



Iowa Ecological Science Job Approval Authority

Cover Crop (340)

DEFINITION:

Grasses, legumes, and forbs planted for seasonal vegetative cover



Job Classes	Control Factors	
	*Number of Species Planted	Practice Purpose
Job Class I	1	Soil Erosion Wind and Water
Job Class II	2 to 3	Water Quality-Excess Soil Nutrients
Job Class III	3 to 5	Soil Health-Maintain or Increase
Job Class IV	Greater than 5	Pest Cycles and Pressure
Job Class V	All	All

CONTROL FACTORS: The Cover Crop (340) practice has two controlling factors and units. They are Number of Species Planted as a controlling factor with Number as the units, and Practice Purpose as a controlling factor with Purpose as the units.

*For Iowa we will use Practice Purpose as the Control Factor

National KNOWLEDGE, SKILLS, AND ABILITIES (KSA):

1. Knowledge of State's Crops and Cropping Systems
2. Knowledge of Soil Health and Management
3. Ability to use current Wind and Water Erosion Prediction Tools
4. Knowledge of Tillage Systems and Equipment used in the State
5. Knowledge of Adaptive Species of Cover Crops for Planned Purposes in the State
6. Knowledge of Approved Planting Dates, Times and Methods of Termination for Cover Crops.

Iowa Guidance: KSA's are unique to each practice phase (*planning/design/certification*). Typically award class V for all the planning and certification phases and a IV for the design phase. To award a V for the design phase, the Planner must show experience writing plans that will be grazed, for a C-B-small grain rotation, and for an Organic Producer that is relying on it for weed control in a no-till system. This is an added Iowa control factor.

Reviewer & Date IOWA KNOWLEDGE, SKILLS, AND ABILITIES (KSA) needed:

Inventory and Evaluation (I&E) / Planning

-Job Class I to V-

- ☐ Read & understand the standard, job sheet, & SOW

Reviewer & Date **IOWA KNOWLEDGE, SKILLS, AND ABILITIES (KSA) needed:**

- ☐ Knowledge of the benefits of using cover crops, specifically: impact on Soil Erosion – sheet & rill & concentrated flow, Soil Quality Degradation - compaction and organic matter depletion, Degraded Plant Condition – excessive plant pest pressure (weed control), Water Quality – Excessive Nutrients.

Design / Development (I-IV)

-Job Class I to IV-

- ☐ Knowledge of planting dates for plant species used
- ☐ Knowledge of planting methods and the advantages and disadvantages of each (*i.e. drilling, aerial application, broadcast before & after harvest, etc.*)
- ☐ Ability to create a cover crop implementation plan to meet the objectives of the producer and specific resource concerns with and understanding of risks associated with different strategies
- ☐ Ability to fill out job sheet

-Job Class V (All)-

- ☐ Ability to develop a plan for incorporation of cover crops into annual crop production for the livestock producer who wants to utilize for grazing &/or forage production
- ☐ Ability to develop a cover crop plan for CBO rotation
- ☐ Ability to develop a plan for an Organic Producer that will provide the weed control necessary in a no-till organic system.

Construction / Installation / Certification

-Job Class I to V-

- ☐ Ability to read seed tags
- ☐ Ability to calculate pure live seed
- ☐ Ability to identify (5) commonly used cover crop plants (*i.e. cereal rye, annual rye grass, brassicas, rape, oats, crimson clover, etc.*)

Signature: _____ **Date:** _____ **Level:** _____

I have reviewed JAA for this practice and certify/recommend the level as indicated above.