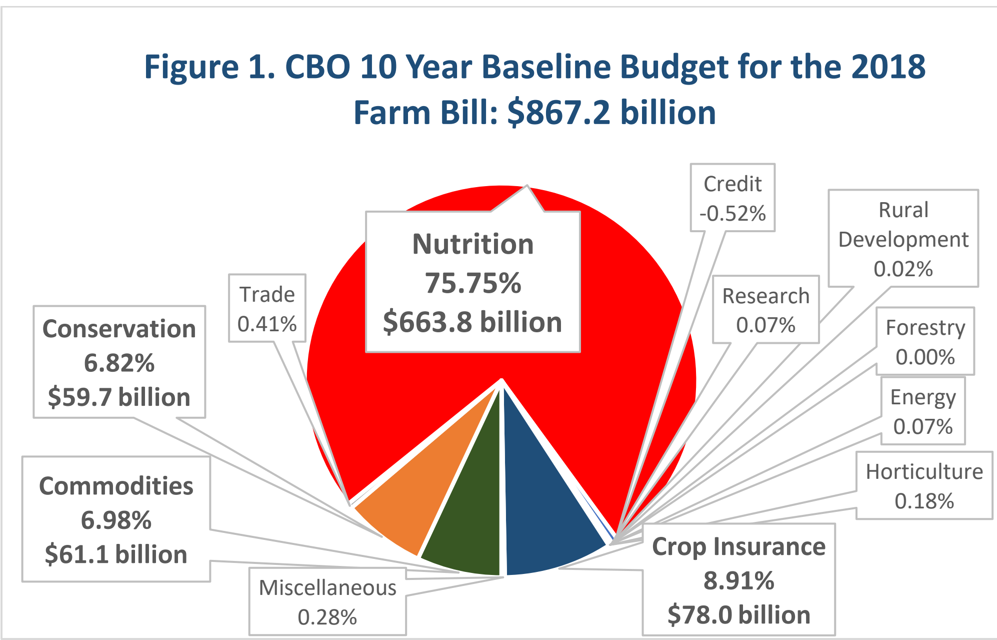
An Overview of the 2018 Farm Bill

Blake Brown
Hugh C. Kiger Professor
North Carolina State University

January 25, 2019

Executive Summary

The week of December 10, 2018 the Senate and House passed H.R. 2, the *Agricultural Improvement Act of 2018* with the President signing the bill into law on December 20, 2018. The 807 page conference report is focused mainly on nutrition programs for low income people and programs that support farm income, rural communities and the rural natural environment. The Congressional Budget Office projects total spending on the bill over the 2019-2023 period to be $428 billion and $867 billion over the 10 year budget period, 2019-2028. The implementation of the bill is administered largely by the USDA (United States Department of Agriculture).



There are twelve titles, or sections, in the farm bill. Nutrition is the largest title and funds the Supplemental Nutrition Assistance Program (SNAP) as well as a number of other nutrition programs for low income citizens, including the school lunch program and programs focused on women and children.

Eight titles target agriculture specifically. The other three titles, Energy, Rural Development and Forestry address programs regarding renewable energy and energy conservation, funding of rural infrastructure like broadband access or flood control, and forest management.

Of the agriculture titles, Crop Insurance, Commodities, and Conservation are the largest comprising almost $20 billion of spending; 23 percent of the total. Crop Insurance provides insurance, at subsidized rates, to farmers for yield and revenue loss. Commodity programs also provide farmers with protection against income and revenue loss. The Conservation title provides technical assistance and funding for programs to incentivize farmers, land owners and rural public entities to implement practices that conserve natural resources or provide some environmental benefit.

The remaining five agriculture titles, Trade, Credit, Research and Extension, Horticulture, and Miscellaneous, cover assistance with trade promotion, agriculture loans and loan guarantees, support of USDA and agricultural university research and outreach, promotion and marketing of specialty and organic crops as well as animal health and welfare programs. Of particular note in title X (Horticulture) is that hemp (Cannabis sativa L.) production is legalized. Production will be regulated by USDA or States or Indian tribes that have regulatory plans approved by USDA.

