# GRAZING WINTER WHEAT GROWN FOR GRAIN WITH STOCKER CALVES

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Since 2000, Kentucky averaged more than 500,000 acres of winter wheat planted annually with the majority produced solely for grain (NASS, 2013). The potential exists for much of this acreage to be grazed with stocker cattle before being harvested for grain.

An on-going study at the University of Kentucky Research and Education Center (UK-REC) has compared wheat grain yields, wheat growth characteristics, and cattle weight gain, on grazed and non-grazed wheat for the past two years. The first year a demonstration was conducted on 19 acres of ground planted to wheat in combination with 7 acres of stockpiled fescue. Wheat was grazed for 39 days out of 95 days total. The second year four paddocks approximately 4 acres in size were used to graze 6 cattle in each paddock. In two of the paddocks wheat was grazed for 34 days out of 59 total grazing days when the wheat was harvested for grain. Two additional paddocks were grazed for 101 days and no grain was harvested from these plots. No N was applied in the second year due to ample residual N remaining from the previous corn crop, but 60 lbs N as urea was applied after establishment in the 2011 to 2012 crop. All wheat was planted according to UK Cooperative Extension Guidelines for NT wheat recommendations (ID-125). Cattle were removed prior to jointing (Feekes 6) in the plots harvested for grain and when soil conditions would lead to a substantial stand reduction (i.e. overgrazing, extremely wet for prolonged periods of time, etc.).

Results from the preliminary trial were promising (Table 1). Twenty-four heifers with an average initial weight of 644.4 lbs resulted in an average final weight of 727.8 lbs after 95 days grazing stockpiled fescue (56 days) and wheat (39 days). Average daily gain was calculated to be 0.90 lbs/day. Wheat yields were lowered when grazed, but were offset by a gain in revenue from calf sales. No additional hay was fed during the 2011 to 2012 year.

**Table 1. Wheat Yield, Calf Gain, And Revenue Change For Both Growing Seasons.**

| Grazing Days | | Wheat Yield/A | | Grain Reduction/A | | Calf Gain/Head | |
|---|---|---|---|---|---|---|---|
| **2011 to 2012 growing season** | | | | | | | |
| **Wheat** | **Fescue** | **Grazed** | **NG** | **bu** | **$** | **lbs** | **$** |
| 39 | 56 | 57.0 | 63.9 | -6.9 | -48.3 | 84 | 113.4 |
| | | | | | | | |
| **2012 to 2013 growing season** | | | | | | | |
| **Wheat** | **Fescue** | **Grazed** | **NG** | **bu** | **$** | **lbs** | **$** |
| 34 | 59 | 74.4 | 72.1 | +2.3 | +16.1 | 179.5 | 242.3 |
| *101 | 25 | 0 | 72.1 | -72.1 | -504.7 | 220.5 | 297.7 |

Note: $7/bu was used for wheat prices and $1.35/lb was used for cattle prices at this time.
*Cattle were not removed and no grain was harvested from these plots.

The second year, four paddocks were used with half of the paddocks having the cattle removed prior to jointing (Feekes 6) and the other paddocks were grazed out and no grain was harvested (Table 1). Twenty-four heifers with an initial starting weight of 630.5 lbs were divided into the four paddocks for grazing. Wheat harvested for grain was not penalized when grazed by cattle and the results were better than the previous year. The previous corn crop left a considerable amount of residual N for the wheat due to drought conditions. The non-grazed checks were more prone to lodging than grazed wheat and grazing reduced the lodging potential in the 2012 to 2013 wheat.

When considering wheat yield loss the first year and approximately $90/A gain in cattle, a gain of around $40/A was calculated. Doing the same exercise in the second year results in a positive income in wheat and $160/A in gain from grazing. Results like this must be verified prior to suggesting that they are common. The more likely scenario is the first one where some yield reduction occurs, but are off-set by the weight gains in the cattle. It is also prudent to mention that wheat grain prices and cattle prices change daily and realistic prices should be used when considering your options.

Grazing wheat does appear to be a viable grazing option for producers that grow winter wheat for grain. A fence, a water supply, and additional land are needed for this system to work for producers. A little more management is needed for proper management and producers should check pesticide labels prior to applying for grazing restrictions. Besides the greater management intensity, potential wheat yield reductions were off-set by modest cattle weight gains on both years. The practice of grazing cattle in the western portion of the country has been utilized for years, but winter in Kentucky is typically much wetter and concerns of damaging crop fields are valid. Subsequent soybean yields do not appear to be reduced when following grazed wheat over the two years of the study when managed accordingly. Grazing winter wheat with stocker cattle does appear to be possible and still maintain profitable yields. More information will be forthcoming as it is made available.