

RAISING COTTON \$50 CHEAPER AND HARVESTING 75% FASTER (HARGETT SPECIAL, NINE-ROW COTTON PICKER)

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Abstract

I found by going to 30 inch 2 and 1 skip row pattern, compared to 38" solid, that my input costs for seed, chemicals, and fertilizer were reduced from \$50-\$70 an acre and with a modified 6 row picker, I can pick 11 acres an hour making the picker 77% faster than a conventional 4 row, 38" machine.

Introduction

Using a modified 4-row machine, it is possible to pick 77% more cotton per hour that it is with a conventional 4-row harvester. At the same time, you can save at least \$50 per acre. In 1999, I did just that.

Discussion

My experiment was based on the assumption that 30-inch skip-row cotton has the capability to produce as much or perhaps even more lint per acre than 38-inch cotton, while greatly reducing inputs. So, last year, I planted 3,520 acres in the 38-inch pattern, and on 480 acres-partly irrigated and partly dry land- I planted the skip-row pattern.

We converted a standard Case IH 4-row model 2555 cotton picker to a skip-row machine with six headers spread over a 22.5 foot toolbar. My design returned a windfall of savings.

Numbers Don't Lie

In my experience, the most I've ever been able to cover in an hour with a 4-row machine is five land acres. With this modified skip-row picker, I cover 11 to 12 land acres an hour-over twice as much ground.

The swath of a 4-row picker is 152 inches (12.67 feet); a five-row picker's hourly capability is about 7 acres and it's swath is 190 inches (15.83 feet). Taking 228 inches at a time (19 feet), a six-row can cover 9 acres an hour. But what makes our machine so much faster at harvesting is its 270 inch (22.5 feet) swath, not to mention the large reduction in turning time. Where do the nine rows come from? Simple. Divide 270 inches by 30 inches (row width) renders a total of nine rows.

Success with this system is the across-the board 20% per acre reduction in cost inputs. In terms of linear foot of rows, if I were to plant a 38-inch skip-row pattern I'd end up with one-third (33%) less row feet per acre. In the 30-inch skip-row pattern, there are only 20% less row feet, but the benefits (greater access to nutrients, sunlight, moisture for each plant) are the same as for the wider row pattern.

A Fifth Less Chemicals

In this system, my data show that I am saving \$2.63 on a projected 3.5 pound/acre in-furrow Temik application (3.5 lb X 3.75/lb X .2=\$2.63). In a conventional row pattern, my in-furrow Terraclor application would cost \$5.50. Reduced 20% means a savings of \$1.10.

Moving from dry land to irrigated cotton, I doubled my bulldog soda and Pix applications, but at the same time, the savings doubled. At 86cents per ounce, a total of 16 ounces of Pix applied on dry land cotton costs \$13.76. A savings of 20% equals \$2.75. Thirty two ounces of Pix on irrigated acres would cost \$27.52. Here the 20% savings amounts to \$5.50. To apply the nitrogen, we blow dry soda directly over the cotton rows only, using twice as much in irrigated cotton. At least 20% less on dry land acres, I pocket \$4.40; on irrigated cotton, the figure is \$8.80.

By blocking off spray tips over skips, I greatly reduced insect control and defoliation costs. Total chemical costs for thrips, boll weevils and boll worms would have amounted to \$36.50 per acre. Twenty percent of that is \$7.30. Anywhere from \$9 to \$13 is what it costs to defoliate. Using \$12 as an average, our savings amounts to \$2.40 per acre.

In our 38-inch solid pattern, my technology fees - Bt and Roundup Ready - totaled \$41(\$32/Bt, \$9/RR). By reducing seed needs in the skip-row cotton, his combined cost cutting is \$8.20.

Our skip-row pattern also offers opportunities for savings in post-emergence applications. We could rig our post-emerge rig to spray two separate herbicides and apply Gramoxone in the skip middles and post direct MSMA, Bladex and Cobra in the row middles. Tank mixed, these three chemicals cost about \$13.50 an acre, while Gramoxone is only 44.00 an acre.

But it's in harvesting where we rake in the biggest savings. If I contracted with a custom harvester, he'd charge \$60 an acre to pick twice - first pick and scrapping. With 20% less rounds in this pattern, I'd save \$12. Also, in this nine-row scenario, you can figure on needing one less picker. To illustrate the savings, consider the \$100 per hour they lease for. Since we need one less picker, on which we would put 400 hours in a season, that's forty grand we didn't spend, not to mention \$3200 on the \$8.00 per hour operator.

If a grower went all out in this system and tailored herbicide inputs, the savings per acre could go as high as \$70. Even at \$50/acre, if we planted our entire crop in this pattern, we might very well have reduced inputs by \$200,000, not to mention reducing picker needs by two machines.

A neighbor who grows cotton in a solid, 30-inch pattern, asked me what savings over his current system he could expect if he planted the 30-inch, two and one skip pattern next year. I told him that my savings ranging from \$50 to \$70 per acre were based on a comparison with my 38-inch solid cotton. Compared to the 30-inch solid pattern he now plants, his savings would be 33 1/3%, or \$87.50 to \$122.50 per acre.

Summary

The ultimate goal of my harvesting experiment is to figure out a way to stay in the cotton business. Either give me 75 cents for my cotton, or show me how to raise 60 cent cotton.