

THE BUSINESS OF SOD PRODUCTION

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The Kentucky Agriculture Statistics Service surveyed Kentucky's sod production in 1989 and determined that we had 4900 acres of sod being produced in Kentucky for transplanting purposes. Sod producers reported annual gross sales of \$3.2 million with 1800 acres harvested. Obviously this is a small crop in Kentucky and growth has been minimal the past 10 years.

The demand for cultivated turfgrass sod is somewhat variable, but it is highly dependent upon new housing starts. When the economy is good and housing starts are increasing, the demand for high quality sod is great. However, when housing starts decline (either on a statewide or local basis) then competition for sales increase, sale price decreases and the developer or installer accepts cheaper sod, even pasture sod that may cost very little. Everyone loses!! Unfortunately the quality sod producer loses most because he must continue to mow weekly or bi-weekly, fertilize periodically, maintain near 100% weed control, etc. A few months of extra expenses and he then must also 'fire sale' his quality sod in order to cut expenses. Then what does he do? Does he seed back or investigate another crop? This difficult scenario has intensified in recent years as some farmers have initiated sod production as a way to replace lost tobacco income. This always skews supply over demand and affects everyone involved.

There does not appear to be any major export or import of sod from/into Kentucky. Surrounding states such as Indiana, Ohio and Tennessee have a much larger sod production acreage than Kentucky. Since the transportation of sod is very expensive, these states are not likely to heavily influence our Kentucky market. In other words, we are presently growing the amount of sod that we need. A few new producers is all it takes to cause a glut on the sod market.

Almost ½ of our sod production in Kentucky is Kentucky bluegrass. We have an increasing acreage of tall fescue and a few acres of bermudagrass and zoysiagrass. Because of the high cost of equipment to plant or sod (especially big-roll sod), only a few acres of bermudagrass sod are being imported from Tennessee and Indiana.

Sod is normally marketed by three methods. Each require differing amounts of labor. Certainly labor and equipment differentiate the three methods. In each case, the farmer plants and grows the sod to maturity. Then he:

- (1) Sells the sod to a sod broker at a 'set' price per acre. Then, over a period of weeks or months, the farmer continues to maintain the sod, i.e. until the broker has harvested all the purchased sod and removed it from his farm. This method was most common 10 years ago, but sod brokers (installers) are almost non-existent at the present time.
- (2) Purchases harvesting equipment and pallet loading equipment and upon receiving orders from landscapers, developers, lawn service companies, etc., he then cuts and loads the customers trucks. This method accounts for an estimated 25 % of sod produced in Kentucky.

(3) Harvests, transports and installs the sod, excluding all middlemen. Within the past 10 years, this has become the major marketing method, accounting for about 70% of sod produced.

Depending on a lot of factors such as sod quality, kind, location of farm, supply and demand, cost of labor, available equipment, etc. the profit is quite variable. A typical bluegrass sod in Kentucky might sell for :

- a. \$1200/acre, i.e. equivalent to \$0.27 / sq yd . This is unharvested sod, in the field.
- b. \$3825/acre, i.e. equivalent to \$0.85 / sq yd. This is sod harvested and loaded in the field.
- c. \$7875/acre, i.e. equivalent to \$1.75 / sq yd. This is harvested sod that is installed on site.

It is evident from the above that the cost of labor, harvesting, and transplanting far outweigh the cost of producing the sod to maturity. In 1989, Dr. Forest Stegelin with the Dept of Ag Econ at UK, estimated the cost of growing and harvesting 100 acres of sod at about \$1888 per acre, or about \$0.42 per sq yd. Assuming that these costs are at least 50% higher now, this would increase the cost per acre of sod to about \$0.63 / sq yd. Therefore, at the suggested sales price above (see b.) , the farmer would net about \$0.22 / sq yd, or about \$990 per acre. A profit of \$990 per acre sounds good, but like other crops, there are a lot of risks. Examples are drought, poor establishment, serious erosion, flooding, mower damage, perennial weed invasion, market decline, oversupply, etc.

Another problem is that the farmer is limited to seeding from about August 15 through September, about six weeks. Seedings made in the spring and summer are seldom successful. Therefore, if you plant Ky bluegrass in September, then start harvesting the following September or October, you must wait until the following September to seed again. Therefore each crop requires an average of two years. Therefore, at \$990 per acre as calculated above, the farmer would only net \$495 per acre per year.

One should consider diversification of a farm into sod production only if one has an established market, sales contract, etc. The demand must be known because the capital cost of harvesting equipment alone may well be \$75,000 or more. Depending upon the market, a farmer may need at least 100 acres in sod production in order to justify the purchase of such equipment.

Sometimes, depending on the thickness of cut, cultivar, time of harvest, age of sod, etc., some bluegrass will regrow from residual rhizomes and another crop may be harvested the following year(without seeding). However, because the soil gets very compacted, this is seldom successful past the second harvest. Additionally the cost of seed is only a small portion of the cost of production.

The best market for sod always appears after a drought year, i.e. 1999. Because most sod producers cannot irrigate, they tend to lose some acreage of sod or do not get new acres planted. This causes some temporary shortages, and developers often encourage farmer friends to start producing sod to supply their business. That often sounds good, but they may only need a small amount of sod and when it comes down to their actual purchase, they almost always buy on price- and the new farmer may be left holding sod that is increasing in maintenance expense.

If not maintained , the sod is highly perishable.

In summary, when considering starting a sod production operation just remember that you will be competing in a market that has an established supply of sod and the demand is quiet variable. To compete, you will have to produce better quality than the competitor and you may have to lower the price.