Reducing Tobacco Dependence

Bobby Ham
Ham Farms

I appreciate you having me here today. It is quite an honor to be here. I would like to get started by first saying that I am from Greene County and that Greene County is one of the most tobacco dependent counties in the United States. As a matter of fact, it ranks second in the United States, and first in North Carolina. I would like to start by giving you a little background on our farming operations (see Figure 1). We started farming in 1975, with a 300-acre tobacco, corn and soybean farm. By the mid 1980s we had reached our peak in acreage, with about 1,000 acres of tobacco and over 4,000 acres of row crops. Today our farm has been reduced somewhat in size, but we still have around 3,000 acres of vegetables and 2,000 acres of cotton. I am not going to go over each one of these enterprises right now, because that would take up too much of my allotted time. They do, however, make an interesting story. Some things we have tried over the years have been successful, and certainly some have not been so successful. It has taken several years of trial and error to get to where we are today.

1975 – Tobacco, Corn, Soybeans
1978 – Swine feeder pigs
1980 – Pickles, Swine finishing operation
1985 – Sweet Potato production
1990 – Specialty Pepper production
1993 – Cotton, Cotton Gin
1995 – Sweet Potato packing operation
1997 – Pepper grading operation
1999 – Cabbage, Watermelon production
2001 – Greens, Squash production

Figure 1. Ham Farms, Greene County, North Carolina: Operational Overview

Early on when I started farming, I tried to identify some clear goals to pursue. One of those goals was to reduce our tobacco dependency down to around 25% of our gross farm revenues. In Greene County that is a pretty tough task. But, I think you will see in Figure 2 that with the help of a major recent reduction in tobacco quotas we have reached that goal. In 1981, 70% of the gross revenues on our farm were from tobacco. By 2001 it had been reduced to below 20%, with sweet potatoes becoming our main crop at close to 50%—about half from processing and half from the actual growing of the potatoes.

Figure 3 shows one of our first ventures into processing vegetables. In 1982 we started buying pickles for Dean Foods—at that time they were actually Cates Pickle out of Faison, North Carolina. We would break pickles down into nine different grades and sizes. This allowed the processing plants to take the pickles straight into the plant and process them. This photo depicts people culling out the bad product. We shipped starting in late May—about 20 loads of pickles per day through mid-July. At the time we installed this particular operation, we also added a cooling facility with forced-air coolers, which I designed myself (with the help of Mike Boyette from N. C. State University). The coolers were unique in that they could cool twelve tractor-trailer loads of pro-

