IOWA STATE UNIVERSITY
Extension and Outreach

Issues with Stover Removal on Rented Land

Selling stover from rented land brings up several issues that should be discussed between the land owner, the tenant, and possibly third parties as well. This discussion should occur before any of the contracts are signed so there aren't any misunderstandings.

Ownership of Stover

Often the question arises as to who owns the stover. In 2010, in an effort to support the development of a cellulosic ethanol industry the Iowa legislature passed legislation that amended the Iowa code as quoted:

"562.5A Farm tenancy — right to take part of a harvested crop's aboveground plant.
Unless otherwise agreed to in writing by a lessor and farm tenant, a farm tenant may take any part of the aboveground part of a plant associated with a crop, at the time of harvest or after the harvest, until the farm tenancy terminates as provided in this chapter."
2010 Acts, ch 1027, §1

This law, which is the default language, gives ownership of the stover to the tenant, but the lease can state something different. If you are using the standard Iowa State Bar Association lease form, it reserves the ownership of the stalks for the landlord and also refers to "care of the soil."

In the lease you may also want to provide provisions for how much stover may be removed, or how much must be left, based on different cropping rotations and tillage systems. You may also want a clause that requires the landlord to sign the stover contract (even if only the tenant gets the revenue) so the landlord is aware of the terms.

The Iowa Code requires that leases end on March 1 of the following crop year so the tenant has the right to graze or remove stover up until that date. The lease termination date is September 1 of the current crop year.

Some of the stover contracts may pay additional premiums if they are multiyear agreements. Producers may need to have multiyear leases to capture this additional income.

If the tenant removes the stover and doesn't have ownership of the stover, the landlord may take court actions to be compensated for damages.

Increased revenue?

If selling stover generates more revenue and more income, should the landlord receive more rent? Based on economic theory you wouldn't sell the stover unless it generated more income. If the selling of stover generates more income, how should that income be split between the landlord and the tenant? The "value" of selling stover comes from several sources and no doubt varies from year to year. Income from the sale of the stover reduced the rates of nitrogen applied for the next year in a continuous corn rotation and often results in higher corn yields. The sale of stover may result in the need for less tillage as well. These are some of the factors that contribute to the "value" of selling stover. There are also costs such as the additional nutrients being removed, potential soil compaction issues, and potentially delayed fall tillage, to name a few.

One might address the question of sharing the additional value by asking what each party contributes to the activity. In a crop share situation wherein the outside contractor was responsible for all the harvesting, storing, and transportation, the revenue would probably be split 50/50.

In a case in which the landlord and tenant are on a crop share lease and the tenant provides the harvesting, storing, and hauling of the stover, considerations would include the "value" contributed by each party and lead to a similar split in the income. The landlord may benefit from increased yields (continuous corn) but would have higher P & K fertilizer costs.

In the case of a cash rent lease, the opportunity to sell stover would be capitalized into the rent similar to seed corn contracts or low cost organic fertilizer (manure), resulting in landlords being able to obtain some of the additional value because a farm is located near the cellulosic processing plant.

If the lease was a flexible cash rent agreement, the stover revenue would generally be included as part of the total crop revenue.

Farmers Concerns

Key issues when discussing selling stover from a leased farm include maintaining the soil quality, fertility, and related issues. Research done by Darren H. Jarboe and others in 2011 indicates that farmers who were interested in selling stover had concerns. The list below gives the top 10 items along with a ranking from 1 to 7 (with 7 being the highest importance) of how critical they felt the issues were.

Nutrient loss	**5.55**
Distance to markets	**5.52**
Long-term biomass market viability	**5.44**
Biomass price volatility	**5.26**
Soil erosion issues	**5.19**
Percent of biomass removed	**5.13**
In-field transport and compaction	**5.00**
Contract opt-out clauses	**4.99**
Contract terms of storage	**4.93**
Residue management	**4.92**

Nutrient loss ranked first and soil erosion was fifth. Landlords and tenants will certainly want to discuss both of these issues as well as others.

Soil Quality

One way to look at soil quality is to use the Soil Condition Index (SCI) that predicts the consequences of cropping systems and tillage practices on soil organic matter in a field. This index uses soil organic matter as a primary indicator of soil quality and carbon sequestration. A positive SCI indicates a cropping system that is likely to result in increasing levels of soil organic matter. Producers can look at the total cropping system to estimate the impact of stover removal. The index has three main components including the amount of organic material returned to or removed from the soil, the effects of tillage and field operations on organic matter decomposition, and the effect of predicted soil erosion associated with the management system.

Landlords can request to have the SCI model run on their farm ground by the Natural Resource Conservation Services (NRCS). This, along with soil test reports, will give landlords a good understanding of what is happening on their farms.

If stover removal results in a producer raising continuous corn instead of a corn-soybean rotation it is possible for the SCI index to be higher for the continuous corn system, as much of the organic matter that is in the soil comes from the root mass and not the above ground stover.

Communication

Communication between all of the parties is key to making this activity successful. Not all farms or cropping systems should be selling stover. Tenants need to make landlords comfortable with the issues such as nutrient removal, organic matter, erosion, soil tilth, and carbon sequestration, among others.

Conclusions

The sale of stover should provide additional "value." This value will be shared between the landlord and the tenant. How it will be shared depends on what each party contributes and how the contributions are valued.

New uses for stover require companies to invest significant amounts of capital and assume significant risks in both the cost of acquiring feedstock for their plants and the end value of their products. For those who feel that this is an opportunity, additional value will be provided as well as a renewable feedstock for manufacturing.

See other publications in this series on nutrient removal, soil quality, carbon recycling, and economics of stover removal.

References

Darren Jarboe, et.al., *Essentials for Producer Participation in Biomass Markets when Choices are Correlated*, http://ageconsearch.umn.edu/bitstream/142747/2/Hoque%20et%20al%20SAEA%202013_Jan15.pdf

Iowa Code 562.5A, Farm tenancy – right to take part of a harvested crop's aboveground plant.

Soil Conditioning Index, Natural Resource Conservation Service, http://www.soils.usda.gov/sqi/concepts/soil_organic_matter/som_sci.html

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