

California Farm Commodities and the 2018 Farm Bill

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Commodity provisions in the 2018 Farm Bill are much like those in the 2014 Act, except for dairy and cotton, where the new law increases subsidies and, for dairy, increases production incentives for small farms.

The Agriculture Improvement Act of 2018, popularly known as the 2018 Farm Bill, is the latest in a long line of similar legislation stretching back to the New Deal of the 1930s that authorizes expenditures and sets regulations related to food, agriculture, rural development, and more. Unlike the passage of the previous Farm Bill, the Agricultural Act of 2014, which was delayed for 18 months due to contentious debate, the 2018 Farm Bill, which expires in 2023, was signed into law by the president on December 20, 2018, essentially on time. The Congressional Budget Office (CBO) projects total outlays of \$867 billion over the next 10 years for the programs authorized by the 2018 Farm Bill, which is down \$89 billion from similar CBO projections under the 2014 Farm Bill.

Although it has kept the nickname “Farm Bill” that was attached more than a half century ago, in recent iterations the great bulk of the Farm Bill budget authorization goes to food and nutrition subsidies for low-income people, with at best only indirect and tangential impacts on farms. Over the next five years, out of \$428 billion of Farm Bill budget authorization, the share of food assistance exceeds 76%, and crop insurance, commodity programs, and farm environmental and conservation programs together have a 23% budget share.

In the current Farm Bill, most farm program provisions changed only slightly from the 2014 Farm Bill. The commodity-related provisions in the Farm Bill

are most important for grains and oilseed crops that are grown mainly in the South and Midwest. Therefore, rather than attempting to list every commodity-related change in the new law, this article focuses on explaining changes in those few parts of the 2018 Farm Bill that may have potentially significant impacts on markets for farm products that are important in California.

Outline and Overview

We consider first the changes in dairy subsidies, in particular the changes to the main remaining dairy subsidy program, which, in 2014, replaced the old dairy price supports and direct farm payments. A new cotton subsidy program was introduced and expanded in 2018, and despite the decline in the California upland cotton industry, the new cotton program may be important for some California producers.

We then turn to a brief summary of changes for the other field crops such as rice. Fruits, tree nuts, vegetables, and other specialty crops do not have specific commodity subsidies, but there are a few provisions that are new or modified in the Horticulture Title of the bill. We also address (relatively minor) changes in provisions in the Crop Insurance Title, including those that apply to horticultural crops.

Crop insurance programs have their own authorization legislation and most major changes to crop insurance programs has occurred outside Farm Bill legislation. Finally, we address a few miscellaneous provisions that have gotten attention, such as legalization and regulation of industrial hemp production in the United States.

Dairy Programs

The most important change in the dairy provisions of the new Farm Bill relates to the Dairy Margin Coverage

(DMC) program, renamed from the Margin Protection Program, which has been the main dairy subsidy program since its introduction in the 2014 Farm Bill, and which was expanded and made more costly in the Bipartisan Budget Act of February 2018. The DMC continues to provide payments whenever the margin between milk price and feed costs falls below some legislated thresholds. The premium subsidy declines for higher margins and disappears for high margins for large quantities per farm.

DMC program payments are tied to a shortfall in the *national average* price of milk minus a *national average* cost of corn, soybeans, and alfalfa hay that is needed to produce that milk. Thus, the program does not use information about the *actual* milk price to feed cost margin of the actual farm enrolled. Under the new DMC program, farms may enroll in margin coverage from \$4.00 up to \$9.50 per cwt, for up to 5 million pounds of milk per farm. For additional milk, the highest margin covered is \$8.00 per cwt, and premium rates are far higher.

For perspective, a margin of \$4.00 has been rare and leads to huge losses on most farms because that margin leaves too little revenue to pay for the labor, cow replacement costs, capital costs, equipment, health services, management, and other dairy farm expenses. A margin of \$8.00 may allow profits on some farms, but for others, the combination of low milk prices or high feed costs would squeeze the long-term viability of the operation.

