

Can fall tillage leave over 30% residue cover?

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Leaving 30% crop residue has been proven to minimize top soil losses from wind and water erosion. But what does 30% soil cover look like? Do certain tillage implements leave less than 30% crop residue? Crop residue in the form of corn stalks, soybean stubble, cereal straw, or green cover (growing crops or cover crops) are all effective ways to achieve 30% cover. In a demonstration at the Outdoor Farm Show in 2012 we learned that if we remove straw from a cereal crop and follow with any type of tillage we retain less than 30% residue. However, the tillage action stimulated a more uniform germination of volunteer cereals which increased total soil cover to well over 30%. The following photographs illustrate crop residue cover after tillage action on two differently managed field scenarios.

Key Learnings from Demonstration:

- If the straw is removed and followed with any type of tillage, it is difficult to achieve 30% residue cover. Allowing volunteer cereals to grow or seeding a cover crop will get you over 30% cover.
- 30% soil cover after harvest does not mean 30% will be remaining in the spring. Residue management ranging from type of residue, form of tillage, modifications or adjustments to tillage equipment and combinations using cover crops will all impact the amount of soil cover.



Above: 25% cereal straw residue remaining after crop harvest with straw removed and the field worked with a vertical tillage implement. The tillage pass stimulated an even germination of volunteer cereals which brought total ground cover to well over 30%.



Above: 70% cereal straw residue remaining after crop harvest with straw spread and the field worked with a vertical tillage implement.