Major Titles

Four of the twelve titles, Nutrition, Crop Insurance, Commodities and Conservation comprise 95 percent of farm bill spending. Following is a discussion of the largest titles as ranked by spending.

Title IV. Nutrition

In December 2018 CRS reported that Nutrition title spending for current programs in the Farm Bill over the 10 year budget period was expected to be $664 billion; about 75 percent of the total budget. While there are a number of nutrition programs the Supplemental Nutrition Assistance Program (SNAP) is by far the largest. In FY 2018 SNAP accounted for 68 percent of $96.1 billion of USDA FY 2018 spending on nutrition programs under the *Agricultural Act of 2014.* Other nutrition provisions include food distribution programs, programs that target children (e.g. the National School Lunch Program) and seniors, as well as the Special Supplemental Nutrition Program for Women, Infants and Children.

According to the Congressional Research Service (CRS) SNAP was utilized by a monthly average of 42.2 million low income people in 20.9 million households in FY2017. SNAP recipients receive an electronic benefit card that can be exchanged for food. States have considerable authority with how they administer the program and how eligibility is determined. Table 1, from CRS, the percentage of SNAP recipients as compared to the official poverty measure.

Table 1. Gross Incomes of SNAP Households by Percentage of Poverty Level: FY2016

	Below Poverty Level	100 to 130 Percent of Poverty Level	131 Percent or Higher of Poverty Level
All SNAP Households	81.8%	12.6%	5.7%

Source: Congressional Research Service

The June 2018 House passed version, was scored with 10-year savings of over $1.4 billion relative to the baseline by making changes to eligibility requirements for SNAP recipients most notably by establishing work requirements for work capable adults. The June 2018 Senate passed version was scored with a marginal increase of $94 million in spending and did not make any eligibility requirement changes to SNAP. Ultimately, thehe *Agricultural Improvement Act of 2018* makes a number of changes to Nutrition programs but in large-part the programs continue as under the previous farm bill.

The House Committee on Agriculture was not the only entity calling for expanded work requirements. In a July 2018 report the Council of Economic Advisers (CEA) present reasons for expanding work requirements for non-disabled working-age adults. The CEA reported that 67 percent of adult SNAP recipients in 2013 were non-disabled and working-age. Both of these calls for expanded work requirements complement an executive order signed by President Trump in April 2018 a part of which asked agencies to strengthen work requirements in welfare programs.

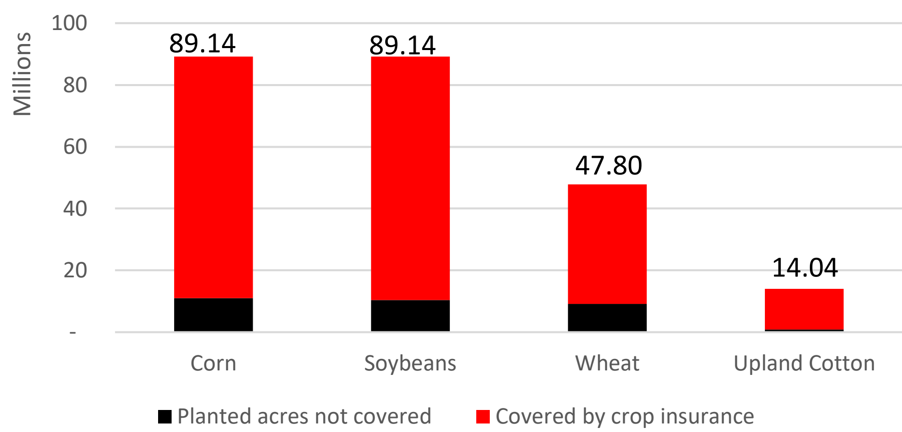
The final version of the *Agriculture Improvement Act of 2018,* while not expanding work requirements, did include some provisions to incentivize recipients to participate in the workforce. Several of these include strengthening the employment and training programs conducted by states; in particular encouraging development of new programs and rewarding states with impactful new and existing employment and training programs. The Act also reduces the proportion of the recipient population of able-bodied adults that states can exempt from current work requirements from 15 to 12 percent.