The 2018 Farm Bill increases subsidies and increases the maximum coverable margin from \$8.00 to \$9.50 per cwt for the first of 5 million pounds of coverage. Based on recent data, with a covered margin of \$9.50 per cwt, a

farm would expect a payout exceeding the premium more than half the time. The result of these 2018 changes is substantially more subsidy for the first 5 million pounds of milk per farm, which is especially important for the small dairies that predominate in the East. Production of 5 million pounds is equivalent to the milk from about 200 cows. This is above the average herd size in most states in the Eastern United States, but would cover only 10% to 15% of herds in California and other major Western dairy states.

To offset expected government budget costs of providing more subsidies for small farms, the 2018 Farm Bill raised the premiums for milk enrolled above 5 million pounds per farm per year. Thus, the new Farm Bill strongly favors the small farms in the East to the detriment of dairy farms in California and the West. The favored farms tend to be high-cost (and high-price) producers, sometimes targeting niche markets but also selling butter, milk powder, and cheese on national and global markets.

These added subsidies are large enough to keep smaller, high-cost operations in production during downturns when they might otherwise exit, and encourage expansion in herd size among farms with fewer than about 200 cows. Both these implications are likely to result in larger price declines and longer durations of low prices and thus lower revenues for larger farms that receive relatively little benefit from the program.

Such impacts may be important for California dairies, so we will provide a numerical example to illustrate the magnitudes. Let us consider the revenue impacts of the DMC program for a typical California dairy farm in the San Joaquin Valley with 1,600 cows producing 40 million pounds of milk per year compared to a typical New England farm with 160 cows producing 4 million pounds of milk per year.

The California dairy has milk revenue of about \$6.0 million per year (assuming farm milk price of \$15 per cwt) and in recent years has lost money or barely broken even at that price. The New England farm, that typically has had higher milk production costs but higher milk prices, has also lost money or barely broken even with an example price of \$17 per cwt and revenue of about \$680,000 per year.

To make the comparison easy, assume that both farms enroll 3.8 million pounds in the program (the maximum 95% of the base milk production of the smaller farm) at a margin of \$9.00 per cwt. The farms pay a Tier I premium of \$0.11 per cwt for a cost of \$4,180. Consider a year when the calculated margin is lower than \$9.00, say \$8.00 per cwt because national average feed prices are high or national average milk prices are low. With this example, both farms get a payment of \$38,000 (\$1/ cwt times 38,000 cwt) for their invested premium of \$4,180. For the California farm, the net payment of \$33,820 is about 0.56% of revenue, thus too little to affect farm survival or decisions about production. Notice that added revenue does not provide an incentive to expand the herd, because producing more milk would not increase the amount allowed to be enrolled below the 5 million-pound limit. Any milk enrolled above 5 million pounds is only eligible for a maximum of an \$8 margin at the very high premium of \$1.816 per cwt, which will be attractive to few producers and would have been a major net loss in our example.

For the New England farm, the benefits are the same in dollar terms, but are of far more significance in farm operations. The \$33,820 insurance gain is about 5% of milk revenue, implying that the margin payment would increase expected net revenue substantially. This increase in expected income would allow the smaller farm to weather margin downturns and

continue to produce milk when it would otherwise exit. Importantly, for industry-wide impacts, the smaller herds could, and likely would, respond to the subsidy by increasing milk production. The small herd used in this example could expand by 31%, from the current 160 cows up to 210 cows to maximize its expected DMC program benefits and remain under the 5 million pound limit.

The numbers in this comparison are for illustration only, and were chosen to make the calculations simple. But, they are not unrealistic. They illustrate the potential negative impact for California dairies (and other dairy farms with larger herds) of a subsidy program designed especially for the smaller herds. The DMC program encourages an expansion by smaller herds with fewer than 200 cows that produce about 20% of U.S. milk. This expansion would lower the market price of milk for all U.S. dairy farms. For the larger farms, only a tiny share of this loss in revenue due to the lower market price would be offset by DMC payments.

Let us illustrate a conservative estimate of expected market price impacts. If DMC subsidies expand production of smaller farms by say 10% relative to what they would have otherwise produced, this leads to a 2% increase in aggregate milk production. Using a short-run demand elasticity of -0.5, the implication is for prices to be 4% lower than they would otherwise be.

