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THE U.S. FARM BILL:
OVERVIEW, AND PROGRAM PARTICIPATION AND IMPORTANCE IN WYOMING

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Contents

Introduction

The United States has about 2.1 million farms, according to the 2012 Agricultural Census. Thirty- eight percent of these farms receive some form of farm program payment through the federal legislation known as the farm bill. **[See BOX 1: THE AGRICULTURAL ACT OF 2014]** Because less than 1 percent of the U.S. population claim farming as an occupation, and only about 2 percent live on farms, it may be easy to conclude the farm bill affects only a small percentage of Americans; however, in 2012, one in four Americans participated in at least one food assistance program administered by the U.S. Department of Agriculture (USDA). These well-known programs include the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps), school breakfast and lunch programs, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), child and adult care food programs, and commodity distribution. One in seven Americans received some level of SNAP benefits alone. SNAP and commodity distribution are the focus of Title IV of the latest farm bill, the Agricultural Act of 2014 (Public Law 113-79).

Indirectly, the farm bill affects farming and non-farming households in many other ways. Farm bill programs can affect the prices, quality, and safety of the foods we eat; the sustainability of the farm and ranch lands on which our food is grown; the conservation of wildlife habitat and other natural resources on agricultural lands; the scientific advances that affect agricultural productivity and profitability; the role of biofuels in the nation's energy portfolio; the prosperity of rural communities; and more.

The Congressional Budget Office estimates direct spending on the programs authorized by the 2014 farm bill will total $956 billion over the 2014-2023 period (approximately $96 billion a year) (Congressional Budget Office, available at: http://agriculture.house.gov/sites/republicans.agriculture.house.gov/files/documents/CBO_AgriculturalAct2014.pdf). Farm bill-related expenditures are captured in the annual outlays of USDA, the federal agency charged with implementing farm bill programs and provisions. In 2012, USDA outlays accounted for only about 4 percent of all U.S. federal agency outlays, but they ranked fifth behind outlays by the Department of Health and Human Services (which administers Medicare), Department of Defense, Social Security Administration, and U.S. Department of the Treasury (which makes payments on the national debt). Between 2002 and 2012, USDA outlays more than doubled (in nominal dollars), and USDA's share of all federal outlays grew about a half of a percent (Table 1).

Table 1. Outlays by Federal Agency (millions of dollars)

Agency	**2002**	**2012**
Agriculture	$68,622 (3.4% of total)	$139,717 (3.95% of total)
Commerce	5,312	10,273
Defense	331,845	650,867
Education	46,373	57,249
Energy	17,669	32,484
HHS (Medicare)	465,326	848,056
Homeland Security	17,570	47,422
HUD	31,788	49,600
Interior	9,739	12,891
Justice	21,178	31,159
Labor	64,686	104,588
State	9,327	26,947
Transportation	56,252	75,149
Treasury	371,187	464,714
NASA	14,405	17,190
NSF	4,155	7,255
Social Security (off budget)	442,010	632,903
Total Outlays	**$2,010,894**	**$3,537,127**

Source: Office of Management and Budget

BOX 1: THE AGRICULTURAL ACT OF 2014

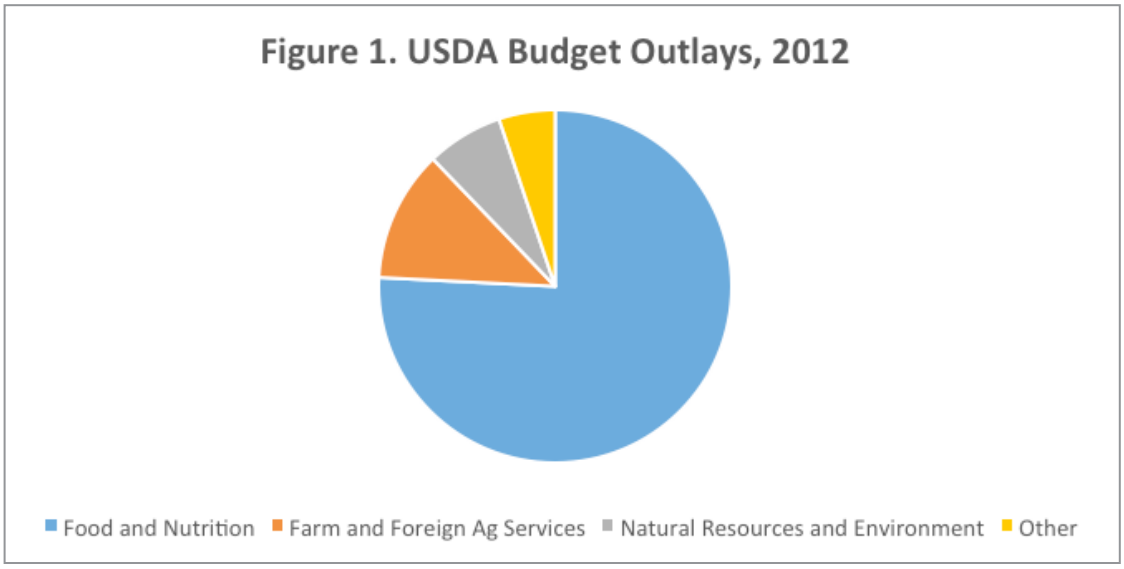
The official name of the farm bill signed into law on February 7, 2014, is the Agricultural Act of 2014 (Public Law 113-79). The brevity of the title belies the broad scope of the legislation, which spans 350 pages and 12 titles.

Titles and Purposes of the Agricultural Act of 2014

Title Number	Title Name	Purpose
I	Commodities	Price or revenue support for growers of qualifying commodities
II	Conservation	Conservation of cropland for various time periods; adoption of conservation activities and practices by farmers and ranchers
III	Trade	Food aid, export credit guarantee, and overseas market access
IV	Nutrition	Food and nutrition assistance for low-income households
V	Credit	Farm ownership and operating loans
VI	Rural Development	Rural community development, such as small business loans, water management projects, rural electrification and rural broadband investments, distance learning, and telemedicine
VII	Research & Extension	Agricultural research and extension at land-grant universities, and identification of national research priorities
VIII	Forestry	Forest health initiatives
IX	Energy	Investments in alternative energy technology and production of renewable biomass for biofuels
X	Horticulture	Specialty crop promotion, including organic, local food, and farmers market activities
XI	Crop Insurance	Crop insurance to protect against losses due to price and yield risk
XII	Miscellaneous	Livestock health and marketing programs; support for socially disadvantaged and limited-resource producers

Source: House Committee on Agriculture, Available from: http://agriculture.house.gov/bill/agricultural-act-2014

A series of briefings on 2014 farm bill topics, with a particular focus on risk management options and participation decisions that must be made by individual owners and operators in the farm and ranch sector, was sponsored by the Extension Risk Management Education Centers during spring 2014. Presentations were videotaped and archived and can be accessed online at the Ag Risk & Farm Management Library, available from: http://agrisk.umn.edu/Library/Topics.aspx?LIB=AR&ID=40180



One way to rank farm bill programs in order of importance is according to their shares of the budget of the USDA.[1] This publication follows that approach. Figure I divides the $139.7 billion in USDA outlays in 2012 into four slices reflecting the shares going to food and nutrition programs (76 percent), commodity, farm and trade programs (12 percent), natural resource and environmental conservation programs (7 percent), and all other programs (5 percent). The three largest slices are the main focus of this report.

Farm bill programs reach every corner of the United States. But due to spatial differences in characteristics of farms and ranches, in natural resource attributes and environmental risks, and in population demographics and economic conditions, farm bill programs differ across geographic regions and states in their focus, importance, and impacts.

How does the U.S. farm bill affect Wyoming? Do Wyoming residents participate in and benefit from farm bill programs at the same rate as all American farmers and consumers? What are the farm bill's economic implications for the state's farms and ranches, households, and communities? This report provides an overview of the farm bill and its major programs and gives special emphasis to changes introduced in the 2014 legislation. Then, using a number of simple indicators, such as participation rates and contributions of benefits to food spending or farm receipts, it offers some perspective on the role of the farm bill in the state.

1 While a convenient way to rank programs, budgetary costs may underestimate a program's full cost. An example is programs designed to support market prices of commodities. The costs of such programs also include extra costs to buyers of the affected commodities due to higher-than-free-market prices.

Food and Nutrition Assistance Programs

As Figure 1 shows, three-quarters of USDA's outlays fund the food assistance and nutrition programs, the largest of which – SNAP – is authorized in title IV of the 2014 farm bill.[2] These programs are administered by the department's Food and Nutrition Service (FNS). Costs of FNS-administered programs can fluctuate quite a lot as program eligibility rises and falls in relation to national economic conditions. More people and households meet the eligibility requirements when the unemployment level is high, everything else held constant; fewer do when unemployment is low. Participation in and therefore costs of food assistance programs rose dramatically with the onset of the Great Recession in 2008. But food assistance program costs had begun to regularly exceed farm program costs back in the late 1980s (Gardner, 2002).

SNAP. SNAP is not only the largest single FNS program but also the largest single USDA program (Table 2). SNAP participants receive benefits on an electronic benefits transfer (EBT) card, which can be used to purchase food in authorized food stores. To receive SNAP benefits, households must meet certain income and resource tests. Generally, households must have gross monthly income at or below 130 percent of the poverty level, and net monthly income at or below 100 percent of poverty. For example, a household of four members must have gross monthly income at or below $2,552. The maximum monthly SNAP benefit for a household of four is $668. (Specific eligibility requirements and tests can be found on the FNS website at: http://www.fns.usda.gov/snap/eligibility.)

Table 2. Food Assistance Program Participation and Expenditures, FY2012

Program		**FY2012**
SNAP	Average monthly participation (millions)	46.6
	Average benefit per person ($/month)	133.42
	Total annual expenditures ($ billions)	**78.3**
School Lunch	Average daily participations (millions)	31.6
	Total expenditures ($ billions)	**11.5**
WIC	Average monthly participation (millions)	8.9
	Food costs per person ($ per person)	45.10
	Total expenditures ($ billions)	**6.9**
School Breakfast	Average daily participation (millions)	12.8
	Total expenditures ($ billions)	**3.3**
Child and Adult Care	Meals served in childcare centers (millions)	1,307.3
	In family daycare homes (millions)	570.3
	In adult daycare centers (millions)	70.6
	Expenditures ($ billions)	**2.8**

Source: Economic Research Service, *Food Assistance Landscape.* Available from: http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib120.aspx#.U9kvs2Oc58E

The SNAP benefits formula is progressive, meaning that benefit levels are inversely related to income levels. To help ensure the program does not provide a disincentive to work, SNAP rules include some employment requirements; in fact, most SNAP participants do work. There are some special, more favorable eligibility requirements for the elderly. Legal immigrants may be eligible for benefits if they have lived in the U.S. for five years, are receiving disability benefits, or are children under 18. SNAP benefits may not be used for non-food items, pet foods, hot foods, foods that will be eaten in the store, vitamins and medicines, alcohol, cigarettes, and tobacco. Food stamps may be used at farmers markets.

[2] WIC, School Breakfast, National School Lunch, and Child and Adult Care Food are authorized separately by the Child Nutrition and WIC Reauthorization Act, but they are administered by the Food and Nutrition Service along with SNAP and commodity distribution programs.

BOX 2: A BRIEF HISTORY OF U.S. FARM BILLS AND EARLY AGRICULTURE-RELATED LEGISLATION

The Agricultural Adjustment Act of 1933 became law during the Great Depression as part of President Franklin Roosevelt's New Deal. Its three titles and mere 26 pages established price supports for major farm commodities to maintain farmers' purchasing power at levels realized during the more favorable market conditions experienced in 1909-14. It contained provisions to control production of farm commodities when surpluses became burdensome, that is, when surpluses depressed commodity prices. And, it created a surplus relief corporation charged with purchasing, storing, and processing surplus commodities to relieve hunger stemming from unemployment as well as to stabilize farm prices (Imhoff, 2012). Following a court challenge to its financing provisions, the 1933 legislation was replaced in 1938. Then, with the addition of permanent amendments in 1949, the U.S. gained "permanent legislation" that would underpin all future farm bills.[1] Every major piece of farm legislation signed into law since 1949 has been a further amendment, with a fixed termination date. Since 1965, new farm bills have been written by Congress about every five years.

