GRANT'S

INTEREST RATE OBSERVER®

Vol. 37, No.13d | 233 Broadway, New York, New York 10279 • www.grantspub.com | JUNE 28, 2019

Mud Bowl

The wettest 12 months in the records of the National Oceanic and Atmospheric Administration have produced the worst Mississippi flooding since 1927, when rampaging waters cost 500 lives and one billion old-time dollars, a third of a Coolidge-era federal budget. As for this year's inundation, it has led at least one Indiana farmer to forsake his tractor and attempt to plant soybeans by dropping the seed from a crop duster. In upstate New York, another farmer did get his crop in the ground in conventional fashion—but the date was June 23. In an ordinary growing season, his corn seed would have already sprouted to the height of a boy's knee.

Aberrational interest rates have their analogue throughout the row-crop raising economy in this strange season. The bull case for corn options constitutes one line of argument in the essay now unfolding. The bear case for a handful of companies doing business with American farmers makes a second—and the risk presented by discontinuous events to our seemingly predictable, rationally ordered, safe, modern lives forms a third.

Usually, the rain stops. This year, throughout the Midwest and points far to the east, it has kept on falling. Unable to plant in April, farmers looked forward to May. Thwarted in May, they tapped their feet for June. What will become of the 2019 American corn crop is the question on which many another farm-related question turns.

"Corn is a factory," Arlan Suderman, chief commodities economist for INTL FCStone, Inc., reminds colleague Evan Lorenz. "It takes sunshine and water and nutrients from the soil and converts those three components into starches to fill a kernel on an ear of corn. That factory in many cases was shut down for six to eight weeks because it got planted six to eight weeks late."

Complicating matters is that corn plants don't put down deep roots in puddled fields. They don't have to—the water's there for the drinking. Then, too, heavy rains tend to pack the ground (and not, as a city-dweller might suppose, to soften it). All in all, says Suderman, "We would anticipate that the yield will be significantly adversely impacted, but by how much we don't know."

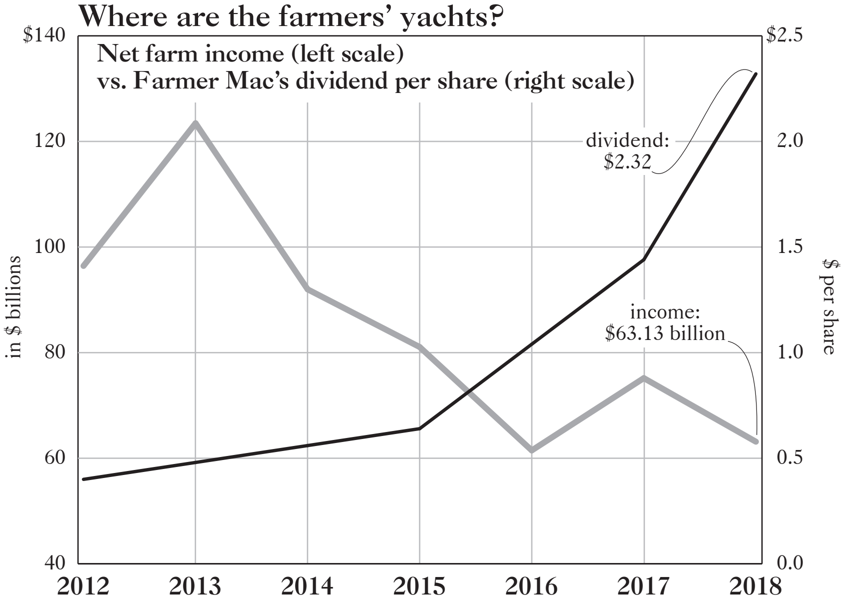
The U.S. Department of Agriculture, which ought to know, projects that the 2019 corn crop will deliver 166 bushels per acre, the sixth most productive in 153 years of record-keeping. In fecundity, this year's harvest would rank behind only those of the past five years, which yielded an average of 173.4 bushels an acre. Squaring that projection with photos of submerged Illinois corn fields is, admittedly, a head-scratcher.

