NRCS approved Conservation Compliance Plans
For Risk Management Agency (RMA)
Subsidized Premiums

- *Potato Grain Sordan Rotations*

- *Richard Sparks, NRCS Regional Agronomist*
  - *February 2015*
Farmers that have RMA subsidized Crop Insurance NEED to make sure that:

- They have an active AD-1026 on file with Farm Service Agency (FSA) that shows a HEL determination has been done, and the plan is being applied.

- They review their approved plans to make sure they have implemented and are maintaining. If the rotation has changed, double check with NRCS that is still valid; a new conservation system may be needed.
Compliance Plans for RMA subsidized Crop Insurance:

- Past compliance violations may have an extra year to implement their old or a new plan approved for that field.

- If a field does not have a plan or

- Rotations have changed significantly:

- Their plan needs to be evaluated with WEPS to make sure it falls below (2T). This can be met on most soils and crop rotations. It will be difficult on loamy sand soils like Gunbarrel, Mosca, Kerber, and etc.
Compliance Plans for RMA subsidized Crop Insurance:

• Farmers who request technical assistance from NRCS, would have a year to apply the new NRCS approved plan to maintain their eligibility for RMA insurance.

• NRCS determines compliance; FSA only keeps the record current on the 1026.
Compliance Plans for RMA subsidized Crop Insurance:

Sod Bust Fields

• If the quarter was sod-busted out of native vegetation after 1987, then it will have to meet (1T) the tolerable soil losses for the soil involved.

• NRCS determines sodbust status when native vegetation has been broken out after 1987; FSA only keeps the record up to date.

• If that has been missed or dropped, we would have to correct that. That often happens when a sodbust field is purchased or fields traded with another farmer.
Compliance Plans for RMA subsidized Crop Insurance:

• If a farmer has never had an AD-1026 on a field, and now want to continue their subsidized RMA crop insurance, they must sign an AD-1026 with FSA before June.

• They would have 5 years of eligibility as they implement a NRCS approved plan.
Sorghum sudan or Brassicas in the Rotation following Rye

- Sorghum Sudan or Brassica cover crops grown on fallowed fields in lieu of Barley, should be carefully planned.
- September planted rye cover can be very effective at reducing erosion going to Sordan and will be essential on loamy sand soils.
- Rye planted after the 25th of September on loamy sand soils will likely not help the erosion prediction.
3000 lbs/ac
Sordan
Early planted Rye rooting development
## Wind Erosion Predictions LS Soils

Pot (rye) Sordan Pot Bar (4yr)
Barley residue not baled

<table>
<thead>
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<th></th>
<th>T/ac av</th>
<th>SCI</th>
<th>OM</th>
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<tbody>
<tr>
<td>Sept Rye</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rye 20th</td>
<td>7.8</td>
<td>-0.5</td>
<td>0.34</td>
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<tr>
<td>Rye 25th</td>
<td>11.8</td>
<td>-0.8</td>
<td>0.33</td>
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<tr>
<td>Oct Rye</td>
<td>24.4</td>
<td>-1.8</td>
<td>0.31</td>
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## Wind Erosion Predictions

### Pot rye Sordan (2yr)

<table>
<thead>
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<th>Rye Plant Date</th>
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<th>OM</th>
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<tbody>
<tr>
<td>Rye 20th</td>
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<td>Rye 25th</td>
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<td>Oct Rye</td>
<td>60.8</td>
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<tr>
<td>Ridged</td>
<td>18.3</td>
<td>-1.4</td>
<td>-0.16</td>
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### Wind Erosion Predictions LS Soils
Pot Barley fall disk/chisel (2yr) full circle

<table>
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<tr>
<th></th>
<th>T/ac av</th>
<th>SCI</th>
<th>OM</th>
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<tbody>
<tr>
<td>Baled</td>
<td>17.4</td>
<td>-1.3</td>
<td>0.2</td>
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<tr>
<td>No-bale</td>
<td>9.1</td>
<td>-0.5</td>
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October Harvested Potatoes

• Fields that are harvested in October should be ridged perpendicular to prevailing wind---NW to SE

• and then go back to barley the next year

• or to a spring planted cover crop.