U.S. Farm Bills, 1933 – 2014
Agricultural Adjustment Act of 1933
Agricultural Adjustment Act of 1938
Agricultural Act of 1949
Food and Agricultural Act of 1965
Agricultural Act of 1970
Agricultural and Consumer Protection Act of 1973
Food and Agriculture Act of 1977
Agriculture and Food Act of 1981
Food Security Act of 1985
Food, Agriculture, Conservation, and Trade Act of 1990
Federal Agriculture Improvement and Reform Act of 1996
Farm Security and Rural Investment Act of 2002
Food, Conservation, and Energy Act of 2008
Agricultural Act of 2014

Source: National Agricultural Law Center, *United States Farm Bills*. Available from: http://nationalaglawcenter.org/farmbills/ Accessed July, 2014.

The 1933 Act was the first comprehensive case of government intervening in markets specifically to prop up farm prices and incomes, but by no means was the first instance of U.S. government involvement in agriculture.[2]

Pre-Farm Bill and Other Early Government Involvement in U.S. Agriculture

Pre-1900:	Land distribution, water rights, Morrill Act (1862) established land-grant colleges, Hatch Act (1887) established agricultural experiment stations
1902: Newlands Reclamation Act	Irrigation subsidies
1906: grazing rights leased to ranchers (1934 Taylor Grazing Act)	Provided statutory authorization of fees for grazing private livestock on federal lands
1906: Federal Meat Inspection Act	Mandated carcass inspection
Beginning 1908: laws regulating grading, standards, and shipping	A series of laws regulated grading, standards, and shipping of perishable commodities
1914: Smith Lever Act	Established agricultural extension services
1916: Federal Post Roads Act	Federal role in rural highways
1916: Federal Farm Loan Act	Created federal land banks
1921: Packers and Stockyards Act	Regulated packers to protect livestock sellers
1922: Capper-Volstead Act	Exempted agricultural cooperatives from the anti-trust laws
1929: Agricultural Marketing Act	Created Federal Farm Board to stabilize commodity prices
1936: Rural Electrification Act	Subsidies for rural electricity
1937: Agricultural Marketing Agreement Act	Created federal marketing orders to support milk prices and limit marketed quantities of produce

Source: Bruce Gardner, American Agriculture in the Twentieth Century, pp. 242-243

1 The funding provisions in the 1933 law, which levied a processing tax on the commodities, was declared unconstitutional in 1936 on the grounds Congress had passed a tax beneficial to one segment of the nation while causing detriment to everyone else (Cain and Lovejoy, 2004).

2 The Agricultural Marketing Act of 1929 established the Federal Farm Board, which set up public-private sector operations for supporting commodity prices, mostly for wheat. The Board liquidated its stocks in 1932-33 (Gardner, page 215).

Why are food stamps part of the farm bill? The first food stamps were issued between 1939 and 1943, just a few years after the legislation thought of as the first farm bill was signed into law. The credit for the first program is given to U.S. Secretary of Agriculture Henry Wallace and to the program's first administrator, Milo Perkins. Perkins is quoted as having said, "We got a picture of a gorge, with farm surpluses on one cliff and undernourished city folks with outstretched hands on the other. We set out to find a practical way to build a bridge across that chasm" (Daniels and Trebilcock, 2005). In fact, the first farm bill had already recognized the link between farm surpluses and hunger relief. [**See BOX 2: A BRIEF HISTORY OF U.S. FARM BILLS AND EARLY AGRICULTURE-RELATED LEGISLATION.**] The first food stamp experiment allowed people on relief to buy orange stamps equal to their normal food expenditures; then, for every $1 of orange stamps purchased, the buyer received 50 cents worth of blue stamps. Orange stamps could be used to buy any food, and blue stamps could be used to buy foods determined by the USDA to be in surplus (FNS, available at: http://www.fns.usda.gov/snap/short-history-snap).

After the U.S. entered World War II, farm surpluses disappeared and stamps were discontinued, but undernourishment remained a national problem, and the idea of food stamps became popular with urban legislators. In 1961, a pilot program was initiated, and then a permanent one was established with the Food Stamp Act of 1964. The program was officially integrated into the 1973 farm bill, the Agricultural and Consumer Protection Act of 1973, which required states to expand the program to every political jurisdiction, as well as other provisions (FNS, available at: http://www.fns.usda.gov/snap/short-history-snap).

In the earlier years of food stamp programs, the relationship between food assistance and lower income households' needs may have been more straightforward than today. Undernutrition and poverty were closely correlated, and the program was widely seen to benefit the farmers growing the food and the low-income families in need of more food. In recent years, overweight and obesity have become closely associated with poverty in the U.S., although they are also concerns for all income strata (Wilde, 2012). Understandably, farm bill and food policy observers have asked if food assistance still makes sense as a form of economic safety net and if food stamps may have contributed to America's weight problem. Some recent research finds food stamp participation does not increase overweight and obesity for participants in most demographic groups but may for nonelderly women (Ver Ploeg and Ralston, 2008). Other research finds SNAP participants had slightly lower diet quality than eligible nonparticipants, but that dietary quality effects are modest, and small negative and positive effects tend to counterbalance each other (Gregory, 2013).

The 2014 farm bill contains several provisions designed to increase nutrition by SNAP recipients.[3] Retailers authorized to accept SNAP benefits are required to stock at least seven items in four basic food categories: fruits and vegetables, bread or cereal, dairy, and meat, poultry or fish. It also establishes a grants program for agricultural providers, such as farmers markets, intended to increase fruit and vegetable purchases by SNAP recipients (Tiehen, 2014).

Dietary effects aside, a logical question for commodity and farm groups, as well as policymakers, is the extent to which SNAP benefits boost spending in the food sector. The answer depends on the "additionality" of SNAP benefits and the overall level of benefits.[4] In other words, does a dollar of SNAP benefits increase food spending by $1 or by something less; or do SNAP benefits merely replace dollars currently spent by the household on food, releasing those dollars for expenditures on other (non-food) purchases? According to Rossi (2008), estimates of food stamp additionality range from 17 cents out of each dollar of benefits to 47 cents.[5]

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3 The 2014 farm bill also included some funding cuts that may be significant for some participants in some states. The legislation added a provision that imposes a minimum level of federal energy assistance required to claim a state-determined income deduction for utility costs when calculating SNAP benefits. Wyoming was not one of the 16 states that offered nominal Low-Income Home Energy Assistance Program payments that triggered additional SNAP benefits to some households (Tiehen, Laura, 2014 Farm Act Maintains SNAP Eligibility Guidelines and Funds New Initiatives, *Amber Waves* July 7, 2014).

4 The notion of "additionality" is closely related to the concept of income elasticity of demand employed in economic analysis. An income elasticity describes how a 1-percent change in a household's income affects the percentage change in a household's demand for a particular good, such as food, housing, or entertainment. The income elasticity of demand for food is lower than for many other consumer goods because food is a basic necessity. If the income elasticity of demand for food is below 1 (that is, a 1-percent change in income results in a smaller than 1-percent change in food demand), then it follows the additionality of food stamps (which are similar to additional income) is likely to be less than 1.

5 This range comes from Fraker (1990), who reviews and summarizes a large number of statistical analyses of the effects of food stamps on food spending. Fraker's report also finds stamps increase food spending more than an equivalent amount of cash assistance. Parke Wilde, who reviewed this report, points out the additional food spending is likely to be much smaller for participants with small benefits and higher income than for participants with larger benefits and smaller or zero income.

Table 3. Effects of SNAP on Food Spending (estimates, 2012)

U.S. population	314 million
Per-capita food expenditures (for food consumed at-home)	$2,215
Total at-home spending for food	$695,510 million
SNAP participants	46.6 million
Average SNAP benefit per person per year	$133.42/month x 12 = $1,601.04/year
Value of total SNAP benefits	$74,608 million
SNAP benefits/total food at-home spending	10.7%
Increase in food at-home spending due to SNAP:	
If additionality = 17 cents per dollar of benefits	1.82 %
If additionality = 47 cents per dollar of benefits	5.03 %

The calculations in Table 3 suggest the $74.6 billion in SNAP benefits equate to about 11 percent of total U.S. spending on food purchased for home consumption. However, the benefits probably raise food spending in the U.S. (over what it would be in the absence of food stamps) between 5 percent and somewhat less than 2 percent, depending on the level of additionality. The more SNAP benefits result in additional food spending, the less they redirect household income currently spent for food toward purchases in the non-food sector (including eating out).

School meals. School meal programs – school lunch and breakfast combined – account for the second largest category of program expenditures by FNS. All U.S. school-aged children may participate in school meal programs, but the federal contribution to the cost of those meals is based on a child's household income. Students with household incomes below 130 percent of the federal poverty level receive free meals; those with household incomes between 130 and 185 percent of the poverty level receive reduced-price meals; and all other students must pay the "full" price set by the school food authorities. In addition to the financial reimbursements, USDA provides some commodities directly to schools, especially those determined by the secretary of agriculture to be in surplus. About 70 percent of all school meals are provided free or at reduced prices (FNS, School Meals, available at: http://www.fns.usda.gov/school-meals/child-nutrition-programs).

Like the farm support programs, the first distributions of surplus commodities to relief agencies and schools date back to the 1930s. The National School Lunch Act was signed into law in 1946, and the program was expanded in 1967 to include school breakfasts (Gardner, 2005). The notion that providing food in schools is important goes back much further. In his 1904 book *Poverty*, Robert Hunter writes, "…the poverty of any family is likely to be most serious at the very time when the children most need nurture, … the nurture is insufficient because there are too many hungry mouths to feed; learning is difficult because hungry stomachs and languid bodies and thin blood are not able to feed the brain" (page 216). Economists use the terms "human capital" and "physiological capital" to refer to the ideas that human labor has economic value, and that this value relates to the individual's stock of skills, knowledge, and creativity, as well as the body's physical well-being (which is affected by good nutrition, sanitation, and health care). Investments in physiological and human capital have significant payoffs for both the individual and society (Fogel, 2002). Hunter's point was societies fail to educate well when they fail to ensure adequate nutrition for school children and, furthermore, society pays a price for this failure. This idea may be said to be a later justification, incorporated in the 2002 farm bill, for the McGovern-Dole International Food for Education and Child Nutrition Program, which directs international food aid to developing countries' schools (US Food Aid and Security, *Food for Education*, available at: http://foodaid.org/food-aid-programs/food-for-education/).

As with SNAP, the nutritional content and health effects of school meal programs have been scrutinized in recent years (see, for example, Poppendieck, 2010). Approximately 17 percent of children and adolescents aged 2 to 19 years old (12.5 million) are considered obese, and one-third are considered to be overweight or obese (Ogden et al., 2012). Since 1980, obesity prevalence among children and adolescents has almost tripled. It may be that, for many if not most young people, it's no longer a case of needing more food per se, but rather of needing better nutrition that supports good school performance. That said, even overweight children can be food insecure and hungry during school hours (Wilde, 2013).

In 2012, USDA issued a new rule designed to align school lunch and school breakfast programs with the Dietary Guidelines for Americans. New nutritional rules require schools to increase fruits and vegetable, whole grains, and low-fat milk, reduce sodium and fats, and adhere to calorie targets for particular age groups (Federal Register, available at: http://www.gpo.gov/fdsys/pkg/FR-2012-01-26/pdf/2012-1010.pdf). At the same time, program funding was increased to ensure any additional costs associated with the stricter nutritional guidelines would be covered. Discussion about the merit of these new nutritional rules continues today.