The Act also improves program integrity by strengthening standards for tracking the length of time recipients are on SNAP and keeping track of multi-state data to prevent recipients from receiving benefits in multiple states. Annual state bonuses of $48 million are eliminated and states are made more accountable for administration of SNAP. The Act further attempts to reduce fraud by limiting benefit storage in the electronic benefit transfer system to 3 instead of 6 months.

Title XI: Crop Insurance

Federal crop insurance covers about 130 crops and is designed to provide farmers insurance against yield and revenue losses. It has grown to be the second largest farm bill program in terms of cost and is projected to be $78 billion for the 2018 bill. The program is operated by private insurance companies and two government entities; the Federal Crop Insurance Corporation (FCIC), which reinsures policies and subsidizes private insurers, and the Risk Management Agency (RMA), a USDA agency that sets insurance premiums and other policy for the program plus regulates the private insurers. Farmers purchase insurance through the private insurers known as Approved Insurance Providers (AIP).

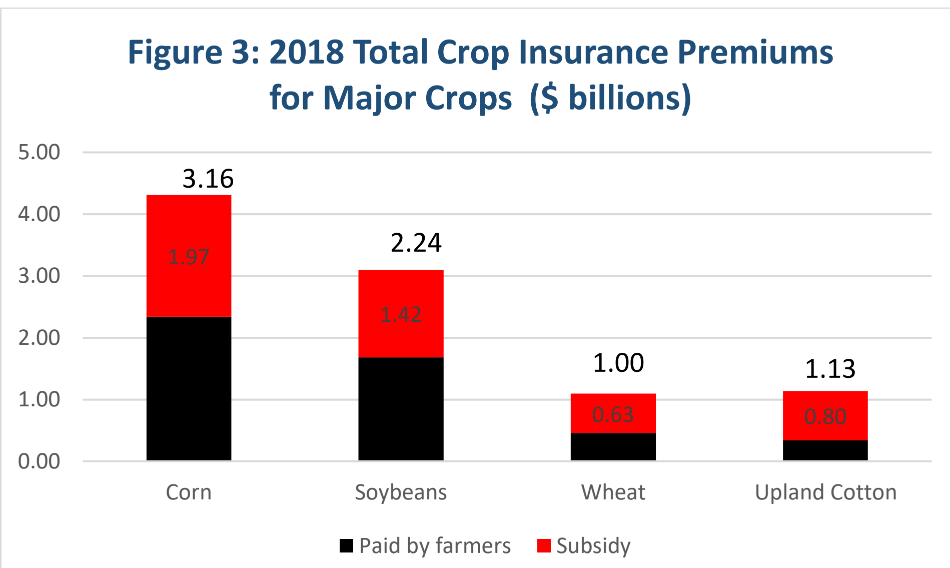
Figure 2. 2018 Planted Acres of Major Crops: Crop Insurance Coverage (million acres)



Farmers can insure covered crops against yield loss or revenue loss. The Congressional Research Service reports that in 2013 1.2 million crop insurance policies were active with ¾ being revenue insurance. In a yield insurance policy the producer must establish historical yields against which yield loss is measured. RMA assigns a crop price based on projected market conditions. The farmers may choose different percentages of his historical yield for which to purchase insurance. The lowest level of coverage, Catastrophic coverage (CAT), pays when yield is less than 50 percent of the farm's established historical yield. The payment is based on 55 percent of the RMA projected market price. Producers can buy coverage on losses on higher proportions of their historical yield. In some areas the coverage can be as high as covering losses on 85 percent of established yield paid at 100 percent of the RMA projected market price. CAT coverage is 100 percent subsidized so there is no cost to the producer. Higher levels of coverage are partially subsidized.

Revenue insurance combines both a yield and price guarantee. The insurance may be specific to a particular crop. In that case the insurance is against revenue loss as measured against the farm's historical yield and market prices. There are a number of options. For example a farmer can choose an option for which the price guarantee portion of the policy rises when market prices rise. He can also choose an option that insures against not only losses based on yields and market prices but also on losses due to low crop quality. Revenue insurance for specific crops is available on fewer crops than is yield loss insurance. This type of revenue insurance is available for barley, canola, corn, cotton, grain sorghum, peanuts, rice, soybeans, sunflowers and wheat with certain types of revenue insurance also available on a few other select crops.