Has USDA taken the full measure of things? In 1993, another waterlogged crop year, corn production fell by 23%, to 100.7 bushels per acre. A decline only half as severe, i.e., by 11.7%, would cut yields to 155.7 bushels an acre. Corn genetics and farm inputs have made magnificent strides over the past quarter-century, but nature has the last word.

And if USDA gets the final statistical word, that conclusion may require interpretation—as in the answer to the seemingly simple question of how many acres of corn are actually under the plow.

The agency doesn't count the acres.

Where are the farmers' yachts?



sources: The Bloomberg, company reports

It rather monitors the intentions of the farmers who work them. Imagine a 1,000-acre farm. Say that, as of June 1, 650 acres are planted in corn. Now, assume that two weeks of heavy rains render the remaining 350 acres unplantable. And further assume that the farmer formally retires the sodden land from production by registering them for federal crop insurance. The June 14 Crop Progress and Conditions report would then count those 1,000 acres not 65% planted but 100% planted. The now-insured acres are dead to the USDA.

How many acres will be lost to crop insurance is anyone's guess till the data are finalized and published in the autumn. In a typical year, the number is small, but there's nothing typical about 2019 so far.

As you don't begin the crop year with nothing, an accurate reckoning of supply begins with the carryover—what's in storage from the prior harvest. Perhaps, ventures Keith D. Bronstein, longtime commodities trader and fully paid-up *Grant's* subscriber, the 2018 carryover will prove smaller than suspected.

You can conjecture as much from price action, Bronstein proposes. The generic weather event in an ordinary year will take a predictable course. Fears of crop damage will send prices higher across the futures curve, but will lift longer-dated futures contract prices more than nearby ones. That's because farmers will unload their excess inventories at weather-inflated prices. The sales will pressure the cash market, not the distant futures contracts.

"That's the opposite of what has occurred this spring," Bronstein tells Lorenz. "The front end has gone up more than the back end across the board by an aggressive amount," perhaps indicating that farmers did not have enough grain in storage to meet demand. Since April 30, front-month prices have jumped by 27%, to $4.48 per bushel, versus a 15% rally in the contract six months out. The greater meaning? "To put it in the old risk-reward terms," Bronstein sums up, "the risk is skewed to the market going up in price versus down."

No survey of the risks to the supply side of the corn market would be complete without a respectful nod to the dreaded fall armyworm, a caterpillar as speedy as it is voracious. *Spodoptera frugiperda* is currently chomping its way through Bangladesh, Myanmar, Vietnam, Indonesia, Taiwan and, not least important, 18 of China's 33 provinces; China is second only to the United States in the production and consumption of corn.

With respect to that staple crop, the bullish news is possibly more ghastly than the bearish news, as it starts with the deaths of perhaps 40% of China's 440 million-head pig population to African swine fever. Animals eat row crops, corn and soybeans. A drop in the number of mouths to feed is what is clinically known as "demand destruction."

With so many imponderables bearing on prices, only a fool would dogmatize. For us, taking the American corn situation in isolation, we observe that USDA is projecting a 347.5 million metric ton crop this year, down 5.1% from 2018 but—even so—the sixth-largest since 1866. That would leave corn stocks at 50.5 days' worth of consumption.

"If, however," Lorenz observes, "yields fell by the afore-speculated 11.7%, and offtake held constant, corn inventories would tumble to 22 days' worth of consumption, below the 29 days at the end of the 2012 harvest when prices shot above $8 a bushel."

How to gamble on such a bullish possibility? The September corn contract trades at $4.53. The $5 calls on the September contract are priced at 15 cents. Should corn reach $8.00 per bushel again, the buyer could net a 18-times return on the contract's cost.

. . .