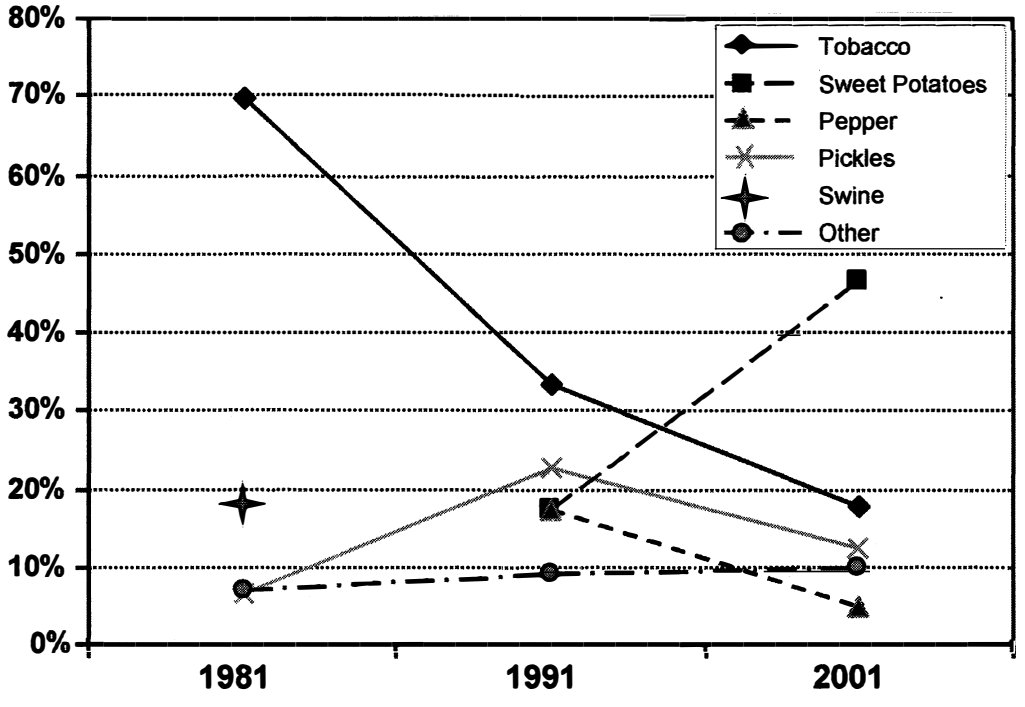

Figure 2. Ham Farms, Greene County, North Carolina: Value-added Farming

duce from field temperatures to around 40 degrees F every four hours. Developing the cucumber operation led us into a lot of relationships that have continued to help us over the years. When you are processing a product, one of the first things you realize is that you need an efficient way to get rid of all the off-grade products, and processors are excellent means of doing that. With our relationship with Dean Foods we were able to get into specialty peppers —which in the mid 1990s we shipped all over the country. Unfortunately, with increasing volume we had a lot of souring of our hot peppers. Also, hot pepper prices sank very low. So, we made a strategic decision to pull back on that initiative. In the last couple of years, however, that business looks to be picking back up. One of the big issues is that, as we have gone along, we have continued to learn how to do everything that we do better. This has made us gradually more competitive across the board.

Sweet potatoes are now the main crop that we grow in Greene, Lenoir and Pitt Counties. Today we process about 4,000 acres of sweet potatoes at our facility in Greene County. We buy from area farmers, although the bulk we grow ourselves. We control the process from planting to shipping. That is certainly one of the key selling points in our operation. You see in Figure 4 the small plants that we get from NC State University. That is our B-14 clone, our replicable seed stock. What we do is pluck the eye out of the core of the potato that we seed, and grow it in a test tube to be sold. We take the initial plant we receive from the university and multiply it—grow our own seed on the farm while also supplying it to our growers. We do not sell seeds. This allows us to effect strict controls over our growers and ensure that the quality of the potato that we run through our facility is the very best in the world. It is about a two-year process to produce a

field-grade commercial potato.

We also pride ourselves in dealing directly with the people who sell our produce to the retail customer. That brings to me to one of the most important aspects of produce processing. A lot of people can grow a product, but marketing the product is key to a successful business—whether it is agricultural produce or any other business. You have got to have a market before you can produce a product. We think the key aspects of our marketing program are: maintaining a year-round supply; contracting on an annual basis; maintaining strict quality controls; offering packaging options; and providing timely and comprehensive customer service. We only started marketing sweet potatoes in 1995, so we are fairly new to the industry. I believe this year approximately 40,000 acres in North Carolina will be planted in sweet potatoes. Looking at my numbers, that gives me approximately a 10% market share.

Our newest acquisition is a storage facility in Greene County. It is going to allow us to consolidate our storage. This, along with our facility on our farm site—which is about half the size—will bring us to a storage capacity of about a million and a half bushels. Forty percent of that capacity is climate controlled—around 400,000 square feet. Processing sweet potatoes is a very labor-intensive business. We have to buy storage bins; we have to have the building; we have to have the capital to hold these potatoes on a year-round basis because we sell potatoes twelve months of the year. If things work as planned, we will never really run out of potatoes. As a first rate supplier, that is the worst thing that can happen to you—run out of potatoes. Now, having gone to a complete, cured crop the emphasis is on good storage and good equipment to be able to store this product year round.

We sell very little product in North Carolina, and we don't try to impact local markets. Most of our product is shipped overseas and across the United States. We contract with Wal-Mart, our largest customer, on a year-round, set-price basis. We ship tractor-trailer loads of potatoes to all their locations east of the Mississippi River, with the exception of Louisiana and Mississippi, which grow their own potatoes and are supplied by our competitors. We also have several local restaurant chains and food service companies with which we have the same type relationship. These stable, contractual relationships have been a key to allowing us to grow our markets at a rapid rate

In order to maintain these relationships we must have good quality control—and to keep

Figure 3. Ham Farms, Greene County, North Carolina: Pickling Cucumbers

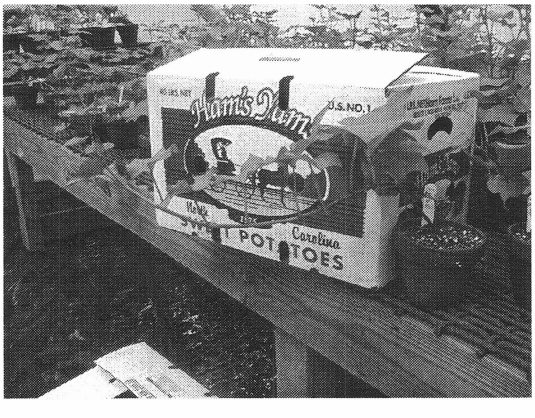

Figure 4. Ham Farms, Greene County, North Carolina: From the Seed to the Consumer