The other type of revenue insurance insures the revenue of the whole farm rather than a specific crop. Since Whole-Farm Revenue Protection (WFRP) is based on the farm's total revenue, farms with non-covered crops, for example some specialty crops, and animals or animal products, can use WFRP. Farms with covered crops or some combination of covered and non-covered enterprises can also use WFRP. But they cannot also use yield insurance or another type of revenue insurance. The level of revenue that can be insured is the lower of the revenue expected based on the current year's farm plan or the farm's five year historic income adjusted for growth. Coverage levels can range from 50 to 85 percent of insured revenue.



Title I. Commodities

The commodities title covers the Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC) programs that provide subsidies to farmers when prices or revenue fall below specified levels. These programs will be similar to the PLC and ARC programs under the *Agricultural Act of 2014* but with a number of updates. Producers may participate in either but not both. The 2018 bill does allow farms to each year change which program they elect beginning with 2021. In the 2014 bill the choice of using PLC or ARC could only be made at the beginning of the program and could not be changed. The title also includes the Marketing Assistance Loan (MAL) program for specific crops that can provide a producer interim financing based on the government holding the crop as collateral.

Price Loss Coverage (PLC)

The PLC program provides payments to farmers when the national marketing year average price (NMYAP - essentially the national average cash market price for a crop year) for a specific commodity falls below a price specified in the farm bill called the reference price. In the 2014 farm bill reference prices were set in the farm bill legislation and could not change over the life of the bill. In the 2018 bill the PLC reference prices set in the 2014 bill are used as minimum levels, but an effective reference price (ERP) is determined each year based on the greater of 85 percent of the 5-year Olympic average market price or the set reference price but no greater than 115 percent of the set reference price. This change means that the ERP can rise above the set reference price should market prices rise. But the ERP is limited to no more than 115 percent of the set reference price.

When market prices for a crop are below the ERP, a farmer's payment from the PLC program for a specific crop is determined by the ERP minus the NMYAP multiplied by a historical yield for the farm ("program yield") and 85 percent of the farm's historical acreage ("base acres") for the crop. The 2018 farm bill also provides opportunities for producers to update their historical program yields used in PLC payment calculations. Not all crops are eligible for PLC payments. Table 1 gives a list of all crops for which PLC is available.

Table 2. Crops covered by PLC and ARC: reference prices and 5-year Olympic Average of market year average prices for select crops.

Commodity	Units	PLC Reference Price	Maximum Effective Reference Price	5-Year Olympic Average (2013-2017) NMYAP
Barley	Bu	$4.95	$ 5.69	$5.26
Chickpeas (Large)	Cwt	$21.54	$ 24.77	$31.20
Chickpeas (Small)	Cwt	$19.04	$ 21.90	$24.23
Corn	Bu	$3.70	$ 4.26	$3.56
Dry Peas	Cwt	$11.00	$ 12.65	$12.20
Grain Sorghum	Bu	$3.95	$ 4.54	$3.52
Lentils	Cwt	$19.97	$ 22.97	$26.27
Minor Oilseeds	Cwt	$20.15	$ 23.17	varies
Oats	Bu	$2.40	$ 2.76	$2.64
Peanuts	Ton	$535.00	$ 615.25	$430.67
Rice (LG/MG/SG)	Cwt	$14.00	$ 16.10	$11.50 (lg) / $12.43 (mg/sg)
Rice (TI)	Cwt	$17.36	$ 19.96	$19.17
Seed Cotton	Lb	$0.367	$ 0.42	
Soybeans	Bu	$8.40	$ 9.66	$9.63
Wheat	bu	$5.50	$ 6.33	$5.20

For example, suppose a farm has a historic program yield for soybeans of 45 bushels per acre, 500 base acres and that the NMYAP is $8.00 per bushel. Assume also that the ERP is equal to the PLC reference price of $8.40 per bushel. The farm payment for soybeans for the year in question is then 45 X 0.85 X 500 X ($8.40 - $8.00) = $7,650. The payments are reduced 6.8 percent by sequester (until Fiscal Year 2021) so the actual farm payment would be $7129.80. The 5-year Olympic average (2014-2018) is given in table 1 for select crops. Note that of the major crops, only soybeans has an average for this particular period greater than the reference price. The average is updated each year. It is only relevant for the ERP if 0.85 multiplied by the 5-year Olympic Average is greater than the reference price.

