Assessing and Improving Forage Utilization and Management

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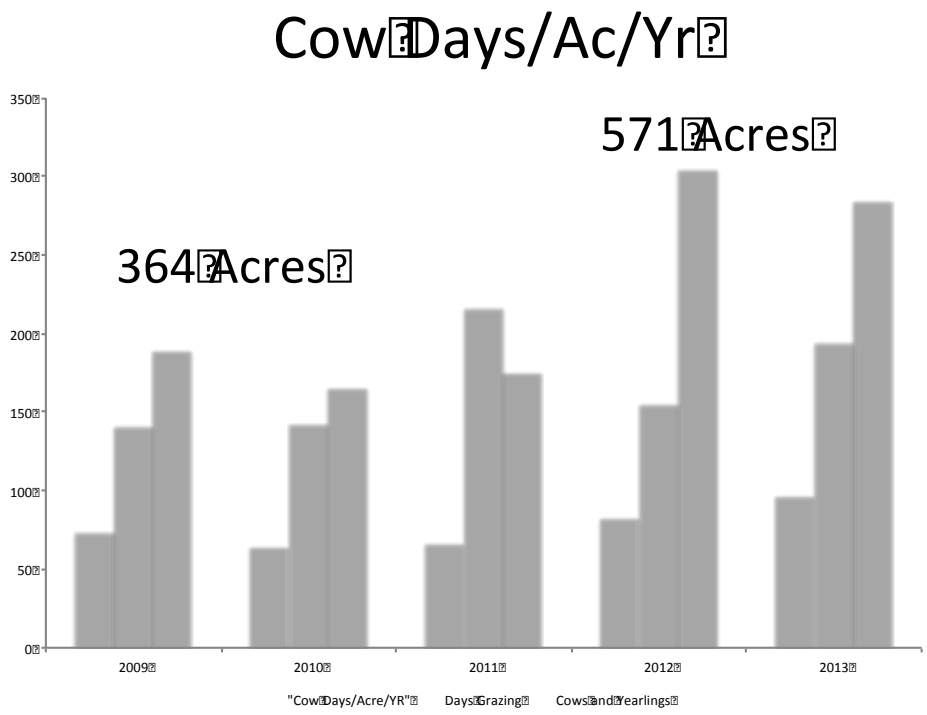
Introduction

In 2010, Lake City Research Center altered fifty years of management in order to more aptly take advantage of the bountiful forage growing potential of N. MI. Primary changes that took place on the farm was implementing an intensive rotational grazing scheme. Further, we elected to fence our hay ground and graze this more often. While the farm does put up some hay, we have elected to graze more pasture and purchase a majority of our winter feed.

Performance Updates

Figure 1 demonstrates the changes in our management along with the improvements in utilization.