Starting with a price in California of \$15 per cwt, under this example, the DMC would cause the price of milk to be \$0.60 per cwt lower at \$14.40. This \$0.60 per cwt decline would reduce revenue for a typical California dairy with 1,600 cows (producing 40 million pounds of milk) by about \$240,000—far more than any realistic DMC payment gain (such as the \$33,820 in our example).

The DMC provides a range of options for dairy farms, but the main thrust

of the 2018 changes were to make the program far more lucrative for small farms. When enrollment incentives are combined with incentives for smaller herds to increase milk supply, the implication is that milk prices will be even lower, especially during periods of already low prices. The bottom line for larger farms is clearly negative. The DMC program was driven by interests of small, typically high-cost dairy farms that produce a small and declining share of milk in the United States. The subsidy in the program transfers money from the USDA budget to dairy producers, but the likely impact is a net loss to larger dairy farms such as those in California.

Grains and Oilseeds, Including Rice

The 2018 Farm Bill continues with little modification of the subsidy programs for grains and oilseeds. Eligible farms enroll in one of two programs: the Price Loss Coverage (PLC), which pays when prices are below a government-set threshold, and the Agricultural Risk Coverage (ARC), which pays when crop revenue falls below the government-set threshold. An important provision of the 2018 Farm Bill is that farms are allowed to update the per-acre yields used to determine their production eligible for payments under these programs. With average yields gradually rising, such updating allows for larger payments and creates an added incentive to adopt yield-enhancing practices.

The other provision that may be important for California producers using these traditional commodity programs is relaxation of limitations that had attempted to reduce payments to larger family operations with members that supply management, but not physical labor on the farm. For California, rice is the most important crop covered by these programs. The 2018 Farm Bill also includes a separate and higher government-set reference

price for japonica-type rice. California produces a japonica-type medium grain rice, which now has a program provision separate from the indica-type medium-grain and long-grain rice that is grown in the rest of the United States. These changes in provision allow for higher expected payments for California rice farms than they would have otherwise expected.

Cotton

The 2014 Farm Bill replaced farm program subsidies for cotton with a heavily subsidized, insurance-style subsidy. Despite the subsidy, most cotton acreage did not enroll, and the program was unpopular. The Bipartisan Budget Act of February 2018, mentioned above in the context of increased dairy subsidies, reintroduced cotton eligibility for the ARC and PLC subsidies under the guise of subsidies not for cotton lint (fiber) but for “seed cotton” (meaning the seeds to which the cotton lint is still attached prior to ginning). Cottonseed is used for oil and meal, as are other oilseeds such as soybeans. Since the cottonseed and cotton lint are produced together, the payments, based on either seed or lint, go to cotton producers and create an incentive to plant cotton. The 2018 Farm Bill extends this new seed-based cotton program and makes it even more lucrative for producers of upland cotton.

The government-set reference price for seed cotton, which is a weighted average of the price of cotton lint and the price of the cottonseed by-product, has been set high enough that budget analysts expect substantial payments under the program. Based on price projections for the next decade (averaging \$0.34 per pound), the payment rates per pound are in the range of \$0.025, and the resulting total cotton payments would be in the range of \$400 million per year—about 7.5% of the market revenue of cotton lint. However, like other such programs, the potential subsidy rate may be much higher if cotton

prices fall significantly. Low prices similar to those that occurred from 2006 to 2008, which averaged about \$0.21 per pound, would mean payments would expand to \$2.5 billion per year and be more than 75% of market revenue of cotton lint.

Three other changes to commodity program provisions are now also important for cotton subsidies. First, the update of program yields will allow higher payments per acre and create an incentive to undertake yield-enhancing practices to gain from future updates. Second, broader payment eligibility for family members will likely increase the payments for cotton. And, third, the 2018 Farm Bill adjusted rules for setting the effective reference price that triggers payments, which will likely increase cotton payment per pound from above the projections made under the February 2018 program.

Crop Insurance

Provisions of the federal crop insurance program, which is permanently authorized under the Federal Crop Insurance Act, changed little under the 2018 Farm Bill. The subsidies include administration and operations costs, reinsurance provided to insurance companies, and premium subsidies averaging about 60% of total premiums. The Congressional Budget Office projected crop insurance outlays for the next 10 years to be about \$7.8 billion per year, which is almost 40% of all agriculture-related outlays. Crop insurance subsidy has been an important source of revenue for field crops such as cotton, feed grains, and oilseeds for many years. However, it has been a smaller share of revenue for specialty crops, even though its availability has expanded to most fruit and nut crops and some vegetables.