A New Program: Seed Cotton

In 2002 Brazil filed a dispute settlement case with the World Trade Organization (WTO) against provisions in the U.S. cotton program. The WTO found that cotton support payments and export credit guarantees were inconsistent with WTO commitments. Consequently in the Agricultural Act of 2014 the traditional cotton program of counter-cyclical payments was scrapped for a new revenue insurance type program, the Stacked Income Protection Program (STAX). STAX proved very unpopular with producers. Consequently another program, the seed cotton program, was designed and passed into law as an amendment to the 2014 farm bill in the Bipartisan Budget Act of 2018, 10 months prior to the passage of the Agricultural Improvement Act of 2018. The Agricultural Improvement Act of 2018 continues the seed cotton program as passed under the Bipartisan Budget Act with few changes.

Rather than link payments to cotton lint (the fiber used to manufacture textiles) as was the case in previous cotton programs, the seed cotton program links payment to un-ginned cotton (termed seed cotton) that is made up of both cotton lint and seed. (Ginning separates the lint from the seed.) Farmers sell both cotton lint and seed; but do so separately. Seed mostly goes to domestic markets, while most lint is exported to be manufactured into textiles. Since no market price for seed cotton exists, the program calculates a price for seed cotton as a weighted average of the lint and seed prices. A marketing year average price below the effective reference price ($0.367-$0.422 cent per pound of seed cotton) triggers a farm program payment.

Will Brazil file another dispute settlement? The export credit guarantee program (the Step 2 cotton program) that was part of Brazil's complaint was eliminated in 2006. The counter cyclical payments (CCP) that existed when Brazil made their complaint were eliminated in the 2014 farm bill. The reference prices under the 2018 farm bill work in a similar manner but are functionally the same as the Price Loss Coverage payments for the soybean and corn programs. Brazil has not filed complaints about the soybean and corn programs which were in similar form under the 2014 farm bill. Part of Brazil's complaint was the CCP depressed world cotton prices. The WTO arbitrator found that the CCP depressed world cotton prices by 9.38 cents per pound.

How does the minimum effective reference price of $0.367 for seed cotton compare with recent cotton prices? According to National Cotton Council calculations, the marketing year average prices for seed cotton as calculated for marketing years 2012/13 through 2016/17 ranged from a high of $0.393 to a low of $0.316. In three of the five marketing years the marketing year average price was below $0.367. Brazil would not likely be able to file another complaint until after the first payments for seed cotton program are reported by USDA in December 2019 or January 2020.

Agricultural Risk Coverage (ARC)

A farm may enroll in ARC instead of PLC. The ARC makes payments to a farm when actual revenue for a covered crop is less than the benchmark revenue. Farmers can choose between ARC that is based on yields for the farm's county (ARC-CO) or the farm's actual yield history (ARC-IC). The benchmark revenue for a county is determined by 86 percent of the benchmark price, the 5-year Olympic Average of the NMYAP, multiplied by the 5-year Olympic Average yield (the benchmark yield) of the county of the farm. The price used in the benchmark revenue calculation must be greater than or equal to the ERP. The actual revenue is determined by the NMYAP times the actual county yield. The payment rate per acre is the benchmark revenue minus the actual revenue when the actual is below the benchmark. The payment rate cannot exceed 10 percent of the benchmark price times the benchmark yield. Enrolled farms receive the payment rate times 85% of the farm's base acres for the crop. A difference in the 2018 bill from the 2014 bill is that a yield trend adjustment factor is applied that may automatically adjust county yields upward over the 5 years of the bill.

