



United States Department of Agriculture



Natural Resources Conservation Service

Essentials of Cover Crop Management



Southern Cover Crop Council Conference

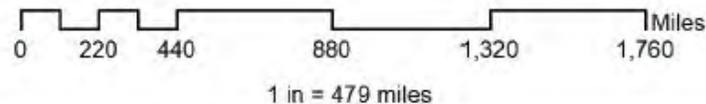
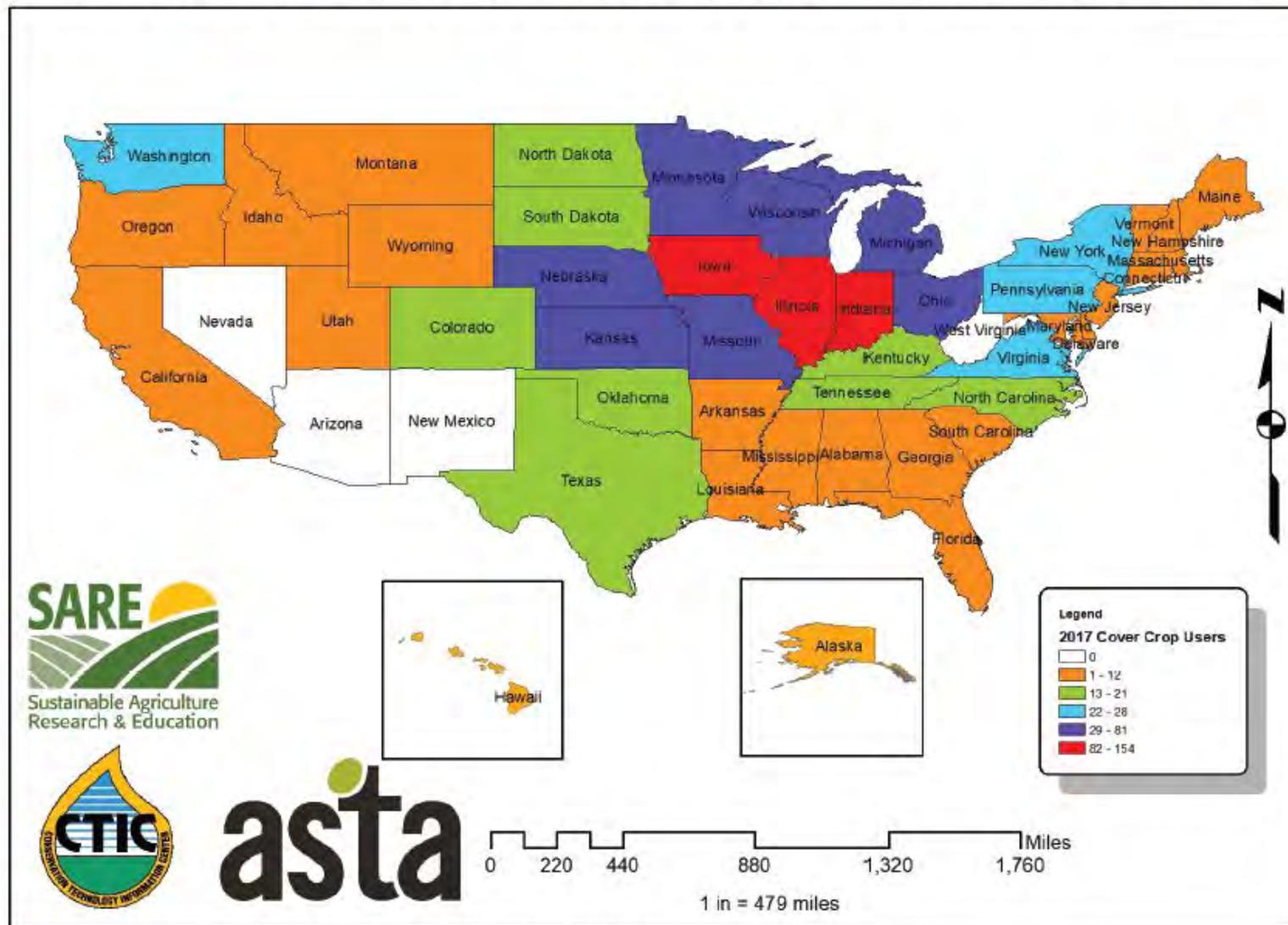
July 2019 | Jodie Reisner – Regional Conservation Agronomist

Fort Worth, Texas

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2017 COVER CROP SURVEY COVER CROP USER RESPONDENTS



* This map represents only those who indicated their state location in the survey, about 70% of all respondents.

