

Cover Crops Enhance Corn Stalk Grazing Quality for Beef Cows

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Corn stalk grazing is a major source of grazeable roughage for beef cows. Although temporal availability of corn stalks is very finite, it fits nicely into many extended grazing plans. A great time for cow outfits to save cash on feed costs is when cattle come off summer grass and go onto winter feed rations. Additionally, the cost:benefit ratio of grazing corn stalks is very high. Many stalk fields require additional temporary fencing and supplemental watering sources, but the added infrastructure generally is offset by the low cost of the roughage. The 2019 University of Minnesota Cow Calf Business Report shows the average winter feed cost to be \$65/cow/month, translating into ~\$2.16/cow/day. Most corn stalk grazing scenarios can feed cows for <\$1/cow/day. Although stalks are only available a month or two, this equates to a \$3,000+ savings in a herd of 100 cows.

Corn stalks are not a very high-quality feed. A typical field of corn stalks will average 50% total digestible nutrients (TDN) and 5-6% crude protein (CP). When stalks are typically available, calves have generally been weaned off, and cows have dried up. Therefore, total energy needs are at their lowest point in the cow's production cycle and 50% TDN is more than an adequate energy level. Low CP availability can be an issue. Even a dry cow in good fall or early winter weather will have a CP requirement between 6-7%. As a result, supplemental protein is often required to achieve adequate utilization and cow performance from stalks.

Commercial CP supplements tend to be expensive and can burn up cheap roughage savings. Many operators have switched from feeding supplemental proteins with corn stalks to growing a secondary forage with a cash crop to provide needed CP for the grazing diet. Species such as annual ryegrass and brassicas are the most popular, but some use annual clovers and other legumes. These forages will generally exceed 15% CP on a dry basis, thus, when grazed along with corn stalks, will push total diet CP up 1-1.5%.

University of Minnesota research using annual ryegrass and purple top turnips (PPT) has shown that when seeded 2X the recommended seeding rate into standing corn at ~V7 stage, annual ryegrass total germination was ~20% while PPT total germ was ~70%. When seeding a forage into standing corn, there is limited or no opportunities to pack seed to achieve optimum seed-to-soil contact. Better PPT germination was likely due to the much smaller seed size which could achieve better soil contact absent of packing. Although not specifically tested, most brassica species with a small seed size would yield similar results. In one year of the study, a hard, pounding rain occurred shortly after seeding, resulting in ~70% germination of both annual ryegrass and PPT, likely resulting in adequate soil contact to germinate them at the same rate.

In the days of Roundup Ready corn and beans, supplementary cropping opportunities were simple, since Roundup is very complimentary to these species. In recent times, however, most have diverted to other herbicides to address resistance. Often, these herbicides are not as complimentary to forage crops in the same year. Thus, a supplementary forage needs to be planned out well in advance with your crop consultant to assure compatibility of your herbicide program. It's not an impossible task by any means, but it takes a well-coordinated approach to achieve the results you hope to accomplish.