For example, suppose for soybeans the 5-year Olympic Average yield for county X where farm Y is located is 50 bushels and the 5-year Olympic Average NMYAP is $9.25 per bushel. Suppose also that the NMYAP for the year in question is $9 and the actual county yield for that year is 40 bushels per acre. The benchmark revenue for ARC-CO is 0.86 X $9.25 X 50 = $397.75 per acre. The actual revenue is $9 X 40 = 360. The farm enrolled in ARC-CO will receive $397.75 - $360 = $37.75 for 85% of the farm's base acres

Marketing Assistance Loan (MAL)

Farmers may pledge their crop as collateral and receive a loan from USDA. This allows a farmer to receive some loan funds at harvest if they decide not to sell the crop at harvest. They can then later sell the crop, perhaps after crop prices have improved, and pay back the loan. They do have several other options under MAL including forfeiting the crop and not repaying the loan. However, most the loan rates are considerably lower than market prices so this is an unlikely option. The only change the 2018 farm bill makes in MAL is to raise marketing loan rates.

Title II: Conservation

The *Agriculture Act of 2014* includes over 20 programs (Appendix Table 1) that provide direct or indirect assistance to farmers, landowners or public entities to implement conservation practices on agricultural and forest land. The *Agricultural Improvement Act of 2018* continues these programs with some changes and some additional funding.

Conservation programs encourage farmers and landowners to adopt or improve conservation practices through a variety of incentives ranging from direct payments to cost-share of practices. For example, one of the largest programs, the Conservation Reserve Program (CRP), promotes replacement of crops on highly erodible land with plantings that control erosion or provide other environmental benefits by paying farmers who are selected by submitting bids (generally the lowest payment the farm is willing to accept to implement the practice) and applications. Applications and low bids are accepted subject to their ranking based on environmental benefits. Some producer oriented programs, for example the Environmental Quality Incentives Program (EQIP), provide technical assistance and direct payments to implement conservation practices on active crop land. Other programs encourage public entities to promote or engage in conservation practices. For example, Watershed and Flood Prevention Operations, offer technical assistance and funding to public partners (e.g. local governments) for protection of watersheds or prevention of flood control.

Table 3. The Rest of the Titles (sections) of the Farm Bill These 8 titles comprise 5.1 percent, $4.4 billion, of the projected cost of the 2018 Act.	
Title	**Description**
III. Trade	Provides support for U.S. agricultural export and international food assistance programs. The 2018 Act includes $255 million each year for Agricultural Trade Promotion and Facilitation.
V. Credit	Provides loan guarantees for agricultural loans to commercial lenders as well as makes direct loans to farmers. The 2018 Act provides additional incentives for beginning farmers and ranchers.
VI. Rural Development	Provides funding and technical assistance, often in conjunction with local and state governments, for economic development and infrastructure (e.g. broadband) in rural areas.
VII. Research and Extension	Supports agricultural research and outreach at USDA as well as cooperative extension and research at land grant and 1890's universities.
VIII. Forestry	Provides funding for management of the National Forest System and some forestry assistance programs for private lands. It also provides assistance for wildlife mitigation and forestry research.
IX. Energy	Encourages research, development, and implementation of renewable energy. Programs range from financial assistance in rural areas with energy efficiency improvements to loan guarantees for biobased product manufacturing.
X. Horticulture	Funds programs that support the specialty crop and organic sectors. This includes block grants administered by states for promotion and marketing of specialty crops, a national program for certification of organic farms, management of plant pest and diseases. Legalizes hemp (Cannabis sativa L) production. Production will be regulated by USDA or by states or Indian Tribes that have regulatory plans approved by USDA.
XII. Miscellaneous	Provides funding for some animal health and welfare related programs as well as assistance for socially disadvantaged and limited-resource producers.

References:

"2018 Farm Bill: House and Senate Conference Report Summary." December 11, 2018.

Agricultural Improvement Act of 2018 Conference Report. 115th Congress (2018) Report 115-1072. https://www.congress.gov/congressional-report/115th-congress/house-report/1072/1?overview=closed Accessed: December 14, 2018.

National Cotton Council. "Seed Cotton Program Frequently Asked Questions." April 23, 2018. http://www.cotton.org/econ/govprograms/upload/Seed-Cotton-Frequently-Asked-Questions_April-23.pdf Accessed: December 20, 2018.

U.S. Congressional Budget Office. U.S. Congress. "Direct Spending and Revenue Effects of the Conference Agreement for H.R. 2, the Agriculture Improvement Act of 2018." December 11, 2018. https://www.cbo.gov/publication/54880 Accessed: December 14, 2018.

