 to 5-1 or 7-20 to 8-30	2-1 to 4-25 or 8-1 to 9-15
Birdsfoot trefoil	9	7	5	3	2	1/4 in	4-1 to 5-1	3-20 to 4-25
Kura clover	6	5	3	2	2	1/4 in	4-1 to 5-1	3-20 to 4-25
Red Clover	11	8	5	4	3	1/4 in	2-1 to 5-1 or 7-20 to 8-30	2-1 to 4-25 or 8-1 to 9-15
White Clover, Ladino	5	4	3	2	1	1/4 in	2-1 to 5-1 or 7-20 to 8-30	2-1 to 4-25 or 8-1 to 9-15
White Clover, Dutch	5	4	3	2	1	1/4 in	2-1 to 5-1 or 7-20 to 8-30	2-1 to 4-25 or 8-1 to 9-15
<b>Warm Season Growth<sup>4</sup></b>								
Non-Legumes								
Big Bluestem	12	9	6	4	3	1/4 in	4-1 to 6-1	4-1 to 6-1
Little Bluestem	10	8	5	3	3	1/4 in	4-1 to 6-1	4-1 to 6-1
Caucasian bluestem	2	2	1	1	1	1/4 in	4-1 to 6-1	4-1 to 6-1
Eastern Gamagrass	9	7	5	3	2	1/2 in	4-1 to 6-1	4-1 to 6-1
Indiangrass	12	9	6	4	3	1/4 in	4-1 to 6-1	4-1 to 6-1
Switchgrass	9	7	5	3	2	1/4 in	4-1 to 6-1	4-1 to 6-1
Legumes								
Lespedeza, sericea	20	15	10	7	5	1/4 in	4-1 to 6-1	4-1 to 6-1

1. Planting depth is critical for successful establishment. Many failures result from planting too deeply.
2. Northern Ohio = Generally North of I70 - Southern Ohio = South of I70.
3. For cool season species dormant seeding can be planned between Dec 1 to Mar 14; interceding clovers into existing grass stands are recommended from Feb to early Mar.
4. For warm season species dormant seeding can be planned between Nov 1 to Mar 14.
5. Invasive without proper management.
6. Consider planting low alkaloid varieties or endophyte free or endophyte friendly varieties.
7. Do not plant until after the Hessian fly free date: Varies from Sept 22 in Northern Ohio to Oct 5 in Southern Ohio. See the Ohio Agronomy Guide for specific date.