Source: CTIC. 2017. Report of the 2016-17 National Cover Crop Survey.



Background

- Soil is the major interface between agriculture and the environment
- Capturing sunlight powers agriculture

How can I get better at this as a farmer?



What is your objective for using cover crops?



- Control erosion?
- Build soil organic matter?
- Increase water infiltration?
- Control and suppress weeds?
- Start down the road to achieve soil health?
- Promote biological nitrogen fixation?
- Provide supplemental forage?



Cover Crop Choices



- **Easy to establish**
- **Grows rapidly to provide ground cover quickly**
- **Produces a sufficient amount of biomass**
- **Should be disease resistant and not act as a host for diseases of the cash crop**
- **Can be easily terminated/killed**
- **Be economically viable**

Irrigated Cropland
and Cover Crops go
well together!



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Systems Approach



- How can I fit cover crops into my rotation?
 - What potential benefits and challenges do I have to overcome?
- **START SMALL** and get it in early!!!!!!!!!!!!
- Start on a good well drained field, not your worst field
- Treat your cover crop like your main crops
 - Get good at it – check on it closely and often

Cover Crops in
Bermuda Pasture



Main Reason – Soil Erosion



Photos: Jodie Reisner



Erosion will take a toll on your farm economics. Cover crops can help hold the soil in place during critical erosion periods.



- Cereal Rye
- Barley
- Oats
- Winter Wheat
- Triticale

Cool Season Grasses

Cereal Rye



- Pearl Millet and other Millets
- Sorghum-Sudan grass
- Forage Sorghum

Brown rib sorghum - sudan grass



Warm Season Grasses

Pearl Millet



Cool Season Broadleaves

- Oilseed Radish
- Turnip – Collards or Kale - Mustards
- Kale and Collards

Impact Forage Collard



Warm Season Broadleaves

- Buckwheat
- Safflower
- Sunflower



Wildlife Mix



Buckwheat

Cool Season Legumes

- Hairy and Woollypod Vetch - Crimson Clover
- Lentils – Faba Beans – other Clovers – Winter Peas

Hairy Vetch
Crimson Clover



Hairy or Woollypod Vetch



Photos: Jodie Reisner

Balansa Clover

Warm Season Legumes

- Cowpea
- Soybean
- Sunnhemp
- Chickpea
- Mungbean
- Lab Lab

Sunnhemp



Photos: Jodie Reisner

cowpea



Timing of Cover Crops in Cropping Systems

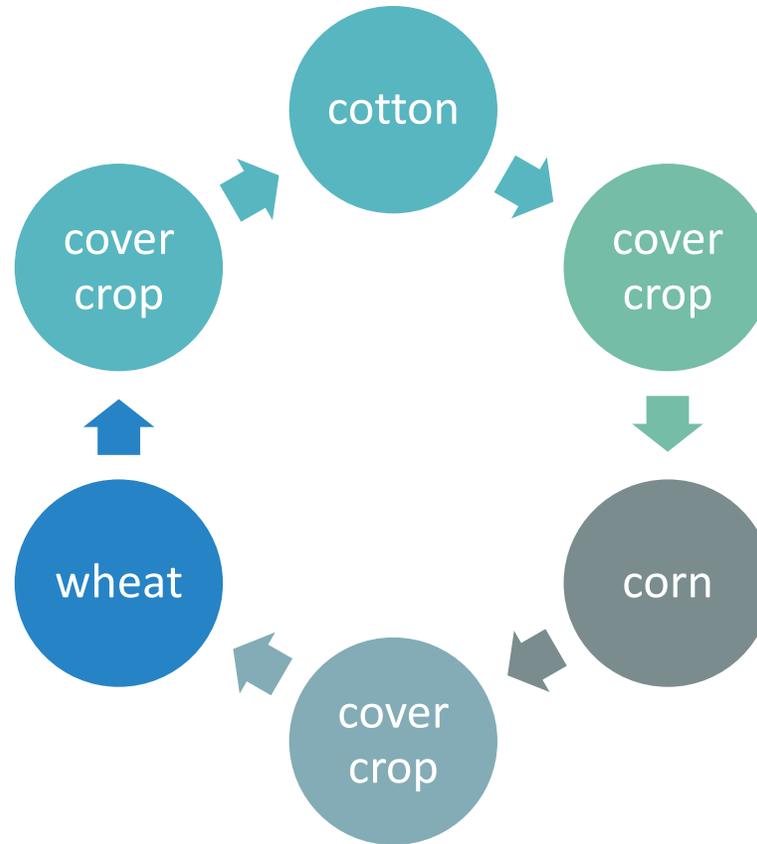
Ordering Seed

- Availability of seed has become an issue in recent years
- Make sure you know that getting cover crop seed may be a challenge and to think ahead for planting plans
- Order early for early delivery
 - Planting in the fall - have all your seed lined up in May or June
 - Planting in summer – have seed lined up in Feb. or March

Timing of Cover Crops in Cropping Systems

Establishment

- Consider when existing crop will be harvested
- Consider residual herbicides
- Consider what crop will be grown next i.e.