Supplemental Nutrition Program for Women, Infants, and Children (WIC). WIC is the third-largest FNS program. It provides a package of supplemental foods, nutrition education, and health care referrals to low-income pregnant, breastfeeding, and postpartum women, infants, and children up to age 5. WIC began as a pilot program in 1972 following a study of the nutritional status of low-income pregnant women and their infants commissioned by President Nixon and became a permanent program in 1974 (Wilde, 2013).

Eligibility for WIC is less stringent than for SNAP, requiring an income below 185 percent of the poverty standard (FNS, WIC, available at: http://www.fns.usda.gov/wic/women-infants-and-children-wic). Some states have slightly different requirements. About 9 million people (including over 2 million infants and almost 5 million children) receive WIC benefits every month at a cost of about $7 billion a year. These participants represent about half of all U.S. infants and a quarter of all children aged 1 to 4 years. About 80 percent of eligible infants nationwide participate in WIC (Besharov and Call, 2009).

WIC packages have very specific food contents, which suggests the program is likely to have a larger effect on consumption of particular foods than does a non-food-specific program like SNAP. Research by Oliveira and Frazao (2009) indicates WIC foods generally replace non-WIC foods in children's diets rather than adding to total food consumption. WIC policy discussion and program changes tend to focus on the selection of approved foods. The provision of free infant formula in the WIC package has been a focus of both debate and research because the program also advocates for breast-feeding. Wilde (2013) contains a good discussion of these and other WIC policy issues and research findings.

Commodity distribution. USDA continues to administer a commodity distribution program many decades after the first farm bill. The Emergency Food Assistance Program (TEFAP) receives funds appropriated by Congress to purchase foods, and USDA supplements these purchases with 'bonus' foods acquired specifically to support agricultural markets. Available bonus foods depend, then, on market conditions. USDA makes both purchased and bonus foods[6] available to state distributing agencies, which in turn provide them to local community agencies such as food banks, soup kitchens, and food pantries. These organizations are responsible for determining household eligibility based on income standards set by the states. Organizations that provide prepared meals, such as soup kitchens, must demonstrate they serve predominantly low-income individuals (FNS, The Emergency Food Assistance Program (TEFAP), available at: http://www.fns.usda.gov/tefap/emergency-food-assistance-program-tefap).

There is clearly overlap between SNAP and TEFAP participation, although TEFAP is a far smaller program than SNAP in terms of both budgetary outlays and participation. Coleman-Jensen et al. (2011) find that of all low-income households that had obtained food from a food pantry, 54 percent also participated in SNAP; however, SNAP and food distribution may also be complementary. Levedahl et al. (1994) pointed out a commodity distribution program can complement food stamps by distributing foods to those unwilling to apply for stamps, which may be especially true of seniors, and also by providing outreach and information about food stamps and other federal assistance. An interesting question is whether this potential for food stamps and commodity distribution to be complements may be especially important in a rural state such as Wyoming, where distances and other factors may possibly pose barriers to formal food assistance program enrollment.

Farm and Commodity Support Programs

The second largest set of farm bill-authorized programs, based on budgetary outlays, is the farm and commodity support or safety net programs. **Title I** (commodities) and **Title XI** (crop insurance) of the 2014 Act pertain to these programs. Programs in this category are administered by the USDA's Farm Service Agency (FSA), Commodity Credit Corporation (CCC), and Risk Management Agency (RMA). In FY2012, they accounted for about 12 percent of

6 In 2014, foods provided through TEFAP include canned fruits, canned vegetables, fruit juice, dried eggs, meat, poultry, and fish, dried beans, pasta, milk, rice, grits and cereal, and soups (Food and Nutrition Service, Nutrition Program Fact Sheet July 2014. Available at: http://www.fns.usda.gov/sites/default/files/pfs-tefap.pdf).

the USDA budget. The portion of the budget allocated to these programs is affected by commodity prices: higher market prices for commodities generally mean lower program costs and vice versa. For example, simultaneous declines in unemployment and commodity prices would reduce the share of the USDA budget held by the food assistance programs and increase the share held by farm and commodity programs.

The most notable changes from farm bill to farm bill may be the numerous modifications to the commodity price and farm income support programs. Such changes, including the ones represented in the 2014 farm bill, are responses to various internal and external pressures and constraints, such as budgetary costs, international competitiveness, global trade rules, competing objectives among stakeholders, and differences in philosophies among legislators about the appropriate role of government in farm markets. Despite many changes – some small and some significant – the extensive role for government in farm price and income support continues even with the 2014 bill. **[See BOX 3: RATIONALE OFFERED FOR GOVERNMENT INTERVENTION IN AGRICULTURAL AND FOOD MARKETS].**

Knutson (et al.) group the evolutionary changes in farm price and income supports into four periods: the New Deal (1929-1954), the Flexible Price Support era (1955-1970), the era of Coupled Direct Payments (1971-1995), and the Decoupled Payments era (1996-2008). The period from 2008 to present may be characterized by reversion to countercyclical (from fixed) payments and by a large expansion of government-subsidized private crop insurance. The specific farm and commodity support programs administered by USDA since the 1930s evolved in meaningful ways during these eras. The following paragraphs group the support programs into several general categories and briefly summarize key policy changes that occurred over time within each. Each category of programs has distinct economic implications for market participants, including producers, consumers, and taxpayers (Table 4).

Table 4. Categories of Farm and Commodity Support Mechanisms and their Economic Effects

Category	Variations	Consumer effects	Producer effects	Taxpayer effects
Price supports	Loan rates Government purchases	Negative (prices higher than free market)	Positive (prices higher than free market)	May be costs if government buys high and sells low; also storage costs can be high.
Supply restrictions	Acreage allotments or set asides Marketing allotments or quotas Import barriers	Negative (prices higher than free market)	Mixed (higher prices but less quantity to sell)	Neutral except for administrative costs. Import tariffs or taxes can generate revenue.
Income payments	Fixed payments Countercyclical payments	May be positive if supply expands and lowers price	Positive generally (but may be offset with supply restrictions or lowered market prices)	Can be very costly (costs may be offset by supply controls)
Crop insurance	Subsidized premiums Payouts based on shortfalls in yield or revenue	Probably positive as likely to expand supply	Positive (due to subsidized premiums)	May be very costly, esp. if program promotes riskier farming practices ("moral hazard").

Price supports. The original 1933 legislation established price supports at "parity." The intent was to restore farmers' purchasing power to what it had been in the 1910-1914 period. How was USDA supposed to do this? The main method used was government purchases at guaranteed "loan rates." Loan rates are prices paid by the Commodity Credit Corporation to farmers who wish to put their harvested crop "under loan" rather than sell it privately at (less favorable) market prices. The loans are referred to as "non-recourse" because USDA must accept the crop pledged as collateral as payment in-full should the farmer decide not to redeem the crop later in the marketing year, sell it on the open market, and repay the loan. In this way, covered commodities are removed from the market to hold the market price at or near the loan rate. The costs of price support loan rates are paid by private commodity buyers (who pay higher market prices than they would in the absence of such supports) as well as the taxpayer-funded CCC.

BOX 3: RATIONALE OFFERED FOR GOVERNMENT INTERVENTION IN AGRICULTURAL AND FOOD MARKETS

At the time of the first farm bill, a quarter of the American workforce was unemployed. Depression-era images of long breadlines on city streets are familiar, but economic conditions for farm families were even more dismal than for city dwellers. The lack of jobs in cities encouraged people to move back to the farms just at the time when farm incomes and off-farm employment opportunities in nearby rural towns could least support them. At the start of 1935, 25 percent of Americans were living on farms (Historical Population Estimates, available from: http://www.census.gov/population/estimates/nation/popclockest.txt and Census of Agriculture, available from: http://www.agcensus.usda.gov/Publications/Historical_Publications/

At the same time, farm commodity prices were being driven down by very weak demand for food and fiber, increasing excess production capacity as tractors replaced horses (innovation that had been driven by World War I-related labor shortages), and the resulting accumulation of "burdensome" commodity surpluses. In the early 1930s, the average farm operator household income was estimated to be only 25 percent of the average U.S. household income (Gardner, page 78). Dust Bowl tragedies in the western Great Plains states contributed to the national perception there was an essential role for government in stabilizing farm commodity markets and protecting farm incomes.

Average farm operator household income continued to be well below average U.S. household income for the next several decades.[1] But beginning in the early seventies, farm operator household incomes began to keep abreast of or even exceed average household incomes in most years (an exception being the early 1980s). In addition, as farm numbers fell, remaining farms became far larger, far more specialized, and far more productive, and farmer operators became more likely to be well-educated business managers with extensive knowledge of global and national markets and risk management strategies.

Despite the evolution toward a more economically secure sector, the sense persisted there was a continuing need for government programs for agriculture. In their book *Agricultural and Food Policy*, Knutson et al., list several rationale for an enduring role for government intervention in agriculture, and in *Food Policy in the United States,* Wilde lists similar justifications based on the concept of market failures.[2] Justifications offered include:

Highly volatile commodity prices and resulting variability of farm income. Farm commodity prices exhibit more volatility than prices in most other sectors due to highly inelastic demand and supply. Some economists believe this situation requires governmental involvement (especially, now, crop insurance subsidies) to mitigate risk and stabilize incomes. Price supports and farm income payments have been used for decades to address market volatility and income fluctuations.

The importance of food as a basic human need. Although many economists would likely question the need for government intervention to ensure an adequate supply of food in the United States, the critical role of food in national security and economic independence has been a rationale for government support for agriculture in many countries as well as the U.S.

Externalities and public goods. Agriculture is associated with both negative and positive "externalities," the costs and benefits of which are not "internalized" in market prices. Negative externalities occur when usual actions by farmers and ranchers adversely affect participants in other economic sectors. An example is the impact of soil erosion or chemical runoff from farms on commercial or recreational fishing in nearby waters. Positive externalities occur when usual actions by farmers and ranchers benefit other parts of society, but there is no compensation by those others. An example is the provision by farmers and ranchers of open space and wildlife habitat as a side effect of their farming and ranching operations. Conservation programs can address both negative and positive externalities.

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[1] Farm operator household income is composed of household income from sales of farm commodities and from non-farm sources, such as in-town employment.

[2] Market failures are circumstances in which free markets fail to serve the public interest.

Food safety and information asymmetries. The U.S. food supply is certainly one of the safest in the world, but it's difficult if not impossible for even well-informed consumers to accurately assess the safety of their food purchases. Government food safety regulations can address this "asymmetry" in information.

Poverty and food insecurity. Even well-functioning free markets may result in unacceptably high poverty levels from the perspective of some society members and policymakers. Since food insecurity, hunger, and malnutrition are closely associated with poverty, agricultural and food programs may have an important role in addressing the adverse consequences of poverty.

Market power. If production or purchasing is controlled by one or few sellers or buyers, this "market power" may be used to force other market participants to accept unfair prices for their products. Historically, farmers and ranchers (of which there are many in relation to the relatively few buyers of farm and ranch products and suppliers of farm and ranch inputs) have worried about the influence of market power on the prices they receive and pay.

Farm bill makers and their numerous constituent groups stake out positions on the need for government involvement in agriculture, how much involvement is appropriate, and what form it should take. The constituency for agriculture-related programs appears to have broadened over time. Most farm bill programs are now supported by multiple stakeholder groups and coalitions allied formally or informally. For example, food assistance programs have the support of anti-hunger advocacy groups that want better food security for low-income populations and also by farm and commodity groups that benefit from stronger food demand stimulated by food assistance. Likewise, farm bill conservation programs that remove land from production or support the adoption of conservation-enhancing practices are supported by both farm and commodity groups and conservation and environmental groups.

A farm bill with extensive roles for government appears to be a very long-lasting if not permanent fixture of our national policy landscape. The 2014 farm bill makes some significant changes from prior legislation, as discussed in this report, but nonetheless continues the long history of government intervention in the agricultural and food system.

