

GRASS - THE NEXT CINDERELLA CROP

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Agronomists all over the United States are scanning the horizon for the next Cinderella crop to hit American agriculture. In the 1970's the Cinderella crop in much of the U.S. was the soybean, but today with fearsome competition arising in the Southern Hemisphere, the soybean looks more and more like the wicked stepmother to farmers who grow it. Corn, wheat, cotton, and rice are all in gross oversupply in the United States, and few expect a dramatic turnaround in the demand for any of those U.S. crops in the remainder of this decade.

I hope to be able to make a credible case that **America's Cinderella crop** for the remainder of this century is all around you. It is here and has always been here, and that crop **is grass**.

The Good Lord in his magnificent plan for the universe has deemed grass to be the ultimate climax crop in his universe. He absolutely will not allow a bare piece of ground. Grass cools the soils, tempers the fall of the raindrop, and heals and re-builds the soil, organic matter and nitrogen. Grass is the only crop we can grow that puts more into the soil than it takes out of it.

The stirring and tiling of the soil and the planting of monocultures is not found naturally anywhere on earth. These activities eventually destroy the organic matter God's grass crop carefully built in the soil and will economically destroy the farmer eventually. Without organic matter, the soil's life force of microbes dies, and when the life dies in the soil, crop residues will no longer recycle. Herbicides will no longer work and can actually do more damage than good. The soil has no water-holding ability and the soil will eventually literally blow in the wind.

In the Mississippi Delta, farmers are having to almost continuously run center pivot irrigators to grow cotton in a 60 inch rainfall area. The soil has so little organic matter that it can only hold one-half an inch of water in an area where the summer daily evaporative rate is one-third of an inch. The only thing that can break the death spiral for these farmers is to put this land back to grass for four or five years and heal the soil. Unfortunately, many of these farmers were able to get a degree in agriculture with virtually no understanding of soil science or ecology. They, in their ignorance, still believe that cotton is king and grass is something you try to kill.

These farmers, who are going broke by the bushel basket, will tell you that their land is

too good for grass and yet any soil scientists can tell them that their land has been rendered virtually worthless by their continuous cropping. Research in Georgia shows a virtual doubling of yields for any subsequent crop grown behind five years of sodgrass, and yet 75% to 80% of the chemicals used in American agriculture are sold to kill grass.

There is a reason why these farmers are going broke and it has less to do with prices and export markets than it does with ignorance of the basics of soil science. Why was this allowed to happen? The base reason was money. The whole research and communications

establishment of American agriculture sold out to the boys who had money, which were the chemical and fertilizer companies. Farm magazine publishers realize the big bucks were those double-page spread herbicide ads. Researchers realized the big bucks were in ridiculous product A versus product B testing, rather than trying to figure out how not to use or need either product!

Any of you who get any free farm magazine, or any farm magazine with a ridiculously low per year price need to realize that magazine is working primarily for his advertisers. You also need to realize that a lot of the research information you read was bought and paid for by some chemical company. I am not saying that any of this information is false, but that all of it is skewed toward the use of greater petrochemical inputs rather than rotation, diversification and working in harmony with nature.

I don't have to tell any of you what has been the result of this shift to petrochemicals and high capitalization. You can see the results in your community as well as on the evening news every night. Anyone who bought this line, from the Federal Land Bank to International Harvester, is sick and near death.

The reason people are starving in Ethiopia is because a society built on grass and nomadic sustainable grazing bought the whole boat of modern agriculture and shifted to unsustainable rowcrop agriculture. There has never been a civilization in history that has been economically sustainable based around rowcrop agriculture, whereas civilizations based upon grazing have existed for thousands of years.

It is not hard to sell the idea that rowcrop farming is not profitable today; what is difficult is to sell the idea that grass is probably the most profitable crop a farmers can grow in 99 cases out of a hundred. Our problem has been that we have not looked at grass as a crop and ourselves as grass farmers. Animals are merely our combines for the crop.

No rowcrop farmer would ever use a corn header to harvest wheat, and yet we mismatch animals and their environment with little thought. Too many of us describe ourselves as cowmen, sheep men, or stocker operators with too little thought about where our environment matches our animal decision.

In much of the United States, the grass-growing season is only 60 to 100 days long, and snow covers the ground for six months or more. Such environments do not lend

themselves to year around cow-calf production nearly so well as it does to seasonal stocker operations. In much of the United States, combinations of species and classes of animals offer a much better harvest than any one species or class. All of our grasses have seasonal protein requirements high enough to allow our grazing animals to breed, and our breeding seasons must mesh with these periods.

We have placed entirely too much emphasis on weaning weights and not nearly enough emphasis on genetically matching animals and their environments. For example, much of the Southwest is covered with brush, and yet there are cattle in Africa who can make up 90% of their diet from brush. It would be much more cost-effective to genetically adapt the cattle to the brush than to chemically adapt the environment to our present breeds of cattle.

