

Integrated Production Systems to Finish Cattle

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The overall theme for this year's short course is "Preparing for the Next Decade: Trends, Tools and Technologies". Thus my goal is to get you thinking about the upcoming decade with regard to the potential for finishing cattle on your own operation rather than sending them over a thousand miles away to accomplish this task. Certainly, the current trend for the U.S. food consumer is to take more interest in where and how their food is produced. My goal is to discuss the various tools and technologies that we can employ to take advantage of this trend, such that your operation has a better opportunity for profitability.

The subtitle for this portion of the program is "Can we pasture finish beef?" Yes. Is it for everyone? No. What are the issues? They are varied and numerous. Let us discuss a few of the most important ones. First of all you need to establish what your goal is. Over the last several years I have visited with numerous beef cattle producers and very few of them have a definable goal for their operation. It is imperative to have a goal so that you can plan for the future. It might also be noted that the goal may not be rigid. It can have flexibility. In fact, it needs to have some flexibility in order to adjust to the constant change we are confronted with.

Assuming that your current status is a cow/calf producer that markets weaned calves, then to convert to selling finished calves you will most certainly need to reduce the size of your cow herd. If the entire calf crop is going to be grass-finished on the farm/ranch then about half of the cows will need to be liquidated to ensure adequate carrying capacity. However, it may be that you are more interested in pasture finished whereby the calves are actually fed a grain-based feed while on a pasture. Obviously, this will require less of a reduction of the cow herd.

The next major consideration with this type of endeavor is to ask yourself the following two questions – "What do I enjoy doing?" and "What am I capable of doing?". I have observed several producers enter into the direct marketing aspect and find that they do not enjoy it or that they are not good at it and thus the entire system fails. They enjoy managing the cattle but have difficulty in dealing with the customer. This is a very important point that deserves much consideration. If you have to hire someone to conduct the marketing then the profitability potential begins to evaporate.

Once you have decided that you can deal directly with the customer the next challenge is to know what your customer wants. It is my opinion that the average customer doesn't really know what he or she wants. They are certainly not in tune with the absolute definitions of grass-fed, pasture-finished, natural, etc. More than one survey has indicated that approximately 25% of the population prefers grass-fed flavor. Many people simply want locally-raised from someone they feel that they can trust and have a relationship with. Let's discuss a truly grass-fed production system versus a pasture-finished system.

For the purposes of this discussion grass-fed refers to the animal being produced entirely on forages and while it was a calf, milk from its dam. For pasture-finished we will refer to a system of feeding a concentrate to cattle on pasture. In this case they are receiving the majority of their nutrients from the concentrate. In both situations, we are marketing beef directly to the consumer.

All the data indicate that grass-fed calves will have a lower dressing percent when compared to grain-finished calves. Generally, grass-fed cattle will have a dressing percent of 56-57 while grain-fed will be 61-62 percent. For

every 1,100-pound calf that you slaughter and market that is a difference of about 50 pounds of carcass weight. In terms of dollars and cents, if a carcass half is marketed at \$2.50/pound from a grain-fed calf then the grass-fed half would have to be marketed at about \$2.70/pound to make up for this difference in dressing percent.

Another big factor to consider is that on a grass-fed system there will be several periods throughout the year when forage quality and/or quantity will become limiting. With a pasture-finished system these deficiencies can be eliminated by the supplemental feed. There is simply more predictability in a pasture-finished system than a grass-fed system. The grass-fed system is extremely dependent on the weather. Even though we have a mild climate in the southeastern U.S. we still experience numerous days throughout the course of a year where the weather limits the grass system. I think that a grass-fed system should incorporate some use of haylage to get through these inadequate times. Much thought and planning should be given to the total forage system before implementing a grass-fed finishing program. The details of such a program will be addressed by other speakers in this session.

To the same extent that a grass-fed system requires excellent grazing management skills, a pasture-finished system requires excellent bunk management skills. In order to keep cattle gaining at a steady rate it is imperative that they do not go off of feed because of poor nutritional management. It is easy for an inexperienced manager to feed too much concentrate too quickly and elicit acidosis when starting calves on a concentrate feed. The fact that they also have forage to graze helps to reduce this risk but caution should be exercised.