• Waiting for a Sordan cover crop will involve too much erosion in April.
Ridging on a Gunbarrel loamy sand soil…. Ridges unstable
Ridging on Norte gravelly sandy loam soils
Ideal Plans

• The ideal rotation is Pot (rye) Sordan Pot Barley. Plant rye before Sept 25th on the determinant potato varieties; kill rye with glyphosate in May or allow to flower and chop the rye in June; and no till your cover crop into the rye sod.

• Sodbusted potato fields may be able to use this type of early planted rye prior to Sorghum-sudan to get a potato field into compliance.

• Incorporate all barley residue and apply compost prior to potato crops.
No-Till Planting Sorghum into Glyphosate killed rye:

May killed Rye Residue in July
Reduce average consumptive use by deficit irrigating rye and

- Reduce average irrigation requirements by planting a rye cover Sept. 25, deficit irrigate it till May and kill it with glyphosate.

- No till plant a Sordan - Brassica cover crop in early July. Deficit irrigate it through August. Grow the Sordan with less than 6 inches of water.

- That will give them a month or six weeks in the hottest part of the summer to apply no water, and allow the killed rye stubble to shade the soil.
We Must Balance Crop Consumptive Use With Our Water

- This is a critically important goal for the primary potato producing areas of the SLV. No one can argue the logic.

- But How? Conservation Enhanced Reserve Program (CREP)?

- Consider Alternative Crop Rotations as well!

- *Crop rotations can be planned that will help balance supply with consumptive use.*
Do You Agree? Check the Logic

• “We have too many wells and too much cropland acreage under irrigation!”
  
  – This is true ONLY if you assume historic crop rotations are the only potential rotations available; if so, taking cropland out of production is our only alternative to reduce consumptive use.

  – Caution Warranted!
  – (Tight rotation = potatoes every other year)

  – Why not go to a three year rotation of Potatoes: Barley: Sordan?

  – Or at least a 4 year rotation of Pot: (rye) Sordan: Pot: Barley
SOIL QUALITY is ALSO a BALANCING ACT!

• Tight rotations (Potatoes every other year) and tillage intensity have had the SLV in a strangle hold for years.

• Why? Economics favor tight potato rotations when there is plenty of irrigation water to support the intensity, and if pathogen levels can be tolerated.

• But given water restrictions and increasing pathogen pressures, we can take advantage of the opportunity for new crop rotations that will address both of these limitations.
Tight rotations also result in pathogens and low microbial diversity:

- Increased soil born pathogens: Columbia root knot and Stubby Root nematodes, pink rot, powdery scab, etc.
- Changing to a more diverse rotation will improve the microbial biological competition and reduce these pathogens.
Wind Erosion reducing practices should be carried out regardless of the rotation.

- **Mulch Tillage of the Crop Residues:**
  - Return all crop residue, barley and Sordan to the soil.
  - Green manuring crops does not require complete incorporation. Reduce tillage where at all possible.
  - *Avoid moldboard plowing.* Plowing green manure crops is a waste of energy & moisture and less effective than mulch tillage.

- **Reduce Unsheltered Distance**
  - Leave mowed annual weeds or other cover in the corners of pivots. Disking weeds on corners increases unsheltered distance.
  - Consider dormant planting of Indian Ricegrass on corners.
Wind Erosion reducing practices should be carried out regardless of the rotation.

- **Ridging:**
  - Ridges should be 3 or 4 inches high, 12 to 16 inches apart, and perpendicular to our prevailing south west winds.
  - Ridges should be constructed with chisels or harrows, not culti-packers, to leave a roughened surface.

- **Minimize exposure:**
  - Growing crops or crop residue should be present at high levels as long as possible.
  - Minimize the time between final seedbed preparation and planting.
In summary: Maintaining eligibility for RMA Crop Insurance subsidies

• Contact FSA or NRCS about your 1026 and conservation compliance plan. Before June 2015.

• Plan a rotation and management practices that will reduce wind erosion to approved levels.

• Increase diversity of your crop rotation, and keep soil protected by a growing crop, cover crops, returning residues to the soil, ridge fields when cover is not available.