

News Column  
by Greg McClure, KSU-Riley County Extension Agriculture Agent  
110 Courthouse Plaza  
Manhattan, KS 66502

For Release 11/14/22  
Phone: 785/537-6350  
Fax: 785/537-6353

## GRAZING CROP RESIDUE

I rode in a combine a couple of weeks ago with a good farmer who told me that “cattlemen don’t make very good farmers”. I didn’t argue,...we had just met and I thought I’d give it a couple of minutes before offending him.

I probably lasted 15 minutes. Then I couldn’t hold myself back and I told him I thought a good farmer should own enough cows to get the value out of the corn residue he was leaving behind.

He didn’t argue.

Research at the University of Nebraska – done the first time about 30 years ago and repeated 10 years ago – shows no detrimental effect on subsequent grain yields from grazing stalks. Their work was on irrigated corn fields and they actually showed a slight increase in corn and soybean yields the summer after grazing corn stalks in the fall or winter.

It is important to not over-graze, and it is important to leave some residue to protect the soil from erosion and to hold moisture. However, a good cattleman should know when his cows are hungry and should be moved off stalks.

We can easily predict how many grazing days to expect from a corn stalk field if we are concerned about over-grazing, and want to use the calendar as a guide. I usually figure one cow per acre for a month, but that’s not very scientific,...and it is only accurate for 100 bushel per acre milo or corn.

There is a strong correlation between grain yield and residue. For each bushel of corn produced, about 41 pounds of residue is also produced. Of this residue, about 40% is leaf and husk, the part that is highly digestible and a good source of cattle feed.

So, we need to do some math. Forty percent of 41 pounds is 16 pounds. That's how many pounds of leaf and husks that are produced per bushel of corn.

Because some residue will be trampled, some will blow away, and you want to leave some behind, only about 50% of that 16 pounds will be utilized by grazing cows. So, now we are down to 8 pounds of consumable residue per bushel of corn taken off the field.

The next calculation is to multiply 8 pounds of residue by the per acre corn yield to determine the expected amount of consumable residue per acre. Easy math gives us 800 pounds of residue that we expect our cows to consume from a 100 bushel per acre corn yield.

The next step in this math problem is to estimate cow consumption. Consumption will be about 2% of body weight and I'm guessing my cows weigh 1300 pounds each. That's 26 pounds of feed per cow per day.

Finally, I just need to divide 800 by 26 to determine how many cow grazing days I should expect to get per acre. Check my math if you want, but I come up with 30.77 grazing days per acre from 100 bushel per acre corn residue. That's one cow per acre for one month.

Why does all the math matter if my first guess was right? Because my guess was only right for 100 bushel per acre corn. An irrigated corn field that yields 200 bushels of corn per acre will have twice as much residue available to graze.

If you're renting corn stalks – whether you are the cow owner or the corn stalk owner – it is important to know the grain yield in order to more accurately estimate the amount of residue available, and a value per acre.

Or, you can just rent the stalks on a per head per day basis and move them when they look hungry. A good cattleman will know when the cows need more feed and a good farmer will know when it is time to stop removing residue.

If you have questions, you can reach me at the Riley County Extension Office at 785/537-6350. Or, you can send e-mail to [gmcclure@ksu.edu](mailto:gmcclure@ksu.edu).

K-State Research and Extension is an equal opportunity provider and employer.