Our customers, the American consumers, are telling us to route fewer animals to the feedlot and more to the hamburger stand. We need to allow every heifer we produce to have an chance to make it as a productive breeding animal that is better adapted to our environment than her mother. If she, in fact, proves she is so adapted, mama goes to McDonalds and daughter takes her place. Those who say we have too many cattle in the United States totally overlook the fact that we import one billion pounds of hamburger grade beef a year. That's a slaughter equivalent of the entire cowherd of Missouri, our second largest cow-calf state.

Our post weaning steer programs need to be referred for producing animals in the 850 to 1000 pounds category prior to being placed in the feedlot for a quick finish. Our critics point out that cattle are wasteful users of the grain resources of the world. Economists point out that cattle will never anywhere equal the feed efficiency of chickens, and both the critics and economists are right. However, if we place cattle on feed at this weight category, the total feed efficiency of grain to live-weight slaughter equals or exceeds that of poultry. I'm not going to overly worry about poultry competition until they breed a bird that can gain two pounds a day on grass. And as far as a waste of our grain resources, I am far more worried about our waste of grass resources.

The central plains area was originally a summer fattening range for yearlings driven up from Texas, and it worked extremely well as such. When we started shifting the post-weaning growing program from grass to grain, we created a huge under-utilized resource, and man hates to see a resource go to waste. So we expanded the only part of the cattle business left to grass....the cow. This set us off on the roller coaster we have been on for the last 35 years whereby the availability of grain rather than grass dictated the size of the cow herd. Every mouthful of grass a steer eats relieves the pressure to have that mouthful of grass eaten by a cow.

If we start routing cull cows to slaughter rather than heifers to the feedlot, and if we start growing all our steer production to 850 to 1000 pounds before placing them on feed, you can start to see that we could have a much better utilization of our grass resources

without that much increase in total tonnage of beef. It would also largely free us from the grain market bondage. We do not have cattle to eat surplus grain. We have cattle to harvest grass.

Let's look at the pieces of our puzzle so far. We've got a crop that God will grow for free. We've got a harvesting machine that runs on sunlight and water, but we've had one key element missing. That was the ability to efficiently control and steer our harvesting combine. And it was this one missing element that allowed rowcrop farming to be more profitable than grazing.

Consider for example, the economics of growing a crop, but having a combine aimlessly churning through the field during the entire growing season. It would be bad enough if this combine were only loosed to do its damage when the crop was ready to harvest, but I am talking about a combine that wanders aimlessly over the crop from the day the first seed is planted. Picture that, please. Can you imagine how much of the crop would be crushed by the wheels of the combine compared to how much would wind up in the hopper?

While this sounds totally ridiculous in the context of a soybean or corn crop, it is precisely how we have been attempting to harvest our grass crop. Our cows only harvest approximately one-third of the grass we grow with continuous grazing.

Our biggest problem in grassland farming has been that we have been attempting to grow more grass than attempting to more efficiently harvest what we already grow. It is on this one key missing piece of the puzzle that all of our grassland economics have foundered, and it is on this one key piece of the puzzle we are starting to separate the men from the boys and the winners from the losers in the grass business.

In my opinion, the greatest technological breakthrough in the history of the cattle business has been these New Zealand electric fences. As a boy, I grew up on a commercial cattle ranch, and I hated every minute of it. Looking back, it was not the cows I hated, it was those damned barbed wire fences that were always needing repair. I recently visited a man in Alabama with 9,000 head of cattle and not one fence on his place was more than a one wire New Zealand style electric fence.

Fencing costs, which were the major capital cost of a grassland farming operation just a few years ago, are a minor expense now. Now for the first time, we can start effectively controlling that combine on our crop. Just like the rowcrop farmers, we can let our crop get to its optimum harvest stage and then whack it off with our combine. Then, just like the rowcrop farmer, we can keep our combine off the crop until it is at its peak, and whack it off again.

Like the cotton farmer, we can also pick and scrap. We can let our yearlings pick the prime crop and the cow follow them and scrape the rest. With control over our cattle, we

can start effectively harvesting alfalfa, johnsongrass, orchardgrass and other extremely high quality forages that were previously only harvestable as hay.

Rather than going to all the trouble of harvesting corn as silage, we can grow a corn crop, allow it to stand and dry down until we need it in the winter, and then take one of the reel-type eclectic fences and ration off only as much of the corn crop as our yearlings can eat that day. In effect, we can combine a rowcrop with animals just like a grass crop.

Want to fatten steers on grain sorghum? Stagger plant your crop and strip graze it while the grain heads are still in the soft, green, doughy stage. After you've gone across the crop like this approximately two times in much of the U.S., you'll still have an excellent standing hay crop to winter your dry cows on. Virtually any crop we can harvest with an oil-burning, iron combine, we can harvest with a solar-powered animal combine.

I hope I have shown you that all the pieces of the puzzle are finally in place. All we need now are grass farmers willing to put these pieces together in their most optimum form for their particular area. If you'll forget the past, ignore prejudices and old wive's tales about cattle and grass, and if you'll start to think of grass as a crop and animals as combines, I think you too will start to see that grass is indeed America's next and most enduring Cinderella crop.