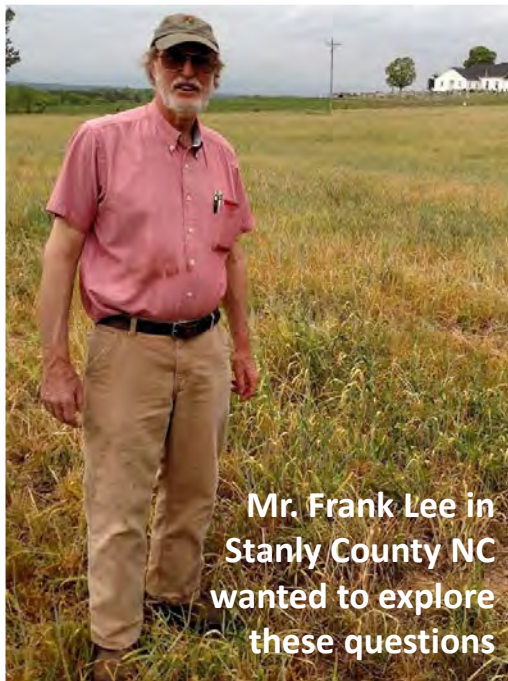


KEEPIN' IT COVERED IN THE CAROLINAS

NC Piedmont Demonstration – see ncsoilwater.org for Mountain & Coastal regions!

Controlling soil erosion, suppressing weeds, and building soil fertility are concerns for producers in the Piedmont region of North Carolina. Winter cover cropping could help, but what type of cover crop is most suitable? Are mixtures of cover crops beneficial? Could multi-species cover cropping improve soil health?



Mr. Frank Lee in Stanly County NC wanted to explore these questions

Replicated strips of multi-species cover crop and no cover crop were arranged on the same field in 2015/16 and 2016/17.

Multi-species cover crop mix in fall 2015:

15 lb/A triticale, 15 lb/A ryegrass, 10 lb/A crimson clover, 2 lb/A radish

Multi-species cover crop mix in fall 2016:

50 lb/A triticale, 15 lb/A Austrian winter pea, 15 lb/A crimson clover, 10 lb/A ryegrass

No-till planted after corn on Oct 15, 2015 and after cotton on Oct 29, 2016. Terminated chemically on May 2, 2016 and Apr 20, 2017.

Multi-species cover crop biomass production

5800 lb/A on April 19, 2016

2210 lb/A on April 18, 2017



Weedy overwinter biomass averaged 1400 lb/A in 2016 1640 lb/A in 2017



Piedmont region

Badin channery silt loam (*fine, mixed, semiactive, thermic Typic Hapludults*)

Lessons learned

Soil properties were improved with multi-species cover cropping in this on-farm demonstration.

Several years of previous no-tillage management and cover cropping were important for improving the soil surface.

Side-by-side strip trials were useful to make evaluations and to demonstrate performance of cover crops in a systematic manner.

“Cover crops are beneficial if they are managed properly.”
– Frank Lee

Soil Biological Activity (mg/kg/3 days) 0-2” depth

	No cover	Multi-species cover
2016	435	516
2017	507	590



Surface residue (lb/A)
No cover – 5076
Multi-species cover – 8364

Residue nitrogen (lb/A)
No cover – 60
Multi-species cover – 116




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