One change to crop insurance provisions in the 2018 Farm Bill, which may be important for small California specialty crop farms, is the increase in the administrative fee (from \$300 to

\$655) for enrolling a crop in the premium-free catastrophic risk protection. Catastrophic insurance, also called CAT, is fully government-subsidized, except for the administrative fee for each policy (defined as an enrolled crop in a county). The CAT enrollment fee increase may induce some smaller farms to no longer enroll.

CAT provides indemnity payments based on 55% of the “normal” price for losses of more than 50% of normal yield, and is, thus, designed to provide farms with basic protection at no premium in the event of severe crop loss. However, with the new fee increase, some farms with small acreage of some crops may find it cheaper to enroll in conventional (non-catastrophic) crop insurance (also called buy-up), which also offers higher protection in return for (still subsidized) farmer-paid premiums.

Consider an example of an almond farm with revenue of \$6,000 per acre. For this farm, the premium for buy-up insurance with the same protection as CAT would be about \$33 per acre (assuming the 2% premium rate applied to the liability of \$1,650 per acre). With about two-thirds of that premium paid by the government, the cost to the farm is about \$11 per acre. For this example, the premium cost of buy-up crop insurance is cheaper than the CAT fee for growers with less than about 60 acres (\$655/\$11). This is an increase from 28 acres under the previous fee of \$300. Given that many specialty crop farms in California grow several crops, the \$655 fee per crop can be a substantial cost for farms with small acreage of each crop, and the CAT fee increase may cause some farms that had enrolled in the CAT to go uninsured.

Other Provisions of Interest to California Agriculture

The 2018 Farm Bill includes little change in specialty crops programs from the 2014 law. It maintains specialty crop research programs and

international promotion programs that are used heavily by California industry groups. For organic farms, it adds a few million per year of authorized funding for organic programs and strengthens the organic certification requirements for imported agricultural products.

One specific provision has received much attention in the popular media. The 2018 Farm Bill removes severe limits on production of industrial hemp. The new law defines industrial hemp as a cannabis plant that has no significant amount of THC. Industrial hemp produces fiber that may have some commercial uses and oil that has some attractive properties. It has been produced in Canada for many years, and is typically grown as an alternative in rotation with wheat, feed grains, and other oilseeds.

Industrial hemp may also be used as a source of CBD, a compound that has garnered considerable interest for health-related claims. In addition to relaxing production restrictions, the 2018 Farm Bill has made hemp eligible for subsidized crop insurance along with other field crops. It is not yet clear where in California growers may have a comparative advantage in hemp production.

Final Remarks

The 2018 Farm Bill commodity provisions are mostly business as usual. We have highlighted a few places, especially in dairy and cotton policy, where the 2018 Farm Bill increases subsidy rates or made the programs more lucrative for some farms.

As with previous farm bills, food and nutrition subsidies dominate “Farm Bill” spending. Those policies mainly operate as income assistance for the poor and linkage to the commodity-oriented farm programs is tenuous at best. It is, therefore, once again important to ask why a “Farm Bill” that combines such unconnected sets of policies should be formulated as a single piece of legislation. Of course,

there may be practical political reasons (probably less compelling in the recent environment) to cobble together these disparate sets of policies. But, in terms of sound public policy, it seems hard to rationalize. A thorough evaluation of food and nutrition funding that provides income support for the poor and a separate thorough evaluation of farm commodity subsidy and revenue support for farm businesses would likely lead to policies more suited to public goals in both arenas.

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Suggested Citation:

Lee, Hyunok and Daniel A. Sumner. “California Farm Commodities and the 2018 Farm Bill.” *ARE Update* 22(3) (2019): 2–5. University of California Giannini Foundation of Agricultural Economics.

For additional information, the authors recommend:

Congress.gov. H.R.2-Agriculture Improvement Act of 2018. www.congress.gov/bill/115th-congress/house-bill/2.

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