Loan rates still exist in the farm bill. For example, the 2014 law requires USDA to provide nonrecourse loans to processors of domestically grown sugarcane and sugar beets, as discussed below in the section on sugar policy (FSA: Sugar Loan Program, Sugar Marketing Allotments and Feedstock Flexibility Program, available at: http://www.fsa.usda.gov/Internet/FSA_File/sugar_loan_2014.pdf). Loan rates are still established by the U.S. Secretary of Agriculture, by law, for wheat, feed grains, oilseeds, pulse crops, milled rice, peanuts, extra-long staple cotton, wool, mohair, sugar, and honey. When commodity prices are below the pertinent loan rates, loan benefits augment farmers' market receipts; however, this price support system has over time come to play a smaller role in supporting U.S. farm income. According to Knudsen et al., in the 1955-1970 period farm prices at parity could no longer be sustained because of their budgetary implications. Demand for farm commodities sagged after World War II, and exporting the surplus commodities held in CCC warehouses required expensive subsidies. In the 1970s, loan rates were lowered to become more "market oriented," and farmers began to receive instead various forms of income payments (as described below).

Marketing loans were then introduced in the 1980s and 1990s, a change that significantly altered the operation of the CCC nonrecourse loan program. Marketing loan provisions allow farmers to repay CCC commodity loans at less than the original loan rate when market prices are lower. This feature decreases the loan program's price support function by reducing the government's accumulation of stocks through forfeitures. Instead, farmers have incentives to retain ownerships of crops and sell them. The change also ensured price support loans would be less likely to adversely affect competitiveness of U.S. commodities in overseas markets (Westcott and Price, 2001; FSA *Fact Sheet on Nonrecourse Marketing Assistance Loans and Loan Deficiency Payments*, available at: http://www.fsa.usda.gov/Internet/FSA_File/mal_ldp_2013.pdf.)

Supply restrictions. Supply controls, if effective, are another tool for propping up prices.[7] They were generally considered by earlier-era farm policymakers to be necessary to reduce surpluses, offset the supply-expanding incentives of price supports, and to thereby control the costs of price support programs. The earliest farm legislation of the 1930s contained supply restrictions; farmers could receive the first price supports only if they set acreage aside (Cain and Lovejoy, 2004). Later, such "voluntary" provisions were applied to the eligibility for income payments. Under the 1985 farm bill, for instance, a grower could be ineligible for price support loans and income payments if he produced a crop covered by an acreage limitation or set-aside in excess of the permitted acreage.

As discussed below in the section on conservation, land retirement still exists as a prominent part of the farm bill. But land retirement is now an important tool for attaining conservation goals for farmlands and is less often thought of as a purposeful supply-restricting measure.

Marketing allotments are a specific type of supply management still used to ensure quantities of domestically produced sugar do not require costly purchases by the CCC. Import restrictions are another form of control of supply to the domestic U.S. market. Import restrictions have been particularly important in supporting prices of U.S. commodities that face significant import competition, including sugar, peanuts, tobacco, and dairy. (Multilateral trade negotiations and regional trade agreements typically involve concessions to reduce barriers and expand access to the U.S. markets in exchange for concessions by other countries that expand access for U.S. goods to their markets.) Without import restrictions, above-market price supports for import-competing commodities would be rendered ineffective because buyers would turn to less-expensive imported commodities. In terms of market impacts, supply controls can generally be thought to reduce budgetary exposure associated with price and income support programs but to also increase prices paid by buyers and reduce returns to producers who wish to expand production. One of the key debates during the development of the 2014 farm bill focused on the role of supply controls in the new dairy support program (Schnepf, 2014, available at: http://nationalaglawcenter.org/wp-content/uploads//assets/crs/R43465.pdf).[8]

Income payments. In the 1970s, farm income payments began to supersede commodity price supports (loan rates) as the primary means of U.S. farm income support. Loan rates were lowered to become more "market oriented" (and therefore less likely to have the effect of propping up prices in global markets and adversely affecting competitiveness of U.S. exported commodities). Deficiency payments were the first U.S. farm income payments; these payments were based on the difference between a government-set "target price" and the national average market price during the marketing year (or the loan rate, if the loan rate was higher than the market price).[9] Exports flourished under this system, but government costs associated with writing farm income payment checks also soared. In 1986, payments reached $26 billion ($47.8 billion in today's dollar, based on the U.S. Dollar Implicit Price Deflator for Gross Domestic Product 1929-2014). Concern also grew that this form of support, which was directly tied to the amount produced, was stimulating excess supply and artificially distorting and depressing global commodity market prices (Tyers and Anderson, 1986; Tyers and Anderson, 1992). As a consequence, other exporting countries (members of the European Union in particular) amped up export subsidies to counteract U.S. export gains.[10] Some "decoupling" began with the 1985 farm bill such that payments began to be based on a farm's "program payment yield" (derived from its yield history) rather than its current actual yield (Baffes and De Gorter, 2005). It was hoped this change would mitigate the tendency of income payments to encourage farmers to increase yields in order to increase their government payments.

Knutson et al. describe the 1996 to 2008 era leading up to the most recent farm bill as the era of decoupled payments. The Uruguay Round of multilateral trade negotiations (1986-1994) had produced an Agreement on Agriculture that gave the "green light" to any farm income payment that could be deemed decoupled from farmers'

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7 Voluntary supply controls, such as acreage set-asides, can be less than 100 percent effective because of "slippage." Slippage occurs because farmers are likely to put their least productive land aside and may at the same time use measures to increase yields on more productive planted acreage.

8 This report does not specifically address the complex dairy provisions in the current or past farm bills. In 2011, Wyoming had only 120 farms with milk cows, out of 65,000 nationwide, and dairy products accounted for just .16 percent of cash receipts from all crops, livestock, and products.

9 At this juncture, three sets of prices became important commodity market signals: the loan rate, the expected market price, and the target price. For planting decisions, the target price was especially important because it would determine gross returns on a majority of production of covered commodities for a participating farm.

10 This situation provided the primary impetus for the importance afforded agriculture in the Uruguay Round of multilateral trade negotiations initiated in 1986.

production decisions; whereas coupled payments had to be tallied and subjected to reduction commitments over time (WTO, Agreement on Agriculture, available at: http://www.wto.org/english/docs_e/legal_e/14-ag_01_e.htm). With the 1996 farm bill, direct payments, known as "production flexibility contract payments," replaced deficiency payments. These payments were not based on current market prices or current production levels but rather on "payment rates" and "payment yields" established by statute, and a farm's "base acres" established based on historical planting records. The payments were to be phased down over time to eventually disappear; however, less favorable (softer) market conditions for growers undid this goal, and some recoupling occurred with the introduction of "countercyclical payments" in the 2002 and 2008 farm bills. The 2008 legislation limited direct payments to $40,000 per person per year or $80,000 per married couple per year; and limited countercyclical payments to $65,000 per person per year or $130,000 per married couple per year. (For a complete comparison of the 2002 and 2008 farm bills, see the *2008 Farm Bill Side-By-Side*, available at: http://webarchives.cdlib.org/sw1vh5dg3r/http:/ers.usda.gov/FarmBill/2008/)

The 2014 farm bill eliminated both the fixed direct and countercyclical income payments defined in the 2008 law. It instead offers farmers new payment program choices, all of which tie the payments in some way to fluctuations in prices, yields, or revenues. In this way, the new law effectively completes the full return to countercyclical payments (Effland, Cooper, and O'Donoghue, 2014). In particular, as Effland, Cooper and O'Donoghue (2014) explain, the 2014 bill creates two new programs designed to mitigate both multi-year risk and "shallow" losses: Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC). Neither program involves producer premium payments, unlike the crop insurance programs described below.

The PLC program will provide payments on 85 percent of base acres of covered commodities on a commodity-by-commodity basis when national average market prices fall below reference prices set in the 2014 bill. Covered commodities include wheat, feed grains, rice, oilseeds, peanuts, and pulses. The ARC program comes in two different forms: the county form, ARC-CO, and the individual farm form, ARC-IC. The county form bases payments on the difference between a moving-average county-revenue benchmark and actual county-level revenue, and provides payments on 85 percent of base acres of covered commodities. The individual form allows producers to use an individual farm-level revenue guarantee rather than the county-revenue guarantee. Under ARC-IC, payments are calculated based on actual farm revenues and are paid on 65 percent of all base acres on the farm.

Producers with base acreages of covered commodities may choose either PLC or county-based ARC for each covered commodity. Alternatively, producers may choose to enroll the entire farm in the individual ARC program, which automatically applies to all covered commodities planted on the farm. Choosing a program may not be easy; the decision covers all five years of the bill, can only be made once, and is not revocable (Zulauf and Schnitkey, 2014). [Program selection decision tools have been funded by the Farm Service Agency and developed by two universities, and state extension services offered training on the decision tools during fall 2014.] Farmers who do not make a program election, and have base acreage of covered commodities, will be deemed to have elected PLC.[11] Outlays for these new payment programs will depend on market and weather variability and program payment parameters. As of this writing, anticipating their magnitude is premature but not too soon to predict that payments will fluctuate more than the direct payments made under the 2008 act.

Crop insurance. Federal crop insurance programs are covered by **titles XI** and **XII** (Miscellaneous) of the 2014 legislation. They are administered by the USDA's Risk Management Agency (RMA), which must also approve products, approve premium rates, administer premiums and subsidies, and reinsure the companies. Private insurance companies sell and service the policies to producers. (Specific programs and provisions are described by USDA's Economic Research Service available at: http://www.ers.usda.gov/agricultural-act-of-2014-highlights-and-implications/crop-insurance.aspx#.U9pv5WOc58E and by RMA available at: http://www.rma.usda.gov/news/currentissues/farmbill/2014%20Farm%20Bill%20072414.pdf.)

The 2014 farm bill clearly continues the growth of the crop insurance programs such that we can expect to see federal crop insurance payments continue to expand. The 2014 bill also emphasizes the expansion of affordable risk management options and special provisions for specialty crop producers (who have never been covered by traditional farm income support programs), beginning and veteran farmers, and organic producers (see RMA, *Organic Crops*, available at: http://www.rma.usda.gov/news/currentissues/organics/).

[11] The automatic election is for 2015 through 2018; no payments will be earned for the 2014 crop year.

A key feature of all federal crop insurance programs is their premiums are highly subsidized to encourage participation. Subsidy rates for most of the insurance programs range from 38 to 80 percent. The new Supplemental Coverage Option (SCO), which offers producers additional area-based coverage in combination with coverage by traditional crop insurance policies, has a fixed subsidy rate of 65 percent. (The SCO program is available to farmers who sign up for PLC but not to those enrolled in ARC.)

Livestock insurance policies are also offered through the RMA. The Livestock Gross Margin (LGM) program protects against loss of gross margin, defined as the difference between the market value of a producer's livestock and the feed costs. LGM coverage extends to cattle, dairy, and swine. RMA also offers Livestock Risk Protection (LRP), which provides protection against price declines for feeder cattle, fed cattle, lambs, and swine (Sedman and Hewlett, 2007). Risk management education and outreach regarding the full set of federally supported risk-management tools is available through the *RightRisk* Education Team at: http://www.rightrisk.org/.[12]

Natural Disaster and Emergency Assistance Programs. In addition to subsidized crop and livestock insurance programs, USDA operates (through FSA) disaster assistance programs, such as low-interest emergency loans. Such programs "kick in" when losses are due to natural occurrences such as drought, flood, fire, pests, freeze, and tornados. A key provision of the 2014 bill was the indefinite extension of four disaster programs authorized in the 2008 legislation, three of them specific to livestock: the Livestock Forage Program (LFP), the Livestock Indemnity Program (LIP), the Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish (ELAP) program, and the Tree Assistance Program (TAP). Payments under these programs require disaster declarations by USDA.

LFP is of particular interest in Wyoming. LFP "provides compensation to eligible livestock producers that have suffered grazing losses for covered livestock on land that is native or improved pastureland with permanent vegetative cover or is planted specifically for grazing. The grazing losses must be due to a qualifying drought condition during the normal grazing period for the county. LFP also provides compensation to eligible livestock producers that have suffered grazing losses on rangeland managed by a federal agency if the eligible livestock producer is prohibited by the federal agency from grazing the normal permitted livestock on the managed rangeland due to a qualifying fire" (FSA, Program Fact, Sheet, Livestock Forage Disaster Program, available at: http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20140415_distr_en_lfp.html).