The rains have come in a sixth consecutive lean year for American agriculture. After peaking at $123.4 billion in 2013, farm net income registered just $63.1 billion last year. As recently as March 6, USDA had penciled in a 10% rise in income for 2019, but the weather gods seem to have another idea. (Federal crop insurance, familiarly known as "prevent" insurance—as in the farmer was prevented from planting—covers the cost of renting land and buying seed but not other operating expenses.)

Even so, the composite farm balance sheet looks sound enough at a glance. While, between 2012 and 2018, farm debt surged by $113.3 billion to $410.8 billion, those borrowings were more than offset by the $445.4 billion gain in the quoted value of farmland, to $2.5 trillion.

"However," as Lorenz notes, "farmers are fast becoming asset-rich and cash-poor. The composite farm ratio of current assets to current liabilities slipped to 1.43 in 2018 from 2.87 in 2012. The source of the disimprovement was the increase in debt coupled with an $84.6 billion decline in cash and investments, to $168.8 billion.

"As we started this downturn," says Tim Koch, the chief credit officer of Farm Credit Services of America, a non-bank lender to clients in Iowa, Nebraska, South Dakota and Wyoming, "producers came in with a lot of equity and so we were able to rebalance debt levels, add some term debt to some customers to either provide liquidity or restore liquidity, and I think that added additional staying power to that as well." No more, Koch goes on. Shrinking profit margins leave little room to add more debt, "at least in our opinion."

Certainly, there's room for more opinions. At least 23 investor-owned banks, most of them pint-size, show a farm-loan concentration of 7% of total loans. John Deere Financial, the wholly-owned credit subsidiary of the mega-cap tractor manufacturer, is the giant of the group. Deere is rather a sore subject at *Grant's*, as our bearish March 11, 2016 analysis was the prelude to a 100% rally in the share price. Suffice it to say that we will return to the scene of our analytical crime before long. For now, we observe that farm-equipment inventories have never been higher, that Deere is cutting production, that the Street is lopsidedly bullish, that short interest is a modest 2.5% of the float and that, since the end of 2018, insiders have dumped $4.6 million's worth of shares.

. . .

You wouldn't guess there's trouble by the latest results at Farmer Mac, officially the Federal Agricultural Mortgage Corp. In the first quarter, loans 90 days or more past due, as a percentage of total loans, amounted to 0.73%, up from 0.37% in 2018 (and 0.71% in 2017) but less than half of the 1.63% delinquencies registered in 2010.

Farmer Mac, federally chartered in 1987, was a child of the bust that grew out of the great inflation of the 1970s. The equity is divided into three classes: "A," held by financial institutions outside the Farm Credit System; "B," held by members of the Farm Credit System; and "C," held by the investing public (AGM on the New York Stock Exchange). The Class C shares appoint no directors and have no say in governance. Class A and B holders each elect five members to the

15-person board; President Trump selects the remaining five.

Like Freddie Mac, Farmer Mac does no direct lending but rather buys or guarantees others' loans. As of March 31, the company showed $20.5 billion of credit exposure. This consisted of USDA-guaranteed loans ($2.5 billion), institutional credit ($8.7 billion), farm and ranch loans ($7.2 billion) and rural utility loans ($2.1 billion).

Little credit risk attaches to the first two categories. Only if the underlying borrower *and* the issuing bank default would Farmer Mac find itself on the hook for losses on the institutional credit line. The Farmer Mac balance sheet shows $763 million of equity, representing 3.9% of total assets, or 8.2% of the kinds of loans that do, in fact, present the palpable risk of impairment, namely, credits to farms, ranches and utilities.

The investment case on Farmer Mac depends on the prospects for farm-related credit. And for insight into that question, we turn to the Rural Mainstreet Index, the fruit of a monthly, 10-state survey conducted by Creighton University in Omaha, Neb.

In commentary accompanying the Rural Mainstreet results for June, almost half of banker respondents "reported that due to crisis-level farm income, farmers in their area have responded by selling the farm, or otherwise leaving the farm." In the May survey, not quite two-thirds had indicated they were increasing collateral requirements for new farm loans and that farm-loan defaults would likely double in 2019 from their 2017 levels.

