



Why Cover Crops?

Cover crops improve soil quality

- Increase soil organic matter (SOM)
- Reduce soil erosion – wind and rain
- Improve soil structure and quality
- Improve soil tilth
- Enhance soil biological diversity
- Remediate subsoil compaction



Cereal rye

Cover crops improve soil fertility

- Supply nitrogen (legumes)
- Reduce nutrient leaching
- Increase nutrient cycling
- Move nutrients from sub-soil to top-soil
- Improve fertilizer use efficiency



Crimson clover

Cover crops reduce pest problems

- Suppress weeds
- Reduce diseases
- Reduce nematodes
- Provide habitat and food for beneficial organisms



Lupin

Other benefits from cover crops

- Reduce labor
- Reduce fuel use
- Reduce land preparation
- Help with timely planting
- Reduce irrigation requirement
- Reduce total production costs
- Improve water quality



Black oat



Winter wheat

Alcorn State University does not discriminate on the basis of race, color, religion, national origin, sex, age, disability or veteran status.

Challenges with cover crops

- Cost of establishment
- May be difficult to kill
- May compete with your crop for resources
- Not a cash crop, lose income
- Require more management

Uses of Cover Crops

	Surface residue	Pest control	Nitrogen fixation	Weed control	Weed control Coma Compaction remediation
Winter wheat	Y	N	N	N	N
Rye	Y	Y	N	Y	Y
Black oat	Y	N	N	Y	N
Brassicas	Y	Y	N	Y	Y
Lupin	Y	Y	Y	N	N
Winter Pea	Y	N	Y	Y	N
Crimson clover	Y	N	Y	Y	N
Hairy vetch	Y	N	Y	Y	N
Sunn hemp	Y	Y	Y	Y	N



Hairy vetch



Winter pea



Sunn hemp



Turnip

For more information, please contact Dr. Franklin Chukwuma, Coordinator, Outreach Centers at franklinc@alcorn.edu or 601-877-2312.