improving quality controls. Just this year we have made another major investment—moving from a hand-packing operation, with very limited sizing capabilities, to state-of-the-art automatic graders (see Figure 5). While there are a few more graders like this in the state of North Carolina, I don't think our competitors in Louisiana and Mississippi have anything like this. We do, however, trump even our North Carolina competitors/colleagues by having the first North Carolina grader with a color-grading capability. We can grade by weight, length, diameter, and now also by color. What you see in Figure 5 are digital cameras that continuously monitor throughput, transmitting that data to the controlling computers. This innovation has meant a major reduction in both labor and basic production costs. During Thanksgiving this year, for instance, we were able to run around 1,250 bushels per hour. This 'video-capable' grader allows us, instantaneously, to grade by sophisticated parameters such as length-to-width ratios and the subtle aspects of potato shape.

Food safety is becoming an increasingly important issue when it comes to capturing market. Our commitment to food safety is absolute. We have the ability to trace our product back to the field. We can tell our buyers which

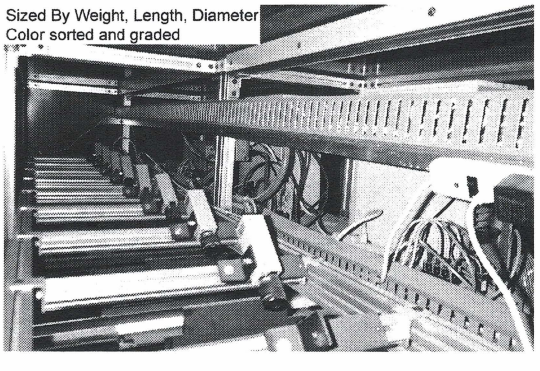

Figure 5. Ham Farms, Greene County, North Carolina: Quality Control Grader, Sorts by Length, Weight, Diameter and Color

workers actually harvested a given crop, and on what day in what field. We can tell them all the chemicals that were or were not applied to a given batch of potatoes. This is all done through computer programs that are connected to field-deployed hand-held devices. It is amazing what you can do with a little hand-held computer out in the field. This gives us a great trace-back program and an excellent recall program. On each package we ship from our plant, we actually print a lot number that identifies it on each 40 pound box. This is a huge asset for a food service company that is selling potatoes on a one-box basis. From an environmental standpoint, we use as little chemical input as possible to be able to provide a good and safe product, and we always work to ensure that the chemicals we use are environmentally friendly.

We do a lot of custom labeling. We produce six-kilogram boxes that were designed for a customer in Israel. They act as a selling agent for us in the UK, the Netherlands and other parts of Europe. We ship from our facility in cold storage containers to ports in Charleston, and it arrives overseas in about 10 days. Israel is a producer of sweet potatoes, but Israeli growers are not able to produce enough to last on a year-round basis, so our relationship with them has supplied us another market to fill, and allows them to do a better job meeting their customer requirements. We have other food service companies that we do special labeling for. We worked with one company to develop packaging that allowed the printing of lot numbers on all the boxes. This company was adamant that the lot numbers be traced back to a place on the farm. Since we were already well equipped to do that, with our information already in place, it was no problem for us to provide them with the service they required.

There is another labeling project that we are particularly proud of. Thanks to Sue Johnson-Langdon over at the North Carolina Sweet Potato Commission, who continues to supply us with high quality recipes and pic-

tures of the very attractive dishes that result, we were able to create beautifully attractive three- and five-pound 'convenience' bags for local grocery store customers. These bags are, of course, also boxed in 40-pound containers. We have found that changing the recipes once a week on these bags is a wonderful way to keep the sweet potato concept fresh in people's minds and to promote the industry as a whole. We also do tray packs, which are two to four potatoes to a pack. This dramatically extends shelf life on potatoes by minimizing bruising and handling damage. When we first started doing this, we packed some and set them on our desks in the sales office; we had them there for sixty days and we could not even tell that they had changed. It is an expensive process, and many people are not willing to pay the price, but for some people it's just the ticket.

We have acquired bagging machines. One particular machine from Spain allows us to pack in a mesh bag and apply whatever additional attractive packaging we choose. We use this, for instance, to apply Sue's recipes. We also insert the North Carolina Goodness Grows label inside each bag in order to promote North Carolina vegetables—a concept that appears to be really taking off. We have now had this machine for about 8 months, but we have only really started to exploit its capabilities during the past 30 to 40 days. The next item is our automatic box builder, which allows us to do 40 pound boxes, 6 kilogram boxes, 10 pound boxes and other specific sizes, using both plastic and cardboard stock (see Figure 6). Normally box builders will set up just for one style of box. We can change at any time to any of these different grades and go to a different box style to satisfy our customers—delivering a completely customized product.