Timing of Cover Crops in Cropping Systems

Termination

- Base termination on cover crop stage, moisture, etc.
- Terminate growth of the cover crop early enough to conserve soil moisture for the next crop.
- Cover crops established for moisture conservation shall be left on the soil surface.
- In areas of potential excess soil moisture, allow the cover crop to grow as long as possible to maximize soil moisture removal.

Farmer Scenarios

Erosion Control Mix = 50 – 60 % grasses in mix then: legume if can plant early enough, hairy vetch creates much biomass in spring OR add cool or warm season broadleaves

Easy Cover Crop = Diverse mix of summer cover crops after small grains

Winter Kill Mix = Spring Oats, Oilseed Radish (may not kill in the south), Collards or Kale, Lentils, Sorghum Sudan grasses, millets

Before Corn Mix = Winter Oats, Hairy Vetch or other Legume, Oilseed Radish, Canola, or Kales

Your State and Cover Crops

What research is going on in your region?

- On Farm Research
- Lubbock – Dr. Katie Lewis
- Vernon – Dr. Paul DeLaune
- Subtropical Soil Health Initiative – UT Rio Grande
- NRCS Plant Material Centers



Cover Crops after Cotton in Brazo Bottomlands



Tools for Cover Crop Success

- Resources and Publications
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/resource/>
- Sustainable Agriculture Research & Education (SARE)
- [Cover Crops for Sustainable Crop Rotation and Soil Health](#) and the SARE cover crops topic room at <http://www.sare.org/Learning-Center/Topic-Rooms/Cover-Crops>

Farmer Perspectives – Scott Gonnerman

**Remember This:
“The most important
inheritance we can leave for
our children is biologically
healthy soils, it our lifeline for
the future.”**



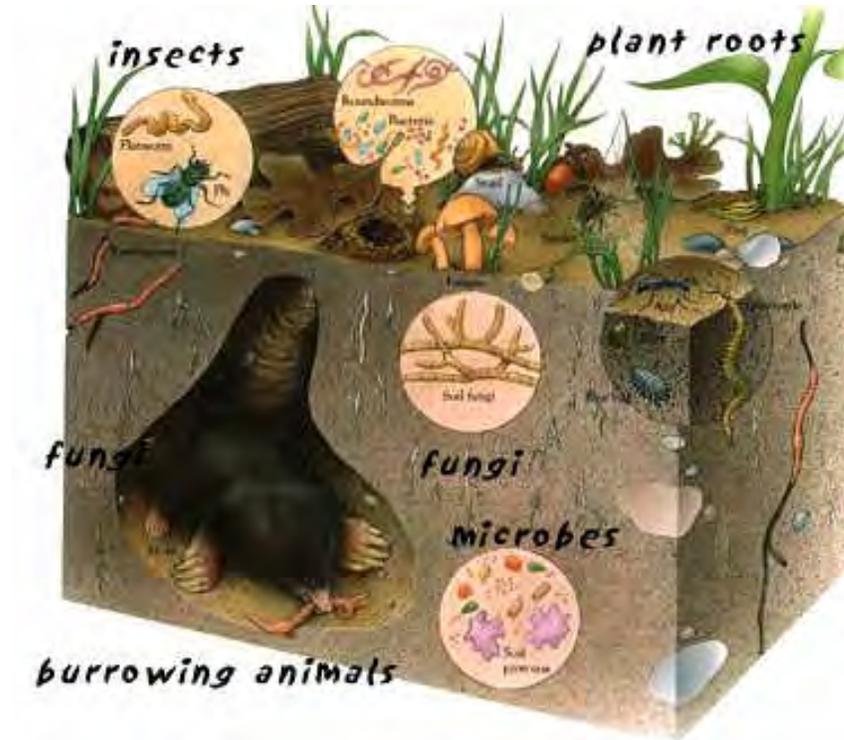
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Healthy Soils Sustain Life

Cover Crops Play a Key Role

Feed
Soil Biology
Protect
Soil Biology





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Questions?

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