Setting the Table— Cover Cropping Expectations

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in Another 20 Years?

Where Will This Land be in Another 20 Years?

- If Dryland many producers in South Plains (sandier soils) believe they have to list their land to keep it from blowing
- Many remain with continuous cotton, which provides minimal residue
- Crop pricing, as well as crop insurance, landlord preferences, etc., contributes to cotton dominance—and indirectly affects cover crop options, considerations, etc.
 - Check with FSA to ensure you understand how a cover crop may impact your eligibility for coverage



Have you already been cover cropping?

- What have many South Plains producers been doing for ~20 years, especially on irrigated?
 - Use of terminated wheat or rye to protect soil and especially seedling cotton—this IS a form of cover cropping.
- Cover crop advocates (or diehards or radicals!) in other areas may not consider this true "cover cropping", but it something many South Plains farmers use.



Right: three drill rows of wheat for cover to eventual seedling cotton. Bottom: drilled wheat on flat sandy ground which was started too late to acquire sufficient growth to control erosion.



Land preparation tillage into existing wheat stubble from a previous crop.

Water Use & Cover Crops

- Can we afford to expend precious water resources on a cover crop?
 - Manage the stubble you generate from an economic crop
- ⊙ Economic return may not occur right away?
- Does the cover use too much water to the detriment of the next agronomic crop?
- That beautiful video from Nebraska...
 - Similar rainfall to Clovis, Lubbock, Plains—it should work in your area, too!
 - What is the flaw—the fallacy—in this thinking?





Are we seeing any measurable improvement in the health of soils with cover crops? Question in "Wheat Farmer/Row Crop Farmer" and Trostle reply (Feb., 2015)

 Texas High Plains (Part 1): "Little data collected on any facet of cover cropping. Though I believe in time cover cropping will find a place in some cropping systems, the very real concern among producers and university staff is the use of moisture by the cover crop in the overall cropping system. Can we afford it?—whether we can or not (data needed!), we <u>can not</u> ignore it..."



Are we seeing any measurable improvement in the health of soils with cover crops?

- "...An emerging consensus among farmers and Extension in the Texas South Plains is that initial focus on cover cropping is not immediately soil health (defined in several different ways), <u>but protection of the soil surface</u>. Desirable soil attributes include:
 - reduced erosion,
 - increased water infiltration rates and capacity,
 - soil aggregation,
 - increased biological activity in the soil, etc.
- "These will not occur until first the soil surface receives a blanket (residue, whether from your cash crop like wheatgrain sorghum-corn and/or a cover crop) likely coupled with greatly reduced tillage.

"Five Keys to Soil Health" NRCS, Soil Health Advocates, Others

- Keep the soil covered
- Minimize soil disturbance
- Orop diversity
- Living roots in the soil at all times
 Integration of livestock with the land
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- Consideration: economic benefits are not readily gauged, especially in the short-term; producers incur real costs, will experience changes in income.

Sorghum/Sudan: Fullseason & Regrowth Groundcover (Dawson Co., 2014)

Winter Canola





XTENSION

 Minimal stand of 'Riley' forage winter canola at Lamesa, TX, Dec. 2013. Seeded dryland Fall 2012, this winter canola achieved approximately a 5% stand on dryland, and due to drought and freeze essentially all plants died by April 1.

The "Gospel" of Cover Crops

- Producers and university/federal staff in the Southern High Plains weren't consulted when many of the things you hear about were written.
- Principles of cover cropping vs. research data
- Data can be "inconvenient"
- ⊙ (Suspect) statements you may have heard:
 - "Fallow periods kill the soil..."
 - "Farmers have destroyed their soils...
 - "We need fungal dominant soils..."
 - Cover crops don't use water..."



Cover Cropping & the Texas South Plains

- A collaborative effort of farmers, NRCS, Texas A&M AgriLife & Texas Tech, conservation tillage equipment manufacturers, and agricultural landowners is needed to address the questions of preserving, improving, restoring the land resource
- O How this is accomplished can include cover cropping, but the method and approach for this region with low rainfall and high evaporative demand will be a great challenge. We will need to work together to find those cover cropping methods or components that offer affordable, economic potential benefit.