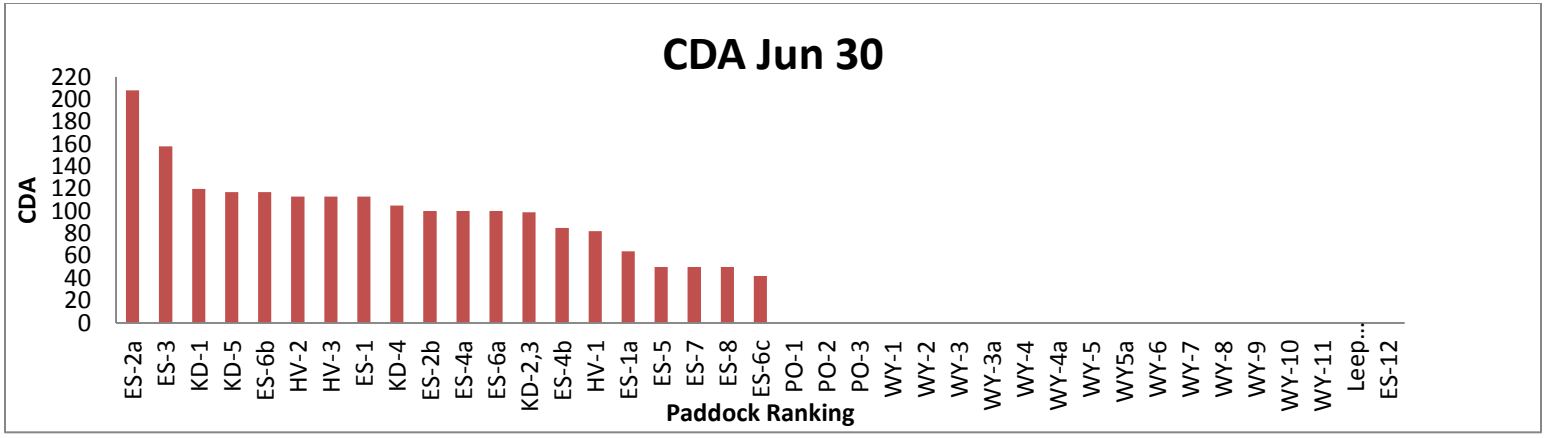


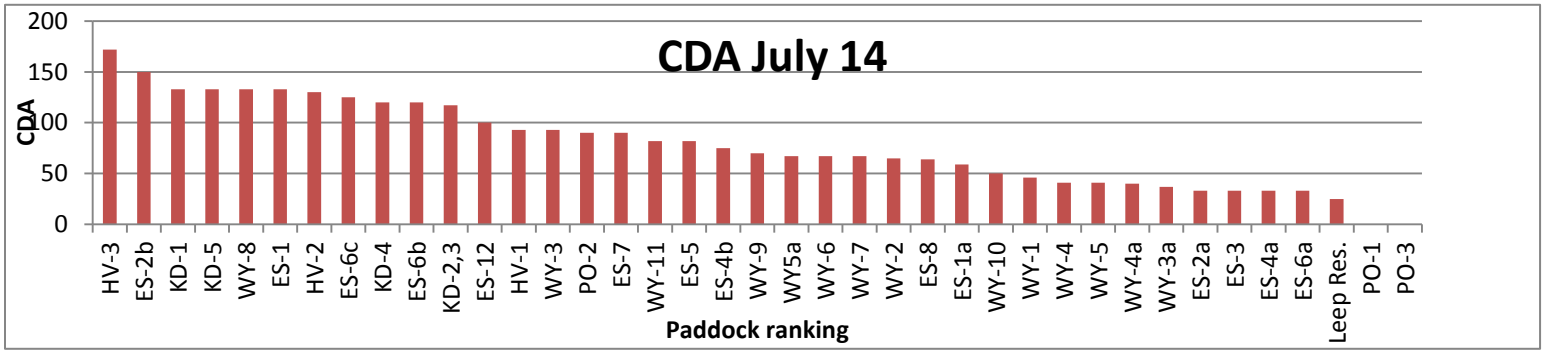
The green bar represents the overall cows and yearlings that we maintained on the farm. Therefore, in 2009 we maintained 190 incremental units of cows and stockers. In 2013, we maintained 285 incremental units. This was accomplished in a two fold way. First we extended the acreage we were grazing and not just using for hay harvest. The adding of the 200 acres also allowed us to increase the overall land. However management also made a huge difference. The blue bar represents the overall utilization of forage in a term we use at the farm, "cow days per acre" (CDA). This term represents a 30 pound forage intake increment. Therefore in 2009, we were essentially harvesting around 75 CDA across the entire farm. In 2013, we harvested 100 CDA or a 25% improvement. This is due to management and maintaining forage inventories and moving cattle on a daily basis. It is true, we can inherit a minimum of 25% of a new farm just by