In most of the direct-marketing endeavors that I have knowledge of the underlying premise is that the animals have received no implants or antibiotics (including ionophores). It is important to consider the pros and cons of these types of management decisions. It has been well established that growth implants will increase rate of gain in beef cattle. In numerous studies it has been

shown that a \$1 implant can result in 20 pounds of additional calf weight. Likewise, the use of ionophores can also increase rate of gain as well as improve feed efficiency, both of which have economic benefits. When we choose to implement production systems that do not use these tools then we need to recoup the diminished level of production by increased price for the product.

As you consider a production system that will allow you to finish cattle on your farm/ranch there are some key points to keep in mind. This discussion has already addressed the fact that it can be accomplished in more than one way. However, a few underlying principles are present no matter what production system is implemented. Regardless of the production system the goal should be to market as many of the calves as possible by 18 to 20 months of age, have genetics that fit the system, and do not compromise a tight calving season for year-round calving.

Whether or not the system succeeds or fails depends primarily on developing a customer base that prefers your beef. Having a majority of the calves finished by 18 to 20 months of age and having the correct genetics will go quite a ways toward producing beef that the customer base will be satisfied with. The earlier that the calves reach finished weight the better our insurance will be that the beef is tender. Likewise, we do not need a genetic type that produces undesirable carcasses (i.e., too big, too small, take too long to reach desired endpoint). There is certainly no best breed to use in pasture-finishing systems but we do need to select replacements and bulls that are in line with our objectives for producing a desirable product for the customer.

Another important principle that should not be ignored is a defined calving season. Many producers feel that if they are going to implement a production system where they finish their calves at home then they will need a year-round supply to market. The supply does need to be available year-round but that does not mean that a tight calving season should be discarded. In fact just the opposite is true. One

of the most important reasons for having a defined calving season is improved nutrition for the entire herd. Winter feeding is the single largest cost item in maintaining brood cows and it is impossible to provide adequate nutrition to a group of cows that are in all stages of production. In situations like this, a large percentage of the cows are underfed, a significant percentage are overfed, and only a handful are fed the appropriate amount. It is much more efficient to feed cows that have similar nutritional requirements (i.e., have a defined calving season). Another crucial benefit of having a defined calving season is that it allows for better observation and care given to cows at calving time. This in turn increases the number of live calves born which is another major economic factor in a cow/calf operation. Whenever the calving season is spread out over the entire year very little time is devoted to checking on newborn calves. The majority of these production systems involving direct marketing will rely primarily on selling frozen beef rather than fresh beef. Thus the year-round supply will be established by freezer space rather than a year-long calving season.

As was mentioned earlier in this discussion, on-farm finishing programs force you into being more than just a cattle manager. Along with duties in marketing the beef you will also encounter new problems associated with the slaughter and beef storage processes. One major obstacle in some locales is identifying a slaughter facility that meets your needs. In today's conditions it would be difficult to market any appreciable number of carcasses as halves and quarters on a local basis. However, I believe there is an enormous potential to market \$40 to \$50 worth of beef at a time in the form of "package deals". Obviously, to do this requires a different set of rules and regulations than marketing halves and quarters. Make absolutely sure that you do all of your homework in this area with regard to the various rules.

If you choose to market packages of beef in a frozen state then you will obviously need some freezer space. It is a significant cost item on the overall production budget to establish as well as maintain freezer space on

your farm. Likewise, there is also the chance of a power failure that could compromise several dollars worth of product. These are certainly issues that cow/calf producers marketing weaned calves will never give much thought to but are extremely important when you begin finishing and marketing directly from the farm/ranch.

It has been my objective to highlight some of the issues that deserve special attention if you are considering a pasture-finished production system on your operation. Many of the issues that I have enumerated would qualify as obstacles. However, keep in mind that there are potentially large advantages to implementing this type of system. First and foremost is the potential for a profitable enterprise. A few of the other intangible benefits are:

- Minimal health problems because all calves are kept on the same farm/ranch
- Pride in producing an end-product that consumers want and will pay for
- Knowing that success is because of what you did
- Potential to make a reasonable income from a moderate-sized operation

