

o the east of the highway, or maybe to the southeast—I was a little turned around—the horizon looked slightly grey.

"That must be rain over Shelby," Richard Noe says. He'd gotten a call a few minutes earlier about a downpour crossing the Delta, which he hoped was coming his way. Some of his fields had been drenched by thunderstorms the night before, but they had skirted one outlying patch of land.

To me, though, it just looked like grey. I had driven through Shelby on the way to Noe's farm, but, turned around by our looping route over the farm roads, now I couldn't point my way home.

I consider myself knowledgeable about the Delta and its landscape, but Noe, clearly, is on another level.

There is one thing I'm clear on: the Mississippi Delta is a land of farms. Despite its small size (it constitutes one seventh of Mississippi's land), over three quarters of Mississippi's row crops are grown here. To some of us—like me—those crops become, at times, just scenery zipping past. For Noe, though, and for the many farmers of the Delta, they are a make-or-break investment.

"If you have a bad crop year now," he says, "Everything is so expensive. It's hard to come out of it. It could take five or six years."

The Delta in its modern form began in the early 19th century, when pioneer farmers, making wild bets of their own, first carved plantations from the swampy woods. Development slowly filled inwards from the riverbanks, as the hardwood forests were cleared away. By 1930, after a century of development, the Delta and its famous soil had become an epicenter of the Southern cotton kingdom.

Nearly a hundred years more have brought changes. Drive the Delta's highways in late fall, for example, and there is no familiar flash of cotton white.

















CLOCKWISE FROM TOP LEFT: Farming is big business, and over the years has become increasingly high-tech. Michael Aguzzi parks a tractor after a long day on Aguzzi Farms in Bolivar County. Jerry Evans Jr. checks the GPS display in his combine while working the soybeans on his farm in Bolivar County. Water flows from polypipe into a soybean field in Coahoma County. A tractor levels the furrows in a cotton field on Aguzzi Farms.

In 2006, 1.2 million acres of cotton were planted in Mississippi. Though that's far less than at the crop's peak—over 4 million acres in the early 1930s—it was nevertheless the crop's last big year. In the decade since, cotton has rarely cracked half that acreage. The king crops now? Soybeans and corn.

The story of that change is complex, involving shifting market prices, changing subsidies, and damage from hurricanes. A key factor, though, is that once a farmer abandons cotton it can be pricey to return: a top-of-the-line cotton picker costs as much as \$750,000, and is used for only two weeks, to harvest its one crop. A combine, meanwhile, is useful for corn and soybeans and milo and more.

Other changes have been less apparent: there are emerging high-tech seed varietals, new herbicides and pesticides, and changing methods to water the crops. Noe noted that when he began working with his father 25 years ago, around 20 percent of their land was irrigated. Today it's 90 percent.

"We were done with fieldwork in July," he says. "All we could do at that point was to pray for rain."

When I joined Noe this mid-July he was still in the thick of work, crisscrossing his farmland—scattered in parcels, some rented, some owned, across Coahoma and Quitman counties—and punching holes in the plastic hosing that irrigates his crops.

At one point, Noe and his son eyeballed a field, one they

were farming for the first time. They were trying to decide just how big to punch those holes—five-eighths of an inch? Fivesixteenths? It all comes down to knowing the land, from the slope of the dirt to the length of the rows.

On other fields, software makes these decisions, crunching GPS data with water flow rates to recommend the perfect size. Farming has gone high-tech. Combines beam lasers down turnrows, ensuring they are planted perfectly straight. Furrow irrigation, the most common technique in the Delta, sends water down ditches between rows of crops. That works best when the land has a nice, even slope; even a tiny rise might block the flow.

Which again revealed how little I knew: I always think of the Delta as utterly flat. A few days later, though, Mark Looney and his son John Mark unfurled a soil survey map in their farm office in Washington County. Its topographic squiggles cataloged a vast array of alluvial dirt on their farm, and their curving shapes betrayed the riverine history of the land. They're subtle, sure, but this Delta is pocked with plenty of ridges and bumps.

To aid irrigation, farmers have flattened these corrugations. As recently as 2009, the Looneys bought a piece of property that had never been leveled. Out the dirt movers came; soon enough it was a modern Delta flattened field.

Looney guesses he hasn't had cotton on his land in 25



CLOCKWISE FROM TOP LEFT: The move to soybeans and the rise of technology means more and more land has become cultivated. Michael Aguzzi checks a monitor in one of his fields. On his smartphone, Aguzzi can read data on the soil, from temperature to saturation levels. The Evans family in Bolivar County have, like many local farmers, moved primarily to soybeans. At Stovall Farms near Clarksdale, a rare patch of land stands unplanted. Larry and Jerry Evans sift through some of their dried soybeans.

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CLOCKWISE FROM TOP: "God blessed us with it," Jerry Evans says of his family's land, which was patched together from pieces unwanted by other farmers. Despite the size of the Delta's farms, their daily operations remain in most cases a family affair. Meg McKee examines her family's cotton crop near Friar's Point. A pivot irrigates a field in Coahoma County.



ABOVE: Thanks to the commitment of families like the McKees, Coahoma County is still the state's top producer of cotton. From left to right: Clay Redd, Bryan Davis, John McKee, Meg McKee, and Will Mullaney.

years. He remembers, though, how in nearby Leland, there were once four or five cotton gins. Just outside of town, at the agricultural research center in Stoneville, an empty slab indicates one former site; a few years ago, the old gin was sold and shipped whole to Georgia. Now only one gin remains in the county.

When it comes to cotton, the research center is still taking the long view. In 2004, on the 100th anniversary of the center's founding, Dr. M. Wayne Eberhar launched the Centennial Rotation, a study that will reveal the long-term effect of planting different sequences of crops in the same plot. Eberhar wants to know which sequence, in particular, will provide the biggest yield.

"It's a planned hundred-year rotation," Eberhar says. "But I don't plan to be here in the final year."

Stoneville—which, at over 4,700 acres, constitutes one of the largest agricultural research facilities in the world—has ragged, weed-cluttered plots that sometimes surprise visiting farmers. But this is how farming pushes ahead: at times scientists want to cultivate worst-case scenarios, creating better canvases on which to test new techniques.

One key question now being tackled at Stoneville: how do farmers beat pigweed? For more than a decade this stubborn weed has been resistant to the most commonly used herbicide.

Mark Looney plans to switch soon to a new chemical, once a new variety of seeds comes in. But in another decade, he figures, pigweed will be resistant to that herbicide, too.

"Farming changes a lot, and it's always changing," he says. "You face different problems every year."

In nearly every field I passed, I saw workers hacking at pigweed with hoes—a return to a once antiquated technique. But other technologies have been left long behind: on the wall of Looney's office, a collection of old mule shoes and railroad spikes were nailed in place—reminders of lives, mostly forgotten now, that had elapsed tending this land. As he drove me home, John Mark showed me the near-perfect arrowheads he'd collected from a nearby Indian mound, remnants of a culture even older, gone long before the land was leveled, before cotton ever appeared.

I tried to imagine what they'd think of our new Delta. Then I found myself thinking ahead: what will it look like in another century's time?

I don't plan to be here, either—but I'm guessing, in one form or another, the farmers will still be around. $\,\,$ $\,$



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