Disaster declaration are reported by FSA (FSA, *Disaster Assistance Programs*, available at: http://www.fsa.usda.gov/FSA/webapp?area=home&subject=diap&topic=landing). The declarations are by county and state and, of course, vary year to year depending on natural disaster occurrences and their locations. For example, as of July 2014, USDA had declared disasters in numerous counties of Arkansas, Arizona, California, Nevada, Colorado, Kansas, Nebraska, Oklahoma, New Mexico, and Texas due to severe drought. Other parts of the country experienced crop disasters due to freeze, excessive rain, and flooding. In 2013, USDA designated 20 Wyoming counties as primary natural disaster areas due to drought, making them eligible for emergency loans and several other provisions (FSA, *Emergency Designation News Release*, April 10, 2013, available at: http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=edn&newstype=ednewsrel&type=detail&item=ed_20130410_rel_0062.html.)

Sugar program. The sugar program looks and acts differently from most other U.S. price and income support programs. The program has, in fact, its own section of the farm bill under **title I**. The program is described here because of the importance of sugar beet production in some areas in Wyoming. In addition, unlike most commodity support programs – which have tended to subsidize production – federal policy for sugar restricts supply and maintains prices at higher levels than they would be in the absence of the program.

The United States has a long history of government intervention in sugar markets, beginning with a tariff imposed in 1789 to raise government revenue. Modern sugar policy began in the 1930s along with other farm bill programs. Originally, the U.S. Secretary of Agriculture determined yearly consumption of sugar in the United States and assigned production quotas to domestic producers and foreign countries. In 1942, import quotas were suspended because of wartime needs, but they were reinstated under the Sugar Act of 1948 and continued until 1974. In 1974,

[12] RightRisk is a collaborative program among Colorado State University, University of Wyoming, University of Arizona, University of Idaho, Montana State University, University of Nebraska, Oregon State University, and Utah State University Extension.

world sugar prices were high so it was argued price supports were no longer needed. But then surpluses accumulated and prices fell, leading to the implementation of mandatory price supports in 1977. Since then, each farm bill has contained similar sugar-program features, including the 2014 bill. They include:

- **Price support loans**: Nine-month nonrecourse loans are made by CCC to processors of sugarcane and sugar beets. (Beets and cane must be processed before sugar can be traded and stored.) Processor must agree to pay growers at minimum payment levels set by USDA. Loans are non-recourse because USDA must accept sugar pledged as collateral as payment in full. Processors are likely to forfeit their sugar if prices are below the loan rate when the loan comes due. In this way, sugar is removed from the market to hold the price at or near this "loan rate."
- **Marketing allotments**: These are designed to guarantee the sugar loan program operates at no cost to the federal government. USDA may adjust allotments throughout the year. Allotments for cane are to Hawaii, Florida, Louisiana, and Texas. Beet sugar allotments are to states where processing occurs, including Wyoming. If states producing cane cannot meet their shares, then the excess is assigned to importers.
- **Tariff-rate quotas**: The U.S. makes available a minimum quantity for import. The raw cane quota is allocated to 40 countries. The refined sugar quota is allocated to Canada and Mexico. The in-quota tariff is .625 cents per pound; the out-of-quota tariff is set "prohibitively" high at 15.36 per pound for raw and 16.21 cents per pound for refined. (Thought exercise: If the current "world" refined sugar price is 28 cents per pound, and the U.S. wholesale refined beet sugar price is 42 cents per pound, would it make sense to pay the out-of-quota tariff to sell over-quota sugar into the U.S. market?)

Conservation Programs

USDA's conservation programs are administered by three agencies: FSA, the Natural Resources Conservation Service (NRCS), and the U.S. Forest Service. Conservation programs on farm and ranchlands can be grouped into two main types: land retirement programs and working lands programs. FSA administers land retirement programs, while the CCC enters into the land-retirement contracts with landowners. Because of the responsibilities given to FSA and CCC, most of the costs associated with land retirement programs are counted in the 12 percent of USDA's 2012 budget allocated in Figure 1 to "farm and commodity programs." CCC outlays for both commodity and conservation programs, and also export assistance programs, are shown in Table 5. CCC outlays peaked at over $30 billion in 2000 (the highest level after 1986) but have averaged about $14 billion a year since 2002. In recent years, high commodity prices resulted in relatively low farm and commodity program outlays, which reduced their budget share.

Table 5. Commodity Credit Corporation Outlays by Program Category, 2012 Enacted

Program	**Outlays (Dollars in Millions)**
Commodity Programs	
Marketing assistance loans and price support	$61
Direct Payments	3,837
Other	1,483
Total	**5,381**
Conservation Programs	
CRP	1,913
Total	**1,925**
Export Programs	
Market access	204
Other	451
Total	**655**
Grand total	**$7,928**

Source: USDA Budget Summary and Annual Performance Plan, FY2014

The NRCS also has a role in the land retirement programs in that it provides technical land eligibility determinations, conservation planning, and practice implementation services on these lands. The other conservation programs, administered by NRCS and the Forest Service, accounted for 7 percent of the USDA budget in 2012. The programs are authorized in t**itle II** (Conservation) and **title VIII** (Forest Health) of the current farm bill, and also pertain to **title XI** (Crop Insurance) because crop insurance benefits now require conservation compliance by participants.

Land retirement. The largest of the modern land retirement programs is the Conservation Reserve Program (CRP), which was established in 1985. CRP might be said to be a descendent of the 1935 Soil Conservation and Domestic Allotment Act (PL 74-46, ch.85, 49 Stat. 163-164), which allowed the government to pay farmers to reduce production so as to "conserve soil" in an attempt to also cut crop and livestock surpluses. The 1935 act also created the forerunner to the NRCS, which was the Soil Conservation Service.

Today's CRP removes millions of acres of highly erodible or otherwise environmentally sensitive cropland from production for 10-15 years and diverts them to a range of environmentally conserving uses. Between 1990 and 2008, CRP enrollment fluctuated around 33 million acres at any one time. The maximum enrolled acreage of 36.77 million acres was attained in 2007. In June 2014 total CRP enrollment was 25.5 million acres, down a bit from the 27 million acres enrolled in 2013 (FSA, *Conservation Reserve Program*, available at: http://www.fsa.usda.gov/Internet/FSA_File/june14crpstat.pdf).

Total U.S. cropland covers about 440 million acres, so CRP accounts for about 6 to 8 percent (Ferris and Siikamaki, 2009). The CRP program has multiple conservation goals, including soil erosion reduction, water quality enhancement, wildlife habitat improvements, and carbon sequestration. CRP land also provides habitat for honey bees and other pollinators that require diverse wildflowers, shrubs, and safe nesting sites (FSA Pollinator Information, available at: http://www.fsa.usda.gov/FSA/webapp?area=home&subject=ecpa&topic=nra-pl).

Specific conservation practices promoted on CRP lands include establishing windbreaks and shelterbelts, installing living snow fences, and establishing vegetative cover, filter strips, riparian buffers, and wildlife food plots; planting hardwood trees, building erosion control structures; and implementing various other practices designed to enhance habitat, improve water quality, and reduce soil, water, and wind erosion (FSA, *CRP Associated Conservation Practices*, available at: https://www.fsa.usda.gov/Internet/FSA_File/appendixb.pdf).

Haying and grazing of CRP acreage is authorized under certain conditions to improve the quality and performance of the CRP cover or to provide emergency relief to livestock producers due to certain natural disasters (a provision of particular importance and interest to livestock producers). There are two types of haying and grazing authorization: managed and emergency (FSA, *Conservation Programs: Emergency Haying and Grazing*, available at: http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=crp-eg).

How does CRP work? Farmers receive an annual rental payment for enrolling their acreage, with the rental fee determined through a competitive bidding process. When market prices for commodities rise, bid prices will necessarily also rise as will program costs (unless offset by reduced participation) and vice versa when market prices fall. If rental rates are not sufficiently high in times of high market prices, producers will forego program participation to receive the higher market returns. CRP enrollment is limited by law, probably because paying for retiring land from production is not only costly in terms of budgetary outlays but may also have negative financial implications for nearby rural communities.

CRP effectively reduces supplies of agricultural commodities to the market. For this reason, although more often thought of as conservation programs than as price-supporting programs, their economic effects are akin to those of supply or production controls.[13] Consequently, there are taxpayer and consumer costs associated with these programs. Taxpayer costs are due to administering the program and paying the rental fees. Consumer (buyer) costs are due to the price-supporting effects. These costs may be weighed against the value of the programs' environmental benefits in terms of reduced soil erosion, improved air and water quality, and improved wildlife habitat. One way these improvements result in economic payoff is through recreational benefits, primarily from enhanced wildlife viewing and hunting. USDA has estimated the value of the program benefits at $1.3 billion a year (Hellerstein, 2010). Young et al. (1994) pointed out the importance of effective targeting to improve conservation performance of CRP.

[13] The price supporting effects may not be insignificant. Assuming demand is inelastic at -0.5, then an 8-percent reduction (backward shift) in supply could increase price by 16 percent.

The NRCS has also administered a number of agricultural land easement programs, which are designed to assist landowners who voluntarily want to maintain or enhance their lands in a way beneficial to agriculture or the environment. The Farm and Ranch Lands Protection Program, the Grassland Reserve Program, and the Wetlands Reserve Program were various forms of easement programs established in previous farm bills. The 2014 farm bill repealed these earlier programs and in their place established one program called the Agricultural Conservation Easement Program (ACEP).

Conservation Programs on Working Lands. The second major form of conservation program is the working lands programs. These programs provide financial and technical assistant to help producers make and maintain conservation improvements on their working farm and ranch lands. There are three main working lands programs:

- The Environmental Quality Incentives Program (EQIP). EQUIP supports techniques that will improve water and air quality, conserve ground and surface water, reduce soil erosion and sedimentation, and improve or create wildlife habitat.
- Conservation Stewardship (CSP). CSP provides payments for conservation performance, thereby providing incentives to maintain and improve existing conservation systems and adopt additional conservation activities.
- Agricultural Management Assistance (AMA). AMA aids producers in using conservation to manage risk and solve natural resource issues through natural resources conservation. (USDA's Risk Management Agency and Agricultural Marketing Service implement other provisions under AMA.)

In 2012, almost 53 million acres were treated by at least one of the NRCS financial or technical assistance programs, and the largest of these programs (EQIP) reached over 24 million acres. About 9 percent of the acres treated by one NRCS program were treated by multiple programs (NRCS Conservation Programs, available at: http://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_nat.html). The effectiveness or payoff associated with these programs depends in part on, once again, the notion of additionality. Do the payments bring about changes in practices that lead to improved environmental quality or would farmers and ranchers receiving the payments have adopted such practices without the payments? A recent study by Claassen et al. (2014) found practices expensive to install or provide only limited nonfarm benefits are unlikely to be adopted without payments, and that additionality is especially high (80 percent) for practices such as terraces and grassed waterways.

The 2014 farm bill includes several changes to the previous conservation provisions. Most importantly among them:

- The CRP cap is gradually reduced from 32 million acres to 24 million by 2017.
- Technical assistance on working lands will continue to grow in importance in relation to land retirement, continuing a trend initiated with the 2002 farm bill.
- The many individual conservation assistance programs detailed in the 2008 law are consolidated into new programs or merged into existing ones (e.g., the Wildlife Habitat Incentive Program (WHIP) is merged into EQIP and the various farm, ranch, and grass land easement programs are merged together into ACEP).
- And, maybe most significantly, crop insurance premium subsidies will now be linked to conservation compliance. Producers who fail to apply approved soil conservation plans on highly erodible cropland or who drain wetlands could become ineligible for all or part of a number of farm programs including, now, subsidies for crop insurance premiums.