With respect to customer service, we will do whatever it takes to satisfy our customers. In our operation, our customers are number one. Yes, we like to promote our own products and our own name and name brands, but such aspirations are always subordinated to what the customer wants. What we are trying to do are 'fill-in' orders for our regular customers—people who buy lots of sweet potatoes, but also want "a hundred boxes of this" and/or "50 boxes of that." What we do not grow ourselves we are able to bring into our cooling facilities from other growers to supply their needs. We also do specialty sweet potatoes, which are white. We are using our greenhouses to grow this 'boniato' potato for the Spanish market. We hope that within two years we should have adequate supplies to meet that marketplace, while also beginning to penetrate other markets. There is also a Japanese type of sweet potato, with purple flesh, and we hope to have that available on a volume basis in the near future. We sell organic sweet potatoes, as well. We have a grower who's currently growing organic sweet potatoes, and he and I work very closely together. There is a market for organic sweet potatoes, but it's very small at this time, and there's not a lot of room for expansion. This is something that a smaller farmer probably has a better opportunity to exploit—I don't see many buyers with demand for a thousand boxes of organic sweet potatoes at this time. While I think that market is growing, it's going to take some time to truly develop.

Our long-term goals are to continue providing more and more value in our existing

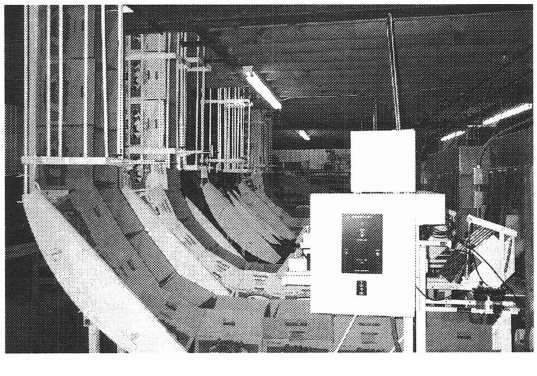

Figure 6. Ham Farms, Greene County, North Carolina: Automated Box Fillers

crops, while also diversifying somewhat away from sweet potatoes. We would like to get to the point where we can sell every potato that comes out of the field. That is a major struggle within the sweet potato industry—being able to move all the potatoes that we grow and harvest. The American consumer is accustomed to seeing perfect products lying on the shelf. We do sell to processors some of the 'off' products that we can't sell to the consumer, but we're looking into new marketing concepts. That has been a major impetus behind our bags. They also give us the opportunity to put some different sizes of potatoes in a bag—something different than the average housewife would pick up as she walks through the store. She will pick up the three pounds of potatoes in the bag and never really look to see what's in it. The product is just as good as the 'big' potato she would normally pick up. Now we are able to sell it as well as those big potatoes. It is just a marketing technique.

I think in the future there will be an increase in plastic, microwaveable packaging—particularly in the frozen food counter. I think that will provide a great opportunity for a lot of products. The white potato has moved into that arena, and I foresee the sweet potato moving into those types of products as well. You can put a sweet potato in the microwave, zap it for a minute or two, and you've basically got a baked sweet potato. The product I'm speaking of has been baked for twenty minutes, the proper way, and then frozen; the consumer just warms it back up. I think it's a very interesting, very attractive feature. Fresh cuts have been something that we've all worked on with the sweet potato—particularly fries. The biggest problem we face is trying to maintain a pretty color. If we can ever overcome that little problem, the same way that the white potato has, I think we've got an excellent opportunity with fried stick sweet potatoes.

Ultimately, one of the biggest reasons for our success has been our affiliation with a lot of good groups here in North Carolina. Sue, from the North Carolina Sweet Potato Commission, for example has been a great help to us. I served on that board, and I have supported that commission in many ways, as they have me. For years I served as President of the North Carolina Vegetables Growers Association, and we are still closely associated with that group. We are listed with the Blue Book, Red Book, Five a Day Program, United Fresh Fruit and Vegetable Association, and Produce Merchandisers Association. We try to support the industry and they in turn support us. We were very fortunate this year to have received a loan and grant from the Global Transpark in Kinston, to help facilitate our recent expansion. I think that they have done a wonderful job. Certainly, from our point of view, we are very appreciative of their support. We have had a lot of support from the North Carolina State University and all its associations—particularly the Goodness Grows Program. We have been a member of that initiative from its inception and are very proud of that fact. In closing, I would like to thank you for your time and attention.