

THE MODERN FARMER IN AMERICA

November 11, 2022

Who farms?

In the past the answer to the question who is a farmer was: farmer, a man outstanding in his field (and his wife is sitting on a 3-leg stool milking the cow). Old MacDonald has passed on.

The Modern Farmer in America will be found riding in an air conditioned tractor or combine or maybe elsewhere in the farm operation – often in home or barn – office managing the work of others and the paperwork in support of many tasks in connection from bank loans to purchase or sale contracts and tax returns. Farmers today are better understood as business owners or managers who hire or employ their own labor to turn a profit.

Estimates place the number of farm owners at about 1 million and the number of farm workers at 2.5 million. To get to the number of “who farms” requires a look at the numbers shown on IRS Schedule F forms, the Current Population Survey (CPS), and the U.S. Department of Agriculture (USDA) most recent (2017) Census of Agriculture (CA).

Schedule F forms are used to report farm income and expenses to the IRS. A great percentage of the as many as 1.8 million taxpayers filing Schedule F in

recent years reported net losses on their agricultural business – obviously for tax benefits. Actually, these “farmers” are in real life retirees, hobbyists, and others who can take advantage of the USDA definitions for farming to live on comfortable rural “lifestyle” farms.

The number of farm households identified by the CPS conducted by the Census Bureau that is the source of national employment statistics has been in decline while the CA has been in an increase over recent years. So the CA needs to be considered against other measures.

The USDA has made over-corrections in the process and now counts a large number of non-farms. The overcount results from the use of definitions, adjusted for inflation, defining a farm as any place from which \$1,000 or more of agricultural products were produced and sold or normally would have been produced in a census year. The USDA devised a point system to estimate how much a plot of land could produce if it were used to raise or grow agricultural products – even if the operator had never used the land as agricultural land and the owners had no intention of using it that way. Example: Rural homes with horses (ten acres of pasture) or other potential “agricultural products” all count under the official definitions.

The most recent CA included a greater share of “point” farms – as high as 30% of farms in the CA of 2017 (the most recent in each five-year census period) which listed 2,042,220 under All Farms. A number of writers have worked through the multiple data sources to conclude that there are about half as many farms and farmers as generally reported by USDA.

These “farm” businesses probably represent as many variations as there are personalities.

The next general type of farm for discussion here would be the smaller sized farming activities. Some of these engage in organic farming and others in activities from one crop to supplying the fresh produce from flowers to vegetables to a farmers market or a number of local groceries relatively near a farm. Here are found small family farms or farming couples.

The farms which probably fit the definition “modern farmer in America” conduct the lion’s share of production of goods in the agricultural market. These sometimes are lumped in news reports as “corporate” yet have their main identity to the operators as family farms while utilizing corporation or LLC form for liability protections. These farms grow or produce the most farm products though in number are about 12% of all farms.

Production of eight major valuable crops in the USA helps feed the USA and the globe and requires mechanization. Those crops are (1) corn, (2) soybeans, (3) hay, (4) wheat, (5) cannabis, (6) cotton, (7) rice, and (8) peanuts. To make a profit requires farm size and modern equipment owned by “corporate” entities. There is a differentiation in farming between real “corporations” – owned by uninvolved shareholders – from farming operations that are conducted by an extended family and with some or all parts put under a corporate structure for tax and in some cases trust or estate planning reasons.

Farming is a highly risky and not consistently high profit business – not likely a target for a listing on Wall Street. So the vast, vast bulk of farming is still on family farms in basic structure. One source reported that he has visited many 5,000- to 12,000-acre large scale farms which might appear to be “industrial” where there are likely to be one or two family members who do almost all the farming. Because of the mechanization involved, an extremely large grain farm for example can be run by a small number of people some of whom often work off-farm as well.

What mechanization?

