

SPACE PLANTING FOR LABOR REDUCTION PANEL

Moderator: Earl French  
Grower of Monitor Sugar Company

Members: William Goetz  
Grower of Northern Ohio Sugar Company

Elmer R. Haines  
Grower of Michigan Sugar Company

Loren Gettel  
Grower of Michigan Sugar Company

Ralph Kaufman  
Grower of Buckeye Sugars, Inc.

First of all, let me introduce myself and the members of the Panel. On my far right is Mr. Goetz, a Northern Ohio sugarbeet grower, who grows around 235 acres; next to him is Elmer Haines, a Michigan Sugar Company grower, who grows between 40 and 50 acres; Loren Gettel, on my immediate left, grows 255 acres for Michigan Sugar Company and Ralph Kaufmann growing 18 acres for Buckeye Sugars, Inc., and myself, Earl French, growing 25 acres for Monitor Sugar Company.

I think we have to realize that sugarbeets is one of our most important crops in our particular area and I think it is holding the farms together. I, also, think we have to do a much better job than we have in the past to cut down this labor cost. Today we would like to tell you how we do it.

First, I would like to tell you how I do it and then you will hear from each of the panel members. Not everything will fit your particular operation but there might be something that you can take home with you.

My rotation is normally where sugarbeets follow peas. I am going to start my sugarbeet production in the summer-time before I plant the beets. I will go through it real briefly -- I usually get the peas off relatively early, the Fourth of July is usually when they start the normal procedure. When we get the right field conditions I will go in and I put down 500 pounds of 0-0-60, hoping for a rain to plow it down. I use a 40-10 tractor with three 16" and I figure on plowing one foot deep. I plow and then land level it three times. The first part of September, I go in and broadcast on about two bushels of oats per acre and then follow that with a field cultivator to work it in. This is for my winter cover crop. This soil we have is a Brookston Clay loam and it is not supposed to blow but when driving up today you could see that much of this heavy soil is moving and see a lot of bare fields. I think this is something that you people should really be concerned about which is the amount of top soil that is leaving our lands and ending up in the ditches where it cannot be used.

In the spring when the company releases seed to the farmer, I try to be there the first day. The reason for that is, when you are space planting you have to keep in mind the germination. I preferably like to find out what the lot number is and then find out whether or not I am getting an 85 plus germination. Next, I work the field once. A flexible spring tooth harrow works best to work up this dead oat cover as it will not plug up.

I do not use any fertilizer when I plant the beets. I broadcast it all on. Remember, I plowed down the 500 pounds of 0-0-60. I use the soil test and I think it figured out to be about 500 pounds of 6-24-24 plus 2% manganese. I will work this in once and then plant the beets.

Another thing I recommend is planting early, -- the earlier the better. This past year we planted April 11th and the 12th and, incidentally, the space planting on that is 5.9 inches. If I have a 90% germination I am actually planting approximately 33,300 seeds per acre. This past year I ended up with around 20,000-22,000 plants per acre which, I think, is an ideal stand. I would like to just give you another thing here about planting shallow. If you are planting early plant as shallow as you possibly can, this is the way I find it to be the most advantageous.

The next thing is after we plant we normally spray and we have been using recommendations of 1½ pounds of Pyramin and 1½ pounds of TCA. We spray after we plant. We spray 8 rows at a time, this way it doesn't take too long.

Another thing that I have done this past year is apply the Nitrogen early. We applied it this year just as we cultivated. I cultivated it the first time and I had a fellow come right in behind me putting on the Nitrogen. This year I am planning on putting my fertilizer on in March about the same time we top dress wheat and then maybe also put my Nitrogen on at this time.

I spray in a 7 inch band. We sprayed for weeds and then we hoed the field just once. That is all we did - just my kids and myself. We hoed 25 acres in two half days so there weren't many weeds. Then the other problem that I have is that if I am a part time farmer, I have to make a decision and my decision was to put all my resources in the production end and forget about the harvesting end. I think you just can't do two things, and in this case there would be three, and do a good job so I try to do everything to the production and hope that I can get a machine when I want it. So far it has worked out real well. We harvest our beets early. I am a firm believer in harvesting early. This year before we harvested we checked my beets -- they were testing around 18% sugar. About three days before we were going to harvest we got a rain and down went the sugar content but I will give you my yield anyway. The yield was 23.01 tons per acre, clear beets, and the sugar content was a disappointing 12.66%. I am not blaming the rain totally for this as I got this Nitrogen on early, really early, but I just went hog wild and I put on about 125 pounds of actual. This is one of the reasons why I might want to put this Nitrogen on in March. I guess I took you through what I do or I have done and, it has worked out for me and it has even work out for us in dry years. I guess

I have talked long enough so I would like to turn it over to Bill Goetz from the Northern Ohio Sugar Company and he will give you the experiences of his space planting for labor reduction.

