Early Weaning May Not Always Have to Be the Answer

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I have been on the job all of 45 days and have learned quite a bit about the current conditions New Mexico producers are facing. When pondering the topic of this newsletter, I struggled with what I could offer at this point to be of any real assistance. The proverbial magic pill, so to speak. Sorry folks, but that is not in my current bag of tricks. What I can offer is something to think about. I along with the Kansas State Livestock Extension Specialist, Dr. Sandy Johnson, conducted a preliminary trial last summer as a result of the drought. As I talked about at this year’s NMCG summer meeting, there was a challenge and we created an opportunity from that challenge. In the end we learned some things that may be helpful to producers in similar situations.

But first a little background. I managed a cow herd as part of my duties in my previous job. We calve in the months of February and March. We start our breeding season the first or second week of May. Approximately two weeks after breeding the cows AI, due to the drought; our feed source changed from decent Sudan hay (cane hay) to Conservation Reserve Program (CRP residue hay). We were basically on a winter feeding program of 4% crude protein hay and a 32% protein supplement in May. Feeding cows in peak lactation this type of ration resulted in severe and rapid weight loss. Within 30 days they had dropped two body condition scores; with the first calf heifers suffering loss even more dramatic weight loss (figure 1). And based on the calves’ appearance, the cows had all but quit lactating. At our 30 day post A.I. pregnancy check, only 25% of the cows were pregnant.

Being an educational institution, we saw this as an opportunity to learn from our situation.

We decided to do an early weaning comparison of calf performance, cow intake, and body weight recovery in the cows. We split the cow herd into two groups with an even distribution of cow age between the two groups (early wean EW and normal wean NW). Because my primary goal was to try and salvage what was lost, once the new annual budget kicked in (a limitation some may relate too), I was finally able to increase the energy and protein of the ration by incorporating wet distillers grain at 25% of the total diet, with the...
remaining portion being in chopped CRP hay. To measure intake, we kept all the cows (from both treatments) in one pen and utilized the Grow Safe Feeding System®(Figure 2). This is a piece of equipment that can individually monitor a cow’s as fed intake on a daily basis through electronic ID technology. We collected intake data on the cows from July 10th to our traditional weaning date of the first part of October. We weighed all calves at the initiation of the trial, and did our version of fence line weaning; with the early weaned group. The early weaned calves were also vaccinated at the time of weaning. The calves still on the cow were provided special access to feed, so they wouldn’t skew the intake data of the cows (Figure 3). All the calves were weighed again on day 119 of the trial. Cows were both weighed and given a body condition score at the beginning and conclusion of the trial. It has been fairly well documented that early weaning can result in reduced intake and quicker body condition recovery. What has not been well studied are intake trends in cows in extremely poor condition. In addition, there has not been much work done on individual intakes of mature cows through individual intake systems. We felt fairly confident we were not going to find any ground breaking discoveries about early weaning, but as it turns out there were some intriguing results.

In terms of body condition recovery, early weaned cows recovered moderately more than the normal weaned cows (BCS = 4.7 vs. 4.5, from a beginning average of 3.75). However, the two year old cows in both groups struggled to return to a healthy body condition by the conclusion of the trial; with only a ½ score change vs. a full score change in the cows. Dry matter intake in the early weaned cows, though lower, was not significant (Figure 4.)

![Fig 4. Dry matter intake of early weaned (EW) and normal weaned (NW) cows.](image)

When we applied the economic implications (Table 1.) of early weaning, it built a scenario that producers may consider before deciding to early wean as a quick fix. The normal weaned calves still offered better returns, despite the added feed cost of the dam. In addition, since the early weaned group did not eat significantly less than their normal weaned counterparts, the advantage of early weaning for the cow was minimal.
Table 1. Net income of Early Weaned vs. Normal Weaned calves.

<table>
<thead>
<tr>
<th>Item</th>
<th>Early Wean</th>
<th>Normal Wean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaning Weights (lbs)</td>
<td>351</td>
<td>518</td>
</tr>
<tr>
<td>Income Per Calf</td>
<td>$552.61a</td>
<td>$643.10a</td>
</tr>
<tr>
<td>Feed Cost - cowb</td>
<td>$26.74</td>
<td></td>
</tr>
<tr>
<td>Creep Feed – calf</td>
<td>$32.67</td>
<td></td>
</tr>
<tr>
<td>Net Income per calf</td>
<td>$552.61</td>
<td>$583.70</td>
</tr>
</tbody>
</table>

a  5-yr KS weight average price 350 lbs calves for August ($157.44/cwt) and 550 lbs in October ($124.15/cwt)

b  7.8 lbs more as fed intake in the normal weaned cows than early weaned x 77 days x $0.045/lb feed, calf creep feed for the normal weaned calves = 9.53 lbs/day

Though this study warrants repeating, the initial results indicate cows that are very thin have quit lactating and are simply eating to regain lost reserves; whether they have a calf on their side or not. That may be one of the reasons we did not see a significant difference in intake between the two groups. So, the question comes down to economics. If there is no real advantage to the cow or the grass for early weaning, is it necessary? That may be a risky statement to make without further study, but I don’t believe anyone is in the business to raise 250 lbs calves.

It is very difficult to mimic real life situation in a research setting. But research does provide information that can lead to potential solutions to help producers in the long run. Financially, will you be better off keeping the calves on the cow? This project suggests yes. Will you be saving or stretch your grass significantly with early weaning very thin cows? This study suggests maybe not necessarily. However, you will improve the longevity of your young cows by weaning them early when feed runs out. Realizing for some producers in New Mexico there is simply no feed for cows or calves, selling pairs is their only way to stretch their grass. As difficult as a decision it may be, those young cows currently carry the highest value, and may be the next group to sell as pairs, minus obvious culls.

So how did our drought story end? Well we had a 90% conception rate (a little below our normal) and a normal calving season; staying within our February/March time frame. As expected, the greatest percent of the open cows were the two year olds. The majority of those very thin cows, however, bred in the first cycle post AI. That contradicts what much research has shown about body condition and reproduction. But that is for another article.

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