Source: *http://www.ers.usda.gov/agricultural-act-of-2014-highlights-and-implications/conservation.aspx#.U81227Gc58E*

Other Programs

The remaining 6 percent of USDA's 2012 budget outlays funded a wide-ranging array of programs, encompassing rural development programs ($2.5 billion), food safety regulations ($1 billion), agricultural research, education and extension ($2.8 billion), and various marketing and regulatory programs ($2.3 billion), as well as core departmental administrative functions (such as communications, civil rights, and legal counsel). Some of these other programs are mandated by the farm bill, while many are discretionary. While representing the smallest share of USDA's budget, some of these other programs may be disproportionately important in Wyoming and similar states or regions. For example, given the extremely rural nature of Wyoming, USDA rural development programs may be

relatively more important to the state than some farm support or even food assistance programs. Over 35 percent of Wyoming's population is considered rural, in contrast with just 18 percent of the total U.S. population (U.S. Census Bureau, Wyoming: 2010, available at: http://www.census.gov/prod/cen2010/cph-2-52.pdf).

USDA's rural development programs are the focus of **title VI** of the 2014 farm bill. They are administered by its rural development agencies, which include the Rural Utilities Service, the Rural Housing Service, the Rural Business-Cooperative Service, and the Office of Community and Economic Development. Rural Utilities supports the expansion and maintenance of rural utilities, as its name suggests, such as broadband, telemedicine, and distance education. Rural Housing provides loans and grants for rural housing and community facilities. The Rural Business-Cooperative provides leadership in building competitive rural business and provides for business credit needs in under-served rural areas. The Office of Community and Economic Development provides technical assistance and technical assistance training grants to assist rural communities in strategic planning and in attaining their economic and community development goals. A good overview of USDA's rural development program history and current emphases is provided by Cowan (2014).

The Rural Development agencies also have responsibility for administering some of the farm bill's energy programs (**title IX**). The Biorefinery, Renewable Chemical, and Biobased Products Manufacturing Assistance Program provides loan guarantees for the commercial biorefineries. The Repowering Assistance Program provides payments to biorefineries to replace fossil fuels with renewable biomass. The Advanced Biofuel Payment Program provides payments to expand the refinement of biofuels from sources other than corn kernel starch. The Rural Energy for America program assists agricultural producers and rural small business owners to develop renewable energy systems and efficiency improvements (Rural Development, *Rural Development Energy Programs*, available at: http://www.rurdev.usda.gov/Energy.html).

USDA's research, education, and extension programs are the focus of **title VII**. They fund agricultural statistics and data collection by the National Agricultural Statistics Service (NASS) ($0.164 billion), intramural scientific and economics research by the Agricultural Research Service (ARS) ($1.18 billion) and the Economic Research Service (ERS) ($0.08 billion), and extramural research and extension at land-grant and other universities, through formula funding and competitive grants administered by the National Institute of Food and Agriculture (NIFA) ($1.38 billion).

USDA's Food Safety and Inspection Service (FSIS) ($1 billion) is responsible for ensuring commercially supplied meat, poultry, and eggs are safe and properly labeled and packaged. FSIS inspects livestock facilities and implements performance standards for reducing pathogens such as S*almonella* and *Campylobacter*. FSIS shares responsibility for food safety with other federal entitles, most notably the Food and Drug Administration (FDA), which is responsible for food products not covered by FSIS responsibilities

USDA's Marketing and Regulatory Programs include the Animal and Plant Health Inspection Service (APHIS) ($1.13 billion), the Agricultural Marketing Service (AMS) ($0.3 billion), and the Grain Inspection, Packers and Stockyards Administration (GIPSA) ($0.04 billion). GIPSA has a key role in ensuring open and competitive markets for livestock, poultry, and meat by monitoring industry trade practices and investigating complaints of unfair trade practices or pricing.

Finally (and not least if you are a producer of an exported commodity!), USDA's Foreign Agricultural Service (FAS) promotes development of new markets for U.S. agricultural products and negotiates improved market access to those countries that apply tariff and non-tariff barriers, or that limit imports of U.S. products for reasons not supported by sound science.

Farm Bill Program Participation and Importance in Wyoming

A number of factors may make Wyoming special in terms of farm bill program impacts. Those include income level, poverty rates, which commodities are most grown in the state (in relation to which commodities are covered by the farm bill programs), and farm size distribution. The large percentage of agricultural land in rangelands, in relation to the land use in most other states, also has implications for the relative importance of some USDA programs in relation to others.

Food and Nutrition Assistance in Wyoming

Are the food and nutrition assistance programs important in Wyoming? Table 6 compares SNAP participation, monthly SNAP benefits per person, and total SNAP benefits distributed to Wyoming with national totals. Both state and national participation increased markedly after the onset of the Great Recession in 2008; however, there are some interesting differences between the national and state figures. Using population figures for 2013, Wyoming – the country's least populated state – has .18 percent of the U.S. population but just .08 percent of the U.S. SNAP participants and receives just .07 percent of the SNAP benefits.[14] Three factors may account for the state's lower participation in SNAP:

- A lower rate of eligibility
- A lower rate of participation among eligible people
- And a lower per person benefit level.

Each of these three factors may come into play. In relation to the national average, Wyoming has a lower percentage of people with incomes below the poverty cut off. Between 2008 and 2012, 11 percent of the Wyoming population had incomes below the poverty levels whereas nationally that figure was 14.9 percent (U.S. Census). Lower poverty rates suggest a lower percentage of people eligible for SNAP benefits; however, FNS reports that Wyoming's rate of participation among all eligible people also has been lower (for example, just under 60 percent in 2011) than the national average participation rate (of 79 percent in the same year) (FNS, *Reaching Those in Need: State Supplemental Nutrition Assistance Program Participation Rates in 2011*, available at: http://www.fns.usda.gov/sites/default/files/Reaching2011.pdf). Participation rates among eligible individuals and households may be lower for a number of reasons, including different philosophical attitudes about participating in federal assistance programs, different perceptions of stigma associated with receiving SNAP benefits, and differences in access to program information and outreach. Wyoming does provide outreach and education on nutrition and food assistance through various offices, including the Department of Family Services (Wyoming Department of Family Services, Food Assistance (SNAP), available at: http://dfsweb.wyo.gov/economic-assistance/snap). [See **BOX 4: Helping Wyoming Families Eat Better for Less.**] However, unlike some states**,** Wyoming does not maintain statewide call centers (Tiehen, *SNAP Policy Database*, available at: http://www.ers.usda.gov/data-products/snap-policy-database.aspx#.U-EnlmOc58E).

BOX 4: HELPING WYOMING FAMILIES EAT BETTER FOR LESS

With funding from the Supplemental Nutrition Assistance Program Education (SNAP-Ed) and the Expanded Food and Nutrition Education Program (EFNEP), University of Wyoming Extension and the Wyoming Department of Family Services, in partnership with other county and local service providers, offer the Cent$ible Nutrition Program (CNP). CNP provides information and education to low-income families to help them eat nutritious and good-tasting food on a limited budget and to connect them to SNAP eligibility guidelines.

According to the 2013 program highlights, almost all participating adults made nutrition improvements based on a national measure called the Healthy Eating Index. In addition, Wyoming families who participated in 2013 saved an average of $49.71 per month on food, or $596.52 a year. Cent$ible Nutrition Program, available from www.uwyo.edu/centsible

[14] According to the U.S. Census, State and County QuickFacts, in 2013 Wyoming's population was 582,658 and total U.S. population was 316,128,839. Available at: http://quickfacts.census.gov/qfd/states/56000.html.

Table 6. U.S. and Wyoming SNAP Participation Data

Persons Participating in SNAP (as of July 2014)					
	FY09	**FY10**	**FY11**	**FY12**	**FY13**
Wyoming	26,762	34,799	36,031	34,347	38,046
US	33,489,975	40,301,878	44,708,726	46,609,017	47,636,090
Average Monthly Benefits per Person (Dollars)					
Wyoming	115.45	123.75	122.96	125.60	124.80
US	125.31	133.79	133.85	133.41	133.07
Total Program Benefits (Thousand Dollars)					
Wyoming	37,075	51,675	53,162	51,770	56,980
US	50,359,919	64,702,165	71,810,924	74,619,345	76,066,280

Source: Food and Nutrition Service, USDA at http://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap

Table 7. U.S. and Wyoming School Lunch Participation Data

Students Participating in School Lunch					
	FY09	**FY10**	**FY11**	**FY12**	**FY13**
Wyoming	56,424	56,540	57,420	56,578	53,764
US	31,310,099	31,752,857	31,841,218	31,653,056	30,675,105
Cash Payments for School Lunch Meals (Thousand dollars)					
Wyoming	10,955	12,637	13,167	13,289	13,961
US	8,874,540	9,751,658	10,105,044	10,414,602	11,058,165

Source: Food and Nutrition Service, USDA at http://www.fns.usda.gov/pd/child-nutrition-tables

The combination of lower eligibility and lower participation by eligible people means that just 6.5 percent of the Wyoming population received SNAP benefits in FY2013 in contrast to 15 percent of the total U.S. population (Table 6). In addition, Wyoming's average benefit level in FY2013 was slightly below (94 percent of) the national average benefit level. The lower benefit level may be due to a slightly higher income level of the average Wyoming participant.

Related to the lower overall participation rate, SNAP benefits make a smaller contribution to food spending in Wyoming than in the country at-large. Nationally, SNAP benefits account for almost 11 percent of spending on food at-home (that is, food purchased in grocery stores for at-home consumption). SNAP benefits in Wyoming represent about 4.3 percent of spending for food at-home.[15] The low SNAP participation rate among eligible individuals means Wyoming households do not receive approximately $38 million in benefit resources they could receive were they to become SNAP recipients.[16] Furthermore, these "foregone" SNAP benefits represent .42 percent of total retail sales in Wyoming ($38 million/$8,957.6 million) (Retail sales from U.S. Census, *State and County Quick Facts, Wyoming*, Available at: http://quickfacts.census.gov/qfd/states/56000.html). If these resources were available to be spent in the state, and were actually spent in the state, retail sales could be almost half a percent higher.

Wyoming-U.S. differences in school lunch participation are less significant. Table 7 shows school lunch participation levels and cash payments for subsidized lunches for Wyoming and the entire U.S. Neither Wyoming nor the United States saw a large bump in participation associated with the Great Recession, probably because school lunch participation is available to all students, not just to those below a particular income level. At .18 percent, Wyoming's share of the nation's total number of school lunch participants is exactly the same as its share of the total

[15] SNAP program benefits ($56,980,056) as a percent of Wyoming spending for food at home ($1,323,216,318) = 4.3%. Wyoming spending for food at home is estimated by multiplying U.S. per capita spending on food at home ($2,271) by the Wyoming population (582,658). Food at home spending is available at: http://www.ers.usda.gov/data-products/food-expenditures.aspx#.UxS14IUXfdY

[16] $56,980,056/.6 = 94,966,760. $94,966,760 - $56,980,056 = $37,986,704.

U.S. population. On the other hand, the state share of school lunch cash benefits is lower, at .13 percent. The reason is probably the same as the reason food stamp eligibility and benefit rates are lower in Wyoming than nationally, that is, because the state's poverty rate is lower. Consequently, a smaller share of school lunch participants likely receive subsidized meals or as highly subsidized meals. In 2012-2013, the number of Wyoming students qualifying for free or reduced-price meals was 34,359 (37.76 percent of students) and during 2013-2014 was 34,707 (37.64 percent of students) (More Laramie County Students Qualify for Meal Help, *Casper Star Tribune*, August 8, 2014). Seventy percent of school lunch participants nationwide receive free or reduced-price meals (Food Research and Action Center, *National School Lunch Program*, available at: http://frac.org/wp-content/uploads/2009/09/cnnslp.pdf).

Tables 6 and 7 together show Wyoming has more school lunch participants than SNAP participants, whereas the country as a whole has considerably more SNAP participants. The reason appears to be not unusually high school lunch participation in Wyoming but rather the low rate of SNAP participation.