William Goetz:

I do all my plowing in the spring because my sandy type soil will blow in the fall. At this time I apply all my Nitrogen. I plow all my fertilizer down at this time except for about 150 pounds that I put in the row about an inch to the side. I try to get the seed at the right depth which I find in my sandy loam soil to be 3/4 to 1 inch. I planted 145 acres this way from a spacing of anywhere from 6 to 7½ inches, the wider spacing at the beginning of the season and a little bit thicker towards the end. If the Farm Crops Department would come along with a sure thing of herbicide, I would go to space planting or mechanical thinning entirely. I think there is a choice that each one has to make on their own, according to their soil type and I think in combination you could possibly use both. If you planted too thick with space planting, you could also use a mechanical thinner along with it but the first thing I see is we have to lick the weed problem. I band spray about 7 inches and use Pyramin - TCA. One problem I do have is wind erosion so I have to cultivate as soon as I see that row, not necessarily for weeds but for wind erosion. I use the Ralston cultivator. We spray for leaf spot about three times during the year. I do not want to see any of this leaf spot so I spray it as an insurance which is cheaper than to have disease in the field. I try to harvest at the right time to get the maximum yield and sugar content. This is especially important when you want to hit the Top Ten. When you raise 200 acres it is hard to compete for Top Ten honors when you are competing with growers with 30 or 40 acres, so I have three contracts. They are not all on my farm but I have three different farms. I will take the one I want to hit the Top Ten with and harvest about the 10th, or about the 15th to 25th in that area. I have been doing pretty good as I have hit the Top Ten three years in a row. Mr. Steck, the plant manager, scratches his head every time he comes out there but so far everything has been working out real well. That is all I have to say at this time.

Mr. French: Thank you, Bill. Next on the Panel is Mr. Haines from the Michigan Sugar Company.

Elmer Haines:

Thank you, Earl.

Yesterday, President Rush of our Association discussed and enumerated various problems that exist as far as mechanical stand reduction operations are concerned, that is, to use some kind of machinery. Dave Sunderland, in his very enthusiastic way, presented what he thought was a solution to the problem and I have no question that it will work as he has indicated in his area, but we are up here to discuss it from another angle and, that is, to plant to a stand and to eliminate this \$7,000 investment that was mentioned yesterday. We are supposed to tell the things that are happening in our area, the things we have done and so here goes. I think one of the first things we

should decide is what are the minimum and maximum number of plants we have to have in an acre without materially reducing our yield. Discussing this with our good friend, Maury Frakes, he tells me that a 10 inch minimum with a 20 inch maximum spacing will not materially reduce the yield. As far as sugar content is concerned, I don't have that information but I imagine those extremes might be a little different from that angle but strictly from the yield situation, I understand those are extremes.

Well, now in the many areas in Michigan we would like to have about 100 beets to the 100 feet of row which is in the neighborhood of 18,600 some odd plants per acre and I am speaking of 28 inch rows so that if we had 100% plant population it would be one to every foot. If my arithmetic is right, with a 10 inch spacing we could get by with about 60% plant population as a minimum with about 120 plants per 100 feet for a maximum. With this in mind, how do we proceed? For several years we have been using a 6 inch spacing which would give you, theoretically, 200 plants per 100 feet of row, with an emergence of about 60%, which I think is about what we can reasonably plan on, will give you about 120 beets per 100 feet and that comes out to about your 10 inch spacing. We have used this six inch spacing for several years in the spring, always with a great deal of enthusiasm. We weren't going to touch any of those beets. We weren't going to use any hand labor. Well, finally, when the day came, we decided we better have labor. Last year, because of the weather conditions, when the labor was available, the beets were a little too small to thin. When they were large enough, the weather conditions were such that the labor couldn't get in and we finally were able to have labor, the beets were getting reasonably large. Gibb Smith and Ralph Dush came along one day and with a good piece of salesmanship, they convinced me that we should leave this particular 20 acre field and not put any hand labor into it so we did that. Irritated the ulcers a little bit worrying about it all during the season wondering just what the yield would be. When we finally harvested them, we were more than pleased, not only with the yield, but the sugar content, as well. I don't know how this averages out with your area or what you consider a good yield but on these that we did not put in any hand labor, we had just a little better than 23 tons to the acre. The field that was planted 10 days later, that we put labor into, that we thought should under all conditions equal or exceed the particular field we didn't put labor into went 19, so the question in my mind now is, maybe I not only lost some tonnage but perhaps I paid for some labor I didn't actually need. There is another thing I think you should take into consideration. We band our fertilizer to the side, all the drill will plant, which is about 600 to 700 pounds. If you put it directly underneath, as Maury has recommended for many years, you must be sure you use a type of fertilizer opener that will get that fertilizer deep enough. If you put it in shallow, I think you will get into some problems.