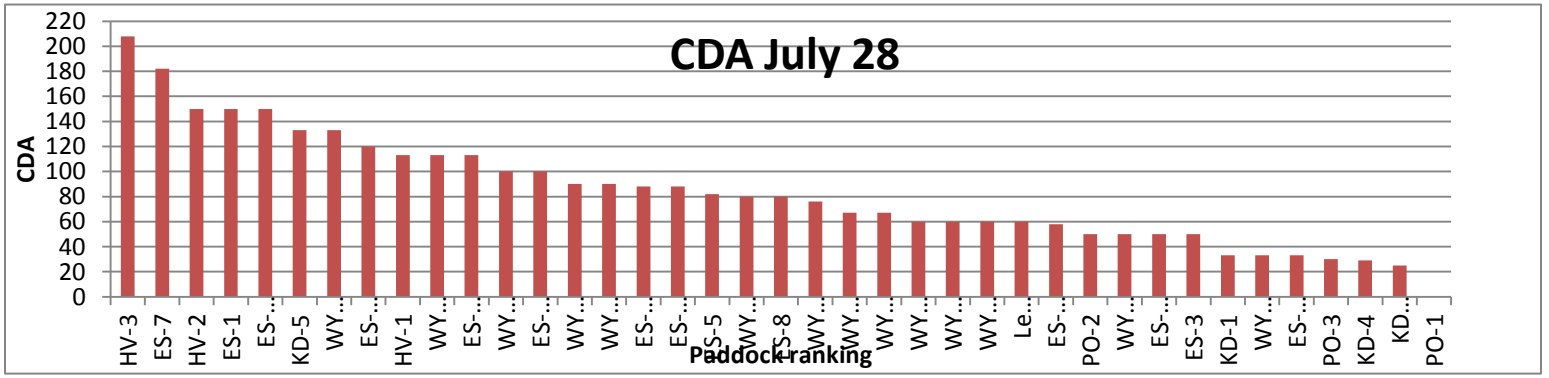
rotationally grazing. Also, the red bar in the figure represents the days spent grazing. In 2013, we grazed for approximately 185 days or just slightly over six months. As you are aware, this region has had unseasonably dry weather for the last two years. So our overall goal is to graze a minimum of 210 days, which was accomplished in 2011 under lighter carrying capacities and more ideal precipitation. In 2014, we are continuing to manage somewhere in the 300 animal unit area on the 571 grazeable acres. We hope to continue to gain higher utilization and graze through December this year.

Grazing Wedges

One way we are hoping to gain great utilization of our forage resource is through more accurate and updated forage inventories. The estimated dry matter per acre are then put into mathematical equations that give us updated forage mass on our different pastures. These can be seen in the next series of figures. Each pasture is given an estimated CDA which allows us to see ongoing level of stockpile the forage is gaining. We use 80 CDA as a beginning point to graze. Having the up to date forage inventories now gives us an accurate path on which pastures we should head next to versus just rotating in a predictable rotation. By grazing the forage at the peak combination of quality and quantity we will more aptly direct which production group grazes where and know our overall pasture utilization from year to year.


CDA Jun 30
CDA
220
200
180
160
140
120
100
80
60
40
20
0
ES-2a
ES-3
KD-1
KD-5
ES-6b
HV-2
HV-3
ES-1
KD-4
ES-2b
ES-4a
ES-6a
KD-2,3
ES-4b
HV-1
ES-1a
ES-5
ES-7
ES-8
ES-6c
PO-1
PO-2
PO-3
WY-1
WY-2
WY-3
WY-3a
WY-4
WY-4a
WY-5
WY5a
WY-6
WY-7
WY-8
WY-9
WY-10
WY-11
Leep...
ES-12
Paddock Ranking


CDA July 14
CDA
200
150
100
50
0
HV-3
ES-2b
KD-1
KD-5
WY-8
ES-1
HV-2
ES-6c
KD-4
ES-6b
KD-2,3
ES-12
HV-1
WY-3
PO-2
ES-7
WY-11
ES-5
ES-4b
WY-9
WY5a
WY-6
WY-7
WY-2
ES-8
ES-1a
WY-10
WY-1
WY-4
WY-5
WY-4a
WY-3a
ES-2a
ES-3
ES-4a
ES-6a
Leep Res.
PO-1
PO-3
Paddock ranking


CDA July 28
CDA
220
200
180
160
140
120
100
80
60
40
20
0
HV-3
ES-7
HV-2
ES-1
ES-...
KD-5
WY...
ES-...
HV-1
WY...
ES-...
WY...
ES-...
WY...
WY...
ES-...
ES-...
ES-5
WY...
ES-8
WY...
WY...
WY...
WY...
WY...
WY...
Le...
ES-...
PO-2
WY...
ES-...
ES-3
KD-1
WY...
ES-...
PO-3
KD-4
KD...
PO-1
Paddock ranking