Table 8 shows that, in 2013, 2 percent of the Wyoming population and 2.7 percent of the U.S. population participated in WIC. Lower state WIC participation could be due to lower eligibility or to lower participation by eligible individuals, or both. Unlike SNAP, WIC participation is limited to pregnant and lactating women, infants, and children, so the state's population demographics matter as well as its income statistics. Females make up 49 percent of Wyoming's population versus 50.8 percent nationwide, so the lower WIC participation may in part be due to the lower percentage of women.

Table 8. U.S. and Wyoming WIC Participation Data

Persons Participating in WIC (as of July 2014)					
	FY09	**FY10**	**FY11**	**FY12**	**FY13**
Wyoming[27]	13,338	13,687	12,997	12,602	11,980
US	9,121,779	9,175,042	8,960,593	8,907,840	8,662,805
Food Costs (Thousand dollars)					
Wyoming	4,815	4,698	5,382	5,121	4,556
US	4,640,920	4,562,770	5,018,210	4,808,465	4,497,313

Source: Food and Nutrition Service, USDA at http://www.fns.usda.gov/pd/wic-program

Table 9. U.S. and Wyoming Food Distribution Program Participation Data

	FY09	**FY10**	**FY11**	**FY12**	**FY13**
Food Distribution Program on Indian Reservations (Persons Participating)					
Wyoming	660	532	509	573	657
US	95,369	84,577	77,827	76,530	75,608
Commodity Supplemental Food Program (Participation total)					
Wyoming	0	0	0	0	0
US	466,615	518,846	588,076	594,196	579,759
TEFAP (Total Food Costs, Dollars)					
Wyoming	749,088	1,050,136	566,469	744,586	905,213
US	553,266,233	565,658,122	461,903,378	378,030,760	626,554,556

Source: Food and Nutrition Service, USDA at: http://www.fns.usda.gov/pd/food-distribution-program-tables

Wyoming's poverty rate for female-headed households (28.4 percent) is slightly under the national average rate of 30.1 percent, which may also contribute to the lower WIC participation rate. That said, Wyoming's female-headed households (with no husband present), and with children under 5, are as economically disadvantaged in Wyoming as in the country as a whole. In both the state and the country, almost half of all female-headed households (with no husband present), and with children under 5, have incomes below the poverty level (U.S. Census, *American Fact Finder, Selected Economic Characteristics*, available at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk).

Table 9 shows participation by people in Wyoming in two USDA-funded food distribution programs and the costs of foods distributed through TEFAP in the state and nation. Wyoming accounts for .14 percent of the cost of all foods distributed through TEFAP, and its share of the national population (.18 percent) is only very slightly higher. According to the Wyoming Department of Family Services, in 2011, 40 non-profit and religious organizations from all parts of the state distributed TEFAP commodities (Department of Family Services, Emergency Food Assistance (TEFAP), available at: http://dfsweb.wyo.gov/economic-assistance/tefap).

In 2010, Wyoming had 11,624 persons living in the Indian Affairs Survey "service area" (U.S. Department of the Interior, 2013 American Indian Population and Labor Force Report, available at: http://www.bia.gov/cs/groups/public/documents/text/idc1-024782.pdf). In that same year, 532 (4.6 percent) participated in the USDA's Food Distribution Program on Indian reservations. Wyoming tribal populations have lower poverty rates (estimated at about 21.3 percent) than do tribal populations in most other states (estimated at 23.2 percent for the entire United States, and as high as 45 percent in South Dakota) (U.S. Department of the Interior, 2013 American Indian Population and Labor Force Report, available at: http://www.bia.gov/cs/groups/public/documents/text/idc1-024782.pdf).

Farm, Commodity, and Conservation Programs in Wyoming

Are farm and commodity support programs and conservation programs important in Wyoming? What factors might determine their importance in the state in relation to their importance nationally?

Because farm and conservation payments are often directly related to specific crop and livestock production, and because some crop and livestock products receive more federal program support than others, a state's share of the nation's crop and livestock production or acreage will affect its share of program benefits. In addition, participation rates may differ from state to state because of differences in farm structure and different tendencies of different types and sizes of farms to participate in federal programs. The distribution of conservation program benefits will also relate to the geographic distribution of various types of environmental sensitivities targeted by the federal conservation programs. And, the distribution of disaster or emergency payments will relate to weather patterns and pest infestations.

White and Hoppe provide an overview of the distribution of farm program payments to all U.S. farms and ranches and by type and size of operation (Source: T. Kirk White and Robert A. Hoppe, Changing Farm Structure and the Distribution of Farm Payments and Federal Crop Insurance, available at: http://www.ers.usda.gov/media/261677/eib91_reportsummary_1_.pdf and http://www.ers.usda.gov/media/261681/eib91_1_.pdf). The set of payments they considered includes direct payments, counter cyclical payments, marketing loan benefits, disaster payments, and conservation program payments. They found the following for 2009, the most recent year of their analysis:

- 37 percent of all U.S. farms received payments
    - 56 percent of general crop farms received payments
    - 14 percent of high-value crop farms
    - 28 percent of dairy and livestock farms received payments
- Payments accounted for 23.6 percent of net cash income for farms receiving payments
- The largest 12.4 percent of farms received 62.2 percent of payments
- Farm payments were largest for commercial farms, next largest for intermediate farms, and smallest for rural residence farms.
    - But farm payments accounted for a much larger share of farm income received by rural residence farms than of farm income received by larger farms.

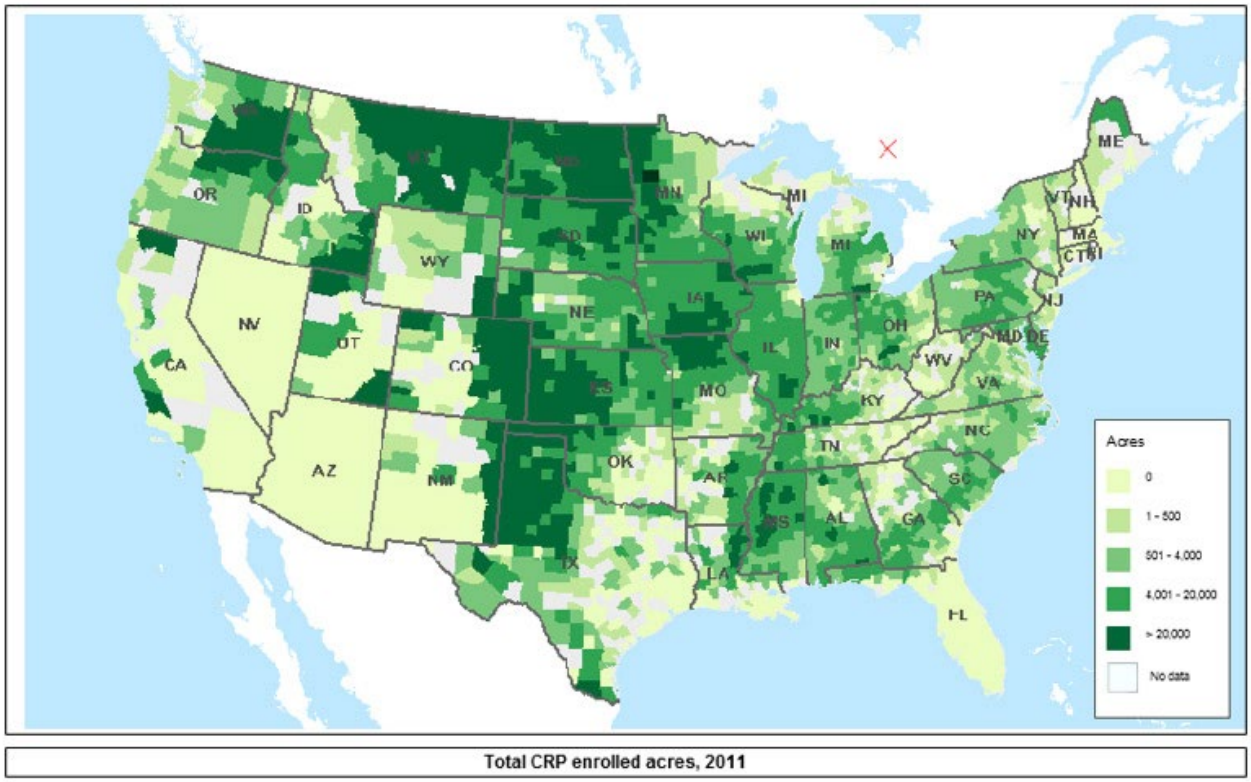

Figure 2: Distribution of Total CRP Enrolled Acres, 2011

Source: Economic Research Service, USDA, Farm Program Atlas, available at: http://www.ers.usda.gov/data-products/farm-program-atlas/go-to-the-atlas.aspx#.U9aNPmOc58E

- Farms with gross sales of $1 million or more received 23 percent of payments
- Fifty percent of payments went to farms with more than $500,000 in sales
- Only 15 percent went to farms with gross sales from $100,000 to 250,000
- The distribution of CRP payments looks different than the distribution of other farm program payments. CRP payments tend to go predominantly to the smaller farms.
- Federal crop insurance indemnity payments look like commodity payments – they go to large farms.

The farm program atlas published by the USDA's Economic Research Service shows the geographic distribution of all categories of payment types (available at: http://www.ers.usda.gov/data-products/farm-program-atlas/go-to-the-atlas.aspx#.U9aMFGOc58E). The atlas shows commodity program payments are highest (in terms of the value of payments) in major crop production areas, including: the Corn Belt (for corn and soybeans), Southeastern Coastal Plains (for cotton and peanuts), California (for cotton and rice), Arizona (for cotton), and the lower Mississippi (for cotton and rice).

However, distribution of conservation program participation tends to look somewhat different (Figure 2). Enrolled CRP acreage is highest in the High Plains (where soils are particularly susceptible to wind erosion), in areas associated with the Dust Bowl of the 1930s (including eastern Colorado, western Kansas, down through the Oklahoma panhandle, and into west Texas), and in parts of the Intermountain West (where land is hilly and prone to rainfall erosion).

A corner of southeastern Wyoming has high CRP enrollment. The distribution of CRP payments looks somewhat different than the distribution of enrolled land because rental fees are tied to commodities that would be grown on the enrolled lands and their market prices (Figure 3).

Table 10 shows farm, commodity, and conservation program payments to Wyoming farms and ranches for each of the four years from 2009 to 2012 and total payments received from 1995 through 2012. The payment data are compiled based on USDA information requested by and provided to the non-profit Environmental Working Group (http://www.ewg.org/). Over the longer period of time, the largest payments received were for disaster assistance, followed by CRP payments, then wheat program payments.