To get an idea of the cost of at least some of the equipment most farmers use in agricultural operations these days, I went to a John Deere agricultural dealer’s sales

center in Woodburn, Indiana. Here are examples of some of the farming equipment costs, likely to be similar at other farm equipment outlets:

Equipment:

- Tractor (180 horsepower) \$200,000
- Combine (commonly used) \$180,000
- “Head” for combine (wheat or beans) \$30,000
- “Head” for combine (8 row crop or corn) \$75,000
- Planter (common 12 row) \$150,000
- Seed Drill (12 row) \$80,000
- Spray applicators (fertilizer or pesticide) \$105,000

More expenses relating to typical crop plantings, maintenance, and through harvesting are as follows as non-land projected costs for the 2022 crop year:

Corn: \$755 per acre, a \$124 per acre increase over the per acres cost in 2021.

Soybean: \$476 per acre, a \$101 per acre increase over the 2021 level.

For comparison, even with these high costs, the return for corn has been projected at \$701 per acre and soybeans at \$515 per acre (as at April 2022).

For good news, the USDA Farm Sector Profits Forecast showed net farm income, a broad measure of profits, to reach \$147.7 billion in calendar year 2022,

an increase of \$7.3 billion (5.2%) in 2022 relative to 2021. Based on the foregoing, corn is estimated to return about \$155 per acre and beans expected to return about \$70 per acre.

There were about 300 million acres of harvested cropland covering the above eight major crops and more such as vegetables harvested for sale, potatoes, and land in orchards. The farms were family owned and operated in a very high percentage. There are some very large farmland owners, however, such as the following:

Bill Gates. (and who doesn't know who he is) He owns over 250,000 acres of farmland in 18 states. Little is known exactly how Gates has been using his farmland, whether for actively growing crops, as a store of value, or whether any of the land has been set aside for conservation.

Stewart and Lynda Resnick. The couple owns 192,000 farmland acres in California and Texas. On this farmland they primarily grow mandarins and other citrus fruit, pistachios, almonds, and pomegranates. Stewart started with a hunch buy in 1970 of 2,500 acres of oranges and lemons in California. Other land acquired in fast-sell situations followed.

The Offult Family. The family ownership includes 190,000 farmland acres in North Dakota. Primarily they grow potatoes.

The Fanjul Family. Sugarcane grown on 152,000 farmland acres in South Florida accounts for the primary operations of the Fanjuls.

The Bosewell Family. They own 150,000 farmland acres in the Central California Valley, farming cotton and also tomatoes.

There are more 80-100,000 acre American farmland owners. The majority of the American Farmers in number conduct operations on hundreds and as high as many, many thousands of acres. Family farms predominate in numbers of farms while the higher acreage farmland operators produce the greatest volume of farm products. All of it depends on mechanization and help from governmental policies and programs.

Every time for USA government budget hearings the Farm Bill allocation comes to public awareness. Underlying for farming are five main avenues through which the federal government supports farms: crop insurance, commodity programs, conservation payments, credit, and trade. The first three categories are expected to provide farming operations with about \$20 billion per year through 2023, making up 97% of Farm Bill appropriations outside of the Supplemental Nutrition Assistance Program (SNAP) (formerly “food stamps”).

Of these USDA farm safety net and lending programs, crop insurance is the largest component of the farm safety net. This program receives almost half of the

estimated \$20 billion in subsidies flowing to farms each year through the Farm Bill. Between 1989 and 2014 the number of crop insurance policies doubled, the number of insured acres doubled, the number of insured acres almost tripled, and spending on premium subsidies increased more than fifteen fold.

Categorized as a safety net, crop insurance operates more as an income subsidy. Often it gets support as a safety net for farmers in case of natural disaster and water and weather issues. While some crop insurance policies only protect farmers from crop losses – routine or not – most crop insurance provides revenue guarantees ensuring that covered crops remain lucrative.

Commodity programs include Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) which came into the Farm Bill in 2014. The commodity programs are expected to distribute an average of \$6 billion annually to 2023 – about 32% of the annual subsidies in the 2018 Farm Bill. Covered are specific commodities such as wheat, corn, sorghum, and rice by enhancing price or revenue protection for producers.