U.S. Congressional Research Service. “Budget Issues Shaping the 2018 Farm Bill.” Report R45425, December 6, 2018. https://fas.org/sgp/crs/misc/R45425.pdf Accessed: December 17, 2018.

U.S. Congressional Research Service. “Brazil’s WTO Case Against the U.S. Cotton Program.” Report RL32571. June 21, 2011. R. Schnepf. https://fas.org/sgp/crs/row/RL32571.pdf Accessed: December 19, 2018.

U.S. Congressional Research Service. “Seed Cotton as a Farm Program: In Brief.” Report R45183. March 26-August 1, 2018. https://www.everycrsreport.com/reports/R45143.html Accessed: December 17, 2018.

U.S. Congressional Research Service. “The Supplemental Nutrition Assistance Program (SNAP): Categorical Eligibility.” Report R42054. June 22, 2018. R.A. Aussenberg and G. Falk. https://fas.org/sgp/crs/misc/R42054.pdf Accessed: December 18, 2018.

Appendix Table 1. Conservation Programs	
Program	**Description and Changes in *2018 Agriculture Improvement Act***
Agricultural Conservation Easement Program	Provides financial and technical assistance on easements to limit non-agricultural use of agricultural land and easements to protect and restore wetlands **2018 Act restores funding to $450 million per year and streamlines planning requirements for agricultural land easement and increases program flexibility**
Agricultural Management Assistance Program	Provides cost-sharing assistance for a broad array of practices with the goal of reducing production, price or revenue risk.
Conservation Operations and Technical Assistance Program	Funds Natural Resources Conservation Service technical assistance to producers and land owners via field staff throughout the U.S.
Conservation Reserve Program (CRP)	Provides annual rental payments to producers to replace crops on highly erodible and environmentally sensitive land with long-term resource conserving plantings. **2018 Act increases the acreage cap for CRP to 27 million acres by 2023.**
• Conservation Reserve Enhancement	Allows states to enroll producers and landowners in special CRP program to address special environmental or resource concerns. State cost share the program.
• Farmable Wetland	Enrolls up to 750,000 acres of agricultural wetlands in conservation practices
• Grasslands	Enrolls rangeland, pasture and certain other lands in CRP while maintain grazing
Conservation Stewardship Program (CSP)	Provides technical and financial assistance to producers and landowners for conservation practices. **2018 Act reforms CSP and reduces funding from $1.8 billion per year to no more than $1 billion.**
Emergency Conservation Program	Provides emergency funding for rehabilitation of farm land damaged by natural disasters.
Emergency Forest Restoration Program	Provides cost-share assistance for repair and rehabilitation of forest damaged by natural disaster. Must be non-industrial forest land.
Emergency Watershed Protection Program	Provides technical and financial assistance for water-sheds damaged by natural disasters to reduce hazards.
Environmental Quality Incentives Program (EQUIP)	Eligible producers and land owners receive payments for implementing conservation practices. **2018 Act increases funding to $2.025 billion by 2023.**
• Conservation Innovation Grants	Awards competitive grants to state and local agencies, NGOs, tribes and individuals to implement innovative conservation practices.
Grassroots Source Water Protection Program	Provides National Rural Water Association with technical assistance to operate state source water protection programs.
Healthy Forests Reserve Program	Uses 10 and 30-year contract and 30-year easements to provide financial and technical assistance for forest enhancement and restoration.
Regional Conservation Partnership Program	Provides financial and technical assistance for multi-state or watershed scale projects. **2018 Act increases funding to $300 million per year.**
Voluntary Public Access and Habitat Incentive Program	Competitive grants are offered to states to promote voluntarily making private land available for recreation use (e.g. hunting and fishing)
Water Bank Program	Offers 10 year contracts to land owners to maintain wetlands.
Watershed and Flood Prevention Operations	Partners with local partners to construct watershed and flood prevention projects.
Watershed Rehabilitation Program	Provides funding for rehabilitation of aging watershed dam projects. **2018 Act provides $500 million over 10 years for projects.**
Feral Swine Eradication and Control Pilot (new program)	**2018 Act provides $75 million to establish a pilot project to control and eradicate feral swine.**