I don't want to be accused of using scare tactics but the fact is this labor situation is getting rough. I think we are a lot closer to having problems as far as getting labor. We have certainly read what the labor situation is in the grape area in California, so my plea to you is -- if you are growing a reasonably sized acreage don't go hog-wild but at least start in the direction of some space planting. Find out what the problems are as far as your area is concerned, your soil conditions and then when we get these more dependable weed sprays we will be ready for space planting. I think that

there are a lot of areas that space planting can be successfully used and if there is anything that I would like to encourage you to do it is to use space planting. Now, in planting to a stand, we find that we want to work our soil once over and have a minimum of a time elapse between the operation of working it and planting it so that you conserve your moisture - use a lot of pressure on your press wheels so that the seed is firmly packed and there is moisture.

Well, I see the time is getting away - there is still a couple of very interesting speakers following me, so thank you.

Earl French: Thank you, Elmer. Next on the program is Loren Gettel. He grows 255 acres for the Michigan Sugar Company. I know that time is getting away but you are receiving so much knowledge that I am sure you don't mind if you wait over dinner anyway. So, Loren, give it to them.

Thank you, Earl. You mentioned 255 acres - the only reason we have that many is we have to grow that many acres to get as many tons as most of you do with a lot less acres. I have always been interested in space planting, or I should say, spring labor reduction, and mainly for the simple reason is to gain more net profit at the end of the year,-- to save money in plain words. Other than that, one other reason is that the way the labor situation is now and going to be in the near future, I think it is very important to take this spring labor reduction very seriously because if you are going to be in the beet business, you are going to have to reduce your labor and get along entirely without it in a very short time or else you are going to be out of the beet business.

Back a few years ago I did some, maybe you call it experimenting, but I did try space planting at about a 7 inch spacing, just in a couple rows on the drill planter units. I tried this three or four years. In the lower parts of the field I felt I had a good enough stand but in all our higher areas of the field I had too thin stand. It made me kind of sick to look at it but after three or four years on limited acreage I felt that it couldn't be done or I didn't know how to do it. The last two years I have gone to approximately 3½ inch spacing. We plow down 250 pounds of fertilizer in the fall and then in the spring, the ideal time is the last day it freezes in March, we go in and spread our Nitrogen on or use 45% urea. One of the reasons I started this two years ago was to eliminate some of the work in June side dressing Nitrogen. This way in March it is very quick and simple. With the spreaders we can cover 50 acres an hour. As you know, 45% urea is more expensive than anhydrous ammonia. Using only about 50 pounds to the acre, so spreading it on or side dressing only amounts to probably a little over \$2.00 an acre and I feel that this can be offset by the ease of applying it and, also, by the time of application. We don't have the time to side dress in June - I just feel this works out better. We try, like most of you, to plant the very first day we can in the spring and shallow, 1/2 to 3/4" in depth and space our fertilizer off the side and below, probably about 400 pounds to the acre. I band spray at the time of planting with the recommended amounts of TCA and Pyramin and then at the time in June when normally the Mexicans or labor would thin the beets, we use the thinner. In the lower areas we get a much better emergence than we do in the higher areas of the

field so I set the thinner to take out the amount I want to in the lower areas. When I come to the higher areas I just lift the thinner up. It seems as though we have to plant about  $3\frac{1}{2}$  to 4 inches in order to have enough beets for a stand on the higher areas of our field. We do this before cultivation, we cultivate after this as soon as we can. As you know, this is a busy time in June. I had labor come in July, approximately the middle of July and just hoe the weeds out. The labor did no thinning of sugarbeets. This cost me, this year, a little over \$7.00 an acre for the hoeing. We had about 40 acres that we hoed twice for weeds but the total acreage averaged out to just over \$7.00 an acre for hoeing. This past year, in 1968, I did all of our acreage of 255 acres this way.

This is all I have to say at this time and I will be happy to answer any questions later on.

Earl French: Thank you, Loren. Next we have Ralph Kaufman from the Buckeye Sugars, Inc., and he is down in my class, an 18 acre producer.

Thank you, Earl. I guess with 18 acres, that isn't many beets but it is a few. I plow all the fertilizer down in the fall with the exception of about 200 pounds which I put directly under the seed at planting. I try and space them about 3 inches with the planter. I then go through with the thinner. Last year I thought I left too many beets. I had the fieldman out and Paul Russell came out and looked at it and he said it looked pretty good, so I left them go. I was worried about it all summer. I made almost 20 tons an acre. I used the Pyramin and TCA and I didn't have any labor. I went through them myself - with only 18 acres I could do this. I did sow about one acre where I used different plates. I had three holes closed and two open with a  $2\frac{1}{2}$  inch spacing which gave me 10 inches between the two seeds at  $2\frac{1}{2}$  inches apart. This turned out real well without any other thinning. There was no difference in yield on acre than where I used the thinner. I plant as early as I possibly can. Last year it was in April. The last two years I have been doing this and both years it worked real well for me so this year I think I am going to try more space planting and not use the thinner, if I don't have to. That's about all I have to say at this time.

Earl French: Thank you, Ralph.