



— Soil Fertility Note 17 — Managing Crop Residue

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N.C.D.A. & C.S. Agronomic Division

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Allowing crop stubble and residue to provide soil cover is much more environmentally and agronomically sound than plowing or burning.

Benefits of Leaving Crop Residue

- Reduces soil compaction
- May reduce weed problems
- Reduces erosion by wind and water
- Reduces nutrient and pesticide run off
- Builds soil organic matter
- Conserves soil moisture
- Limits release of carbon to atmosphere (a contributor to global warming)
- Provides food and shelter for wildlife
- Conserves fuel, labor and time

Suggestions for Residue Management

- Mow cotton stalks with a flail-type mower, leaving stalks about six inches high.
- Cut small grains high so more residue is left standing than is left on the ground.
- Use a straw chopper and spreader on the combine to minimize windrowing.
- Mow or bale straw from any windrows.
- Use sharpened, notched coulters that cut through residues more easily.
- Attach a residue manager to the planter to clean crop residues from the row.
- Increase pressure on coulters by tightening tension springs and adding weight to planter.

- Plant after dew has dried on crop residues.
- Plant at an angle to the row pattern of the previous crop.

Hazards of Burning

- Depletes soil nutrients like nitrogen
- Leaves soil surface exposed to erosion
- Presents fire and smoke hazard/nuisance
- Poses a health hazard, especially for children, the elderly, and people with health problems
- Contributes to air pollution
- Adversely affects soil structure

Do Not Burn Crop Residue if

- Animal waste has been applied to the field
- Crop residue is included in an erosion control or water quality plan
- Prevailing winds will carry smoke to roads, homes, or businesses
- It is evening (between 6 p.m. and 8 a.m.)
- Occupied buildings are within 1000 feet
- You have not checked with representatives from NCDENR Division of Forest Resources and county authorities about local restrictions and the need for permits

Questions or comments should be directed to the Field Services Section of the N.C.D.A. & C.S. Agronomic Division, NCDENR Division of Air Quality (phone 919-733-3340), or NCDENR Division of Forest Resources (phone 919-733-2162).

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