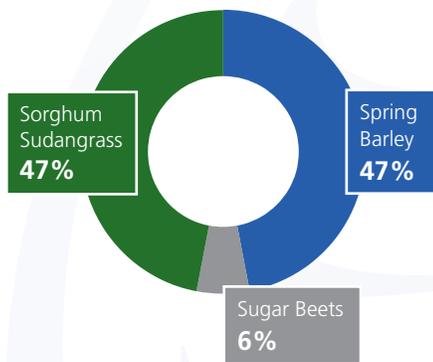




INTEGRA® Harvest Bounty™ Cover Crop Mixes

Alkali Mix

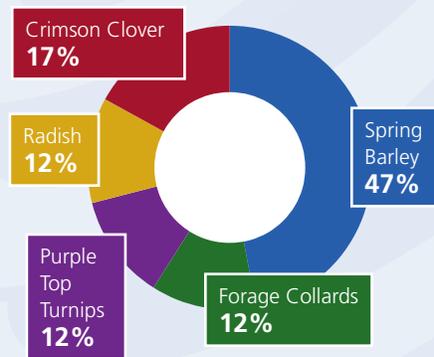
A mix of sorghum sudangrass, spring barley, and sugar beets designed to thrive in high alkaline environments and soils with typically low infiltration capacity.



- Designed to extract salts from the soil that negatively impact pH and restrict cash crop establishment
- This cocktail will help increase water permeability and increase water movement throughout the root zone
- Alkali Mix will minimize soil crusting that can severely affect seedling emergence
- Can be planted from early summer (once soils reach 65°F) until late summer (when time still exists to maximize spring barley and sorghum sudangrass growth)
- Seeding Rate - 17 lb/ac (with drill or seeder); increase seeding rates by 20% when broadcasting with fertilizer or with aerial applications

Grazing Mix

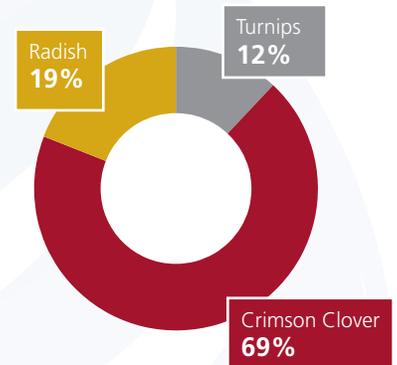
A mix of brassicas, legumes, and spring barley formulated to generate additional forage tonnage and grazing opportunities into late fall and winter.



- Perfect option for providing supplemental hay or grazing; brassicas (radish, turnips, collards) quickly generate summer biomass
- Crimson clover provides valuable N needed by the grass and brassicas to augment tonnage potential, while increasing the protein levels of the forage
- Brassicas and barley sequester leftover nutrients from previous cash crops
- Grazing Mix's biomass helps weed suppression while fighting costly wind erosion
- Can be planted from early summer through late August; ideally needs to be seeded 8 weeks prior to first frost
- Seeding Rate - 17 lb/acre (with drill or seeder); increase seeding rates by 20% when broadcasting with fertilizer or with aerial application

Multi-Purpose Mix

A traditional blend of radish, turnips, and crimson clover formulated for multiple applications and objectives.



- Perfect for breaking up compaction and improving soil structure
- High biomass potential helps control erosion and suppress weeds
- Ideal mix preceding corn as the components will not interfere with corn germination or establishment
- Should be seeded from early summer through early fall (needs about 900 GDDs to maximize growth)
- Seeding Rate - 8 lb/ac (with drill or seeder; increase seeding rates by 20% when broadcasting with fertilizer or with aerial applications)



Reasons to Plant a Cover Crop

A cover crop is a plant used to improve soil health, control pests and diseases, reduce weeds and manage soil erosion.

By improving the soil, you will improve the health and productivity of the soil, and the crops produced from it.

The 3 most common reasons used to promote cover crops are:

- **Soil Improvement**
- **Soil Nutrient Improvement**
- **Soil Protection from Erosion**

Soil Organic Matter Improvement

Modern high tillage farming systems have depleted the original soil organic matter. By introducing a cover crop to the rotation, a grower can help arrest this decline and reverse this trend over time. For every 1% increase in SOM, the water holding capacity of the top 6" inches of soil is increased by 20,000 gallons or as much as 6%.

Soil Nutrient Improvement is usually associated with legumes in the cover crop fixing Nitrogen, but the addition of a cover crop releases other nutrients from the soil as the plant material breaks down as well.

Soil Protection from erosion by water is reduced with cover crops by both protecting the soil surface and the increased infiltration under the cover crop. Soil with a standing cover crop is less likely to be prone to wind erosion. Water Infiltration is increased by the pores left in the soil by the cover crop roots, and by increasing the time water is retained on the area by top growth slowing the water flow across area.

Cover Crops Can Fulfill Multiple Tasks

Suppress weeds

- By competing with the weeds for light, moisture and nutrients
- Management practices can reduce the amount of weed seed developed, early mowing
- Living or killed mulches that smother weeds, killing the mulch can control weeds too

Allow field access for winter operations

- Sod-based cover crops allow early spring spraying or operations
- Reduces ruts and compaction from working on wet soils

Address soil moisture issues

- Too much soil moisture: high water tables or high WHC soils
- A perennial grass as a cover crop can use excess soil moisture
- Stretching irrigation water: plant matter mulches reduce soil evaporation
- A killed mulch will not be transpiring water, and shields the soil from evaporation

Increase diversity within the field

- Pollinator forage, diverse forage/pollen/nectar
- IPM Practices, habitat and forage for beneficial insects
- Increased soil biota will increase soil O₂-CO₂ exchanges
- Increased earthworms will increase carbon and nutrient cycling and increase infiltration

Address environmental regulations

- A cover crop can sequester soil and water Nitrates and help meet environmental regulations by having BMP in place that reduces potential nitrate/nutrient leaching
- Cover crops reduce off site movement of dust, pesticide drift and surface water