Farmer Mac is part of that tightening cohort. "What has changed is that our application of our operating cash-flow coverage ratios . . . have resulted in more loans that we rejected, i.e., that we did not do because of cash flow," Farmer Mac CEO Brad T. Nordholm tells Lorenz.

The Class C shares, voteless, appear to be valued on the basis of their dividend yield, currently 4.1%. Between 2012 and the first quarter of 2019, Farmer Mac and its farm constituency parted economic company. While farm income was sawn in half, Farmer Mac's loans and credit guarantees grew by 58%; the quarterly payout increased to 70 cents a share from a dime.

"Of particular concern," Lorenz points out, "are the loans in nonaccrual status ($63 million as of March 31) and loans deemed special-mention ($283.8 million; 'potential weaknesses due to performance issues,' according to the 10-Q report) and substandard ($246.7 million; 'well-defined weakness or weaknesses and there is a distinct possibility that some loss will be sustained if deficiencies are not corrected'). In total, AGM has set aside $8.8 million in loan-loss provisions against the $593.5 million in problematic loans."

"The potential losses implied by the impairments, weakness and deficiencies shown to date do not take into account the severe decline in real estate values that will occur when farmland prices finally realign with farm incomes," Steven Grey, eponym of Grey Value Management, LLC and a short-seller of Farmer Mac, writes to his clients. "Agricultural real estate is already in the early stages of what will likely prove to be a sharp correction. But the reality is that prices do not have to correct by much before the Class C equity dividend is eviscerated, if not entirely eliminated."

Farmer Mac has a $719 million market cap, and the Class C shares trade at 1.3 times book value. The Street averts its eyes (one buy, one hold) and so do the bears (just 0.6% of the float is sold short). Year-to-date, insiders have purchased a net $273,316 worth of shares. We commend those officers and directors for their commitment but question their investment judgment.

• • •

Should the price of farmland take an arguably well-deserved knock, Farmland Partners, Inc. (FPI on the Big Board), a real-estate-investment trust that owns 162,000 acres across 17 states, might feel it, too. Farmland leaves the farming to its tenants, of whom there are more than 100. In the 12 months ended March 31, row crops (corn, soy, rice, cotton) accounted for 57% of revenues, specialty crops (almonds, avocados, walnuts) 42% and livestock 1%.

In a June presentation, FPI disclosed that the cap rate of its properties in aggregate amounts to 4.4%, but that its properties in the corn belt (28% of trailing revenues) are marked at 2.8%. "Attentive readers," Lorenz relates, "may notice something peculiar about how FPI calculates cap rates: The REIT divides gross rental income by property value. Net operating income, i.e., property-level rents less property-level expenses, is the more conventional numerator."

"Last year when we were leasing out farms, I would say on average farmers were underwriting the lease with no economic profit, which is crazy," says Greyson Colvin, the managing partner and eponym of Colvin & Co, LLP, which owns more than 50,000 acres of farmland. "In the fall of 2018, I would say 15% of our existing farmers retired—threw in the towel."

Given all that farmers are up against, rents may decrease next year. "We anticipate, going into 2020, that we'll see more pressure on rents than we've seen in a while," Jim Farrell, president of Farmers National Company, which manages two million acres of farmland, tells *Grant's*. "Rents have held steady, and that's one of the reasons that land values have held pretty steady. If we do start to see deterioration in cash value of rents due to all this pressure this year—and that's not a given—but, if we do, then I think that's going to start to pressure land values, and we'll likely see some declines in land values."

Farmland Partners has a $209 million market cap, and its shares are priced to yield 3%; 14.4% of shares are sold short and only one of the four analysts on the case says "buy." The insiders, at least, have listened; in the year to date, they've purchased a net $71,652 worth of FPI shares.

•