The Commodity Credit Corporation. This program, CCC for short (and no relation to FDR's Civilian Conservation Corps), funds a variety of USDA activities. Included are conservation programs, export assistance and international aid.

The agriculture secretary has the authority to distribute up to \$30 billion annually through CCC to fund mandatory programs as well as create new programs in support of the production, distribution, and marketing of agricultural commodities.

Conservation payments, credit and trade programs add to both regulations and possibilities for subsidies for American farmers. In short, these payments and programs bring about a new bunch of alphabet agencies for farmers to learn about, apply for, and try to collect.

CAFOs: Concentrated Animal Feeding Operations are on the rise. In this 21st Century the process for hog, cattle, dairy, some sheep, and chicken or turkey farming increasing has brought operations indoors or mainly so. Benefits to the operators result from conducting the activities out of the weather, seasonally or otherwise, and into buildings or sites occupying much, much smaller acreage (even square feet) than the historic pasturage or farm lots in the growth process of the animals. Increased prices and profits at sale result from cramming the animals into nearly immovable stalls or cages.

The Environmental Protection Agency invented the CAFO term for factory farms. The majority of the chickens, egg-laying hens, cattle, and pigs today are coming to be confined to these industrial factories in America. Natural cycles

customary in more typical farming activities can be ignored. Negatives include smell, although not limited to hogs, pests, use of antibiotics (70% of antibiotic use in the USA), and effluent to name a few. Pasturage for hogs, cattle, milk cows, and sheep typical in former days has gone through great reduction. Free range for chickens may be a name on a product, but there really can be found little resemblance now in the raising and feeding of chickens to Grandma's hen house and yard. From concern for antibiotic resistance to the environment, much more might be said about this area of farming, but that remains for another paper.

Farmers make up about 2% of the American rural population. A USDA analysis found that the operators on larger farms now are more likely to bypass local towns to acquire machinery, farm inputs and credit. So much for local banks, feed and fertilizer stores, and the small groceries and other shops of "Smallville" that provide goods and services to farms.

To view the Modern Farmer in America from another quarter, there are the developments in agriculture technology (AgTech). One of Elon Musk's more recent ventures has been to help his younger brother, Kimbal Musk, build a farm in New York City.

Vertical farming is a method of growing crops stacked in layers in order to utilize the tight spaces in cities where building up has been the skyscraper method.

In 2016 Kimbal started Square Roots, a vertical farming company in Brooklyn, New York. The purpose was to provide local supermarkets with fresh food grown from their own neighborhood. Since launching the company, Square Roots has grown 120 varieties of crops in 25 climate-controlled shipping containers.

Hydroponics at work.

The vertical farming market has been booming with more than 2,000 farms across the USA. “Strawberry Fields may not be forever” was headlined in a Fort Wayne Journal Gazette article on robotic pickers showing a stacked hydroponic tabletop factory growing strawberries. The plant is in Santa Maria, CA where robots have been picking strawberries with great care and precision all summer in 2022.

Vertical farming as a practice has been increasing in grower popularity. The vertically stacked layers can be climate-controlled to optimize year round growth using soilless farming techniques such as hydroponics, aquaponics, and aeroponics. Some common choices of structures to house vertical farming include buildings, shipping containers, tunnels, and abandoned mine shafts. The main advantage comes with an increased crop yield using a smaller unit area of land and less water.

Determining who should be in the picture on a Time Magazine cover as “The Modern American Farmer” takes a little casting. Maybe Bill Gates? Or perhaps modern farming practices by the Musk brothers? Then there might be cause to use one of the mega thousand landowners covered above.

My vote goes to a depiction of the middling sized family farmer with a couple of huge, expensive pieces of farm equipment in the background. These people represent the real “salt of the earth” who take pride in carrying on their craft and enjoy the livelihood of farming. Those family people know about care and nurture of the soil to produce food.

So we come to the definition of The Modern Farmer in America: People who cultivate the art of managing the financing, planting, growing, harvesting, selling, and providing the food to the USA and the globe.

Thank you all for covering the field with me.