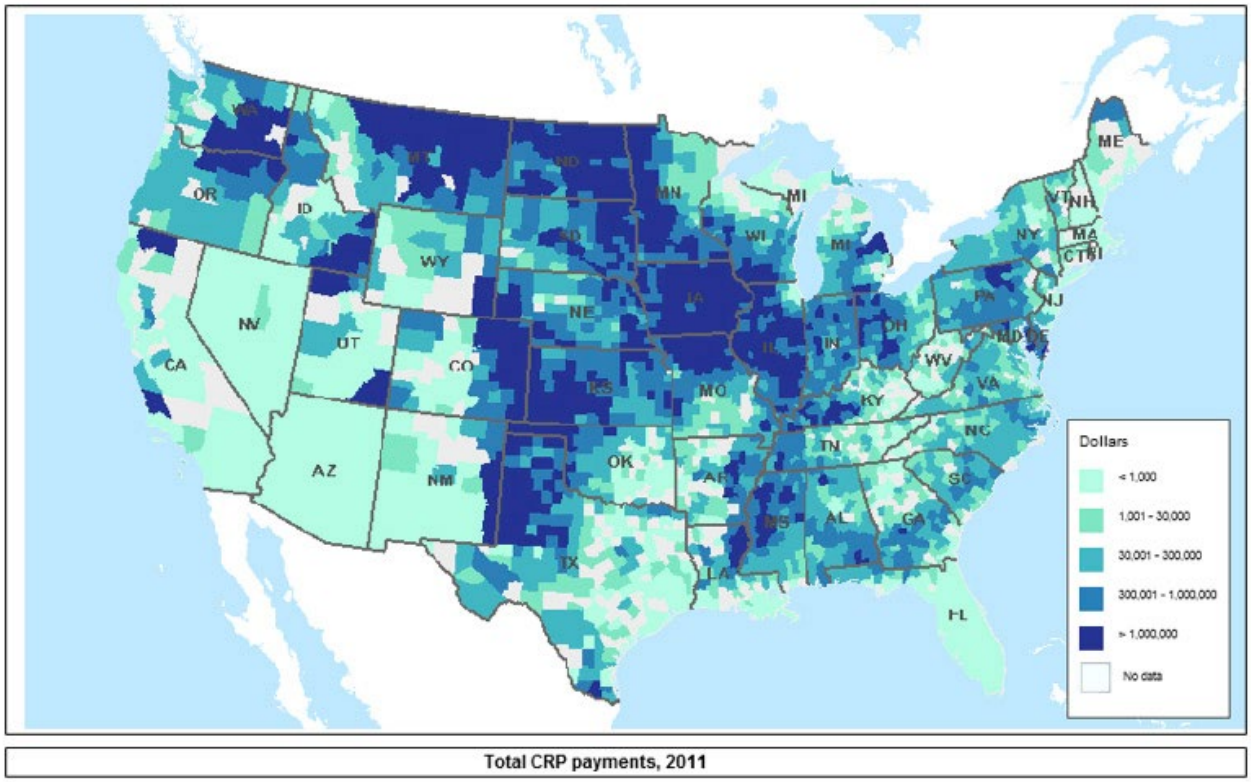

Figure 3: Distribution of Total CRP Payments, 2011

Source: Economic Research Service, USDA, Farm Program Atlas, available at: http://www.ers.usda.gov/data-products/farm-program-atlas/go-to-the-atlas.aspx#.U9aNPmOc58E

Table 10. Top 10 Farm, Commodity, and Conservation Program Payments to Wyoming, 2009-2012 and 1995-2012 Total*

	2009	2010	2011	2012	Total 1995-2012
Disaster payments	$723,342	$5,314,755	$2,417,128	$1,451,192	$176,230,641
CRP payments	7,756,500	6,298,635	7,071,637	6,421,428	145,459,195
Wheat payments	5,629,961	4,644,983	5,271,860	1,913,086	98,696,209
EQIP payments	12,650,836	5,918,401	--	--	86,311,749
Livestock payments	2,078,916	3,633,695	960,922	777,584	83,422,545
Corn payments	3,446,173	3,267,818	4,611,570	2,399,170	75,705,557
Barley payments	1,751,159	1,547,220	1,836,951	582,039	42,704,696
Wool payments	700,786	607,040	101,927	--	21,368,516
Sugar Beet payments	--	--	--	--	7,985,328
Sheep Meat payments	--	--	32,910	--	7,355,328
Wetlands Reserve program	540,142	884,363	--	--	--
Dairy Program payments	532,380	--	--	198,103	--
Sunflower payments	--	197,967	343,874	259,461	--
Oat payments	--	--	--	58,832	
Total	$35,810,195				

*Blanks (--) denote payments were not sufficiently large to rank in the top 10 payment categories, not that no payments were made.

Source: Environmental Working Group at http://farm.ewg.org/region.php?fips=56000&progcode=total&yr=2012

If payments are aggregated, conservation payments (CRP and EQIP) were the largest category, commodity payments to crop farmers (for wheat, corn, barley and sugar beets) were the second largest, disaster payments were third, and livestock payments (for livestock and sheep meat) were the fourth. In 2012, CRP payments were the largest, and commodity payments were lower by quite a lot than in prior years (because of relatively high commodity market prices).

Two main points emerge: one, Wyoming does indeed benefit from farm, commodity, and conservation program payments (with the payments reflecting the composition of the state's crop and livestock production); and, two, conservation program payments are more or equally as important in Wyoming as commodity program payments.

Are these payments important to Wyoming farms and ranches? One way to answer this question is to compare commodity payments received to cash receipts from market sales of the same commodities. Using cash receipt data for 2011 from *Wyoming Agricultural Statistics*, Table 11 contains these comparisons and indicates the value of payments ranged from 16 percent of wheat receipts in that year to an insignificant amount for cattle and calves. They were equal to 3.35 percent of all crop cash receipts and to just 1.6 percent of all crop and livestock receipts.[17] The importance of payments as a portion of cash receipts will vary from year to year depending on crop and livestock market prices, weather, and pest problems. Also, the economic importance within a particular county of the state may be much greater or much less than the state-wide significance. For example, wheat and corn production are concentrated in the southeast district of Wyoming, especially Laramie, Goshen, and Platte counties, so for these counties wheat and corn program payments can be quite important economically. Likewise, barley production is concentrated in the northwest district of the state, especially Park, Big Horn, and Washakie counties, so for these counties barley payments can be quite important economically.

Table 11. Commodity Program Payments in Wyoming in Relation to Wyoming Cash Receipts, 2011

Commodity	**Payments (million dollars)**	**Cash receipts (million dollars)**	**Payments/Cash Receipts (percent)**
Wheat	5.272	32	16
Corn	4.6	40.2	11.4
Barley	1.84	28.3	6.5
Oats	--	--	0
Cattle and calves	.961	863.8	.11
Wool	.102	6.3	1.6
Sheep meat	.033	50	.07
Sunflower*	.344	2.6	13.2
Total crops and livestock	**22.648**	**1447**	**1.6**
Total crops	**12.056**	**359.8**	**3.35**

* Assuming that sunflower accounts for the majority of the vegetable and oil crops category.

Sources: Environmental Working Group and Wyoming Agricultural Statistics 2012.

Other points emerge from Table 12, which compares payment data for Wyoming and the entire United States. Wyoming received just a little over a quarter of 1 percent (.26 percent) of all farm program payments to all U.S. farms and ranches over the 1995-2012 period. But Wyoming's payment receipts were, maybe surprisingly, not the smallest among the states; rather, Wyoming ranked number 37 out of 50 in terms of the total value of those payments. The state share of total conservation and disaster payments was larger than its share of total commodity payments and crop insurance indemnity payments. A smaller percentage of Wyoming farms and ranches received payments than nationally (25 percent versus 38 percent), likely reflecting the larger share of ranches and smaller share of farms composing the Wyoming agricultural economy versus the country's. However, payments were somewhat less concentrated in Wyoming than nationally. Two-thirds of the Wyoming payments went to the top 10 percent of recipients versus three-quarters accruing to the top 10 percent nationally.

[17] The Bureau of Economic Analysis reports that in 2012 farm program payments to Wyoming equaled 2.6 percent of cash receipts from marketings of crops and livestock, and 2.3 percent of total cash receipts and other income, which includes government payments (Bureau of Economic Analysis CA45 Farm Income and Expenses, available at: http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=5#reqid=70&step=25&isuri=1&7022=14&7023=7&7024=non-industry&7033=-1&7026=56000&7027=2012&7001=714&7028=-1&7031=56000&7040=-1&7083=levels&7029=14&7090=70).

Table 12. Wyoming-U.S. Comparison of Farm and Commodity Payments, Summary Data for 1995-2012

Summary Information	United States	Wyoming	Wyoming as percent of U.S.
Payments received 1995-2012	**$292.0 billion**	**$758.0 million**	**.26**
• Commodity payment	177.6 billion	229.0 million	.13
• Crop insurance payments	53.6 billion	90.0 million	.17
• Conservation payments	38.9 billion	262.0 million	.67
• Disaster payments	22.5 billion	176.0 million	.78
State ranking	--	37 out of 50*	--
Percent of farms/ranches NOT receiving payments	62	75	121
Percent of subsidies collected by top 10 percent of farms receiving them	75	63	84
Total amount received over 18 year period by top 10 percent of recipients	$178.5 billion	$420.0 million	.24
Average amount received per year by top 10 percent of recipients	$32,043	$19,637	61
Average amount received per year by bottom 80 percent of recipients	$604	$755	125

* Wyoming was 37 out of 50 in 2012 as well.

Source: Environmental Working Group at http://farm.ewg.org/region.php?fips=00000

Table 13. Conservation Reserve Program Enrolled Acreage, Wyoming-U.S. Comparison, 2005-2013

Year	U.S. Acreage	Wyoming Acreage	Wyoming Enrolled Acreage/ U.S. Enrolled Acreage (percent)
2005	34,902,300	281,083	.8
2006	36,003,300	285,172	.8
2007	36,770,984	284,254	.8
2008	34,612,696	276,236	.8
2009	33,721,252	270,759	.8
2010	31,298,245	208,819	.7
2011	31,124,371	223,995	.7
2012	29,525,599	223,995	.8
2013	26,838,728	195,470	.7

Source: FSA, CRP acreage by state: http://www.fsa.usda.gov/Internet/FSA_File/enrolledstate13.xls

The average amount received per farm was smaller in Wyoming than nationally; however, the bottom 80 percent of Wyoming recipients received somewhat larger payments than did the bottom 80 percent country-wide.

Given the relative importance of the conservation program payments in Wyoming, it's useful to look more closely at Wyoming's participation in those programs. Table 13 provides data on Wyoming's share of the country's enrolled CRP acreage. That share hovered between .7 percent and .8 percent between 2005 and 2013 – not too different than the state's share of the nation's cropland (not including grazing land). The state's enrolled CRP acreage is highly concentrated in the crop-producing southeast district, including Laramie, Goshen, and Platte counties, so CRP payments are much more important for the economies of those few counties than for others in the state (Source: Maps of CRP Enrollment, November 2013, available at: http://www.fsa.usda.gov/Internet/FSA_File/crpenrollmentnov2013dot.pdf and http://www.fsa.usda.gov/Internet/FSA_File/crpenrollmentnov2013.pdf).

Nonetheless, other areas of the state do at times participate in CRP. In November 2013, Niobrara and Campbell counties had the next most CRP acreage after the three southeast counties, and all other counties except Sweetwater and Teton had smaller amounts of CRP acreage. The data also indicate Wyoming's changes in participation tend to mirror the national trends in participation, which largely reflect commodity market conditions.

The NRCS is quite active in Wyoming. Its budget obligations in the state for technical assistance payments and financial assistance amounted to $59.2 million in fiscal year 2012 (1.3 percent of the $4,491 million in total obligations nationwide). Technical assistance refers to "scientific expertise, natural resource data, tools, and technology employed by NRCS." Financial assistance refers to "cost-share payments, easement payments, and rental payments that help producers and landowners pay the costs of implementing conversation measures" on retired and working lands (*NRCS spending in Wyoming, available at: http://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_wy.html).* The largest obligations were for the EQIP program ($18.7 million), the Farm and Ranch Lands Protection Program ($15.7 million), the CSP program ($8.5 million), and Conservation Technical Assistance ($7.2 million). The repeal of the Farm and Ranch Lands Protection program could, therefore, be important for Wyoming landowners.

Between 2005 and 2012, the number of Wyoming acres treated by at least one financial or technical assistance program ranged from just over 1 million acres in 2012 to 2.25 million acres in 2008, representing 3.3 percent to 6.2 percent of the state's total crop and grazing acreage of 30.2 million[18]. (These percentages appear to be considerably below the national average participation of 12 percent, based on 52,851,371 acres treated by at least one program out of 440 million acres nationwide.) Some Wyoming acres are "treated" by multiple conservation programs. For example, in 2012, 4.15 percent of Wyoming acres receiving NRCS conservation assistance were treated by multiple NRCS programs (NRCS, available at: http://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_nat.html).

Table 14 categorizes the Wyoming acreage treated by NRCS programs according to category of conservation practices applied