Wheat Residue Management

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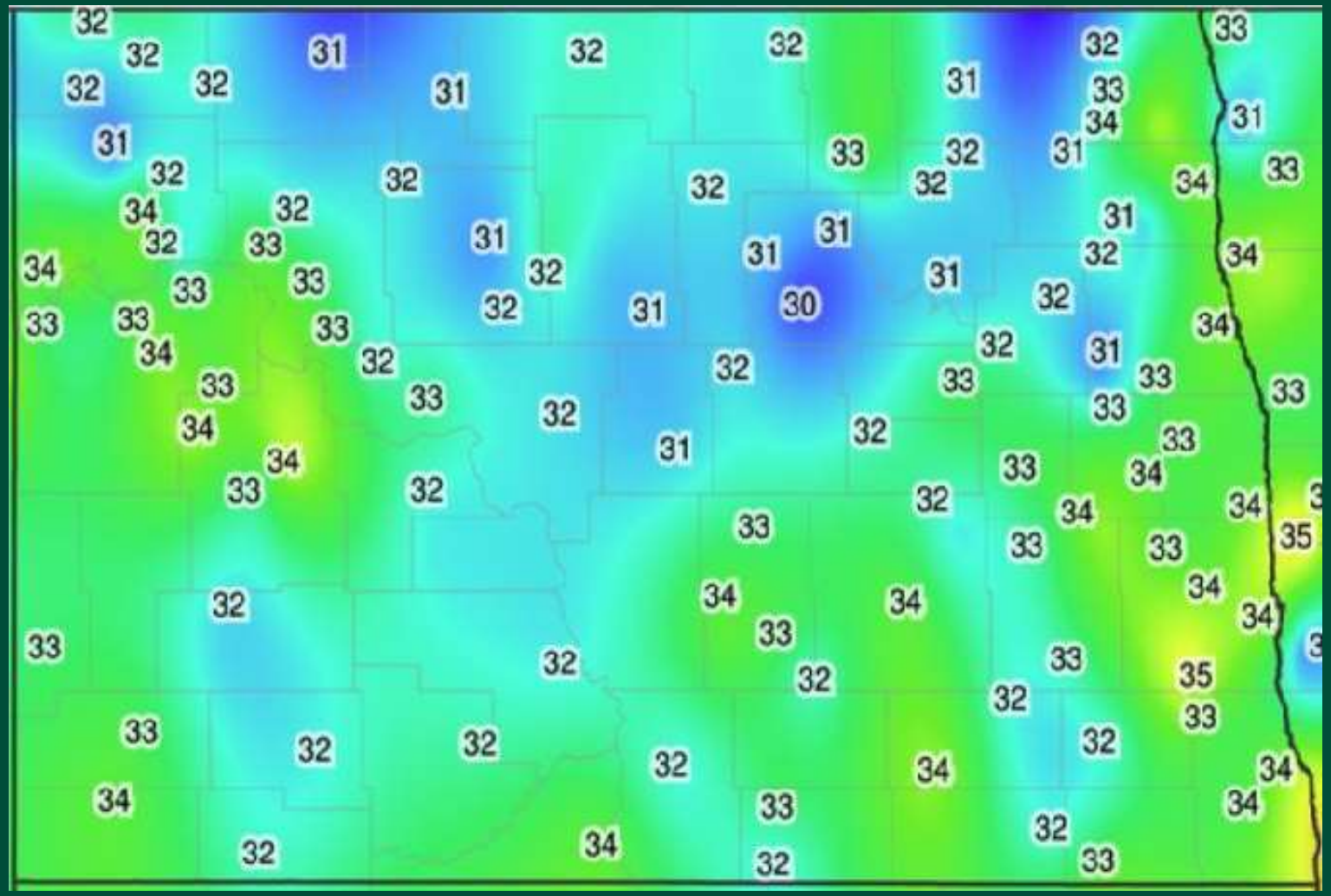
NDSU | EXTENSION

Soil Temps



NDSU | EXTENSION

Burn Wheat Stubble

- Pro's
  - Greatly reduces residue
  - Occasionally is okay
  - Release P & K

Burn Wheat Stubble

- Cons
  - Erosion
  - Loss of soil organic matter
  - Impedes water infiltration
  - Loss of N and S
  - Reduces soil microbial populations
  - Re-soil test

Burning Erosion

- Normal no-till **adds** ~3.5 t/ac/yr
- Conventional till **looses** ~15 t/ac/yr
- November burning to next May **looses** ~ 30 t/ac/yr

Burning Safety Considerations

- Where's the smoke going?
- Fire breaks
- Be prepared to increase fire breaks
- Contact neighbors and fire departments

Tillage

- Pros
  - Reduce residue while erosion isn't as bad as burning this fall
  - Incorporates O.M.
  - Level ruts
  - Too late to till

Tillage

- Cons
  - If you’re no-till this will destroy soil structure
  - Adversely impacts no-till nutrient cycling
  - Tillage will likely take several passes
  - Re-soil test (unless you're conventional till)
  - Rippiing

Tillage

- Hit a few different directions with a disk/vertical tillage
- Maybe harrow and burn straw
- Chisel plow SW to NE
- Work this spring
- Plant

50 bu/ac Wheat Crop has about 5,000 lbs residue/ac

Nutrient	Lbs/ac
N	27
P_2O_5	7.5
K_2O	37.5
S	5

DeAnn Presley, KSU Extension

Bale Wheat for Feed

- 50 bu/ac wheat has about 4 round bales/ac with ~750 lbs grain/bale
- High protein and low fiber can be tough on the rumen. Wheat ferments quickly.
  - Acidosis, bloat, founder
- If you feed wheat hay, use sparingly and process/crack grain

Summary

- All options have their benefits.
- Spring burning vs. now will reduce over-winter erosion and reduce residue.
- Tillage may require several passes.
- Tillage and burning will adversely impact soil microbes.
- Tillage will hurt soil structure and loose OM.
- Wheat hay can be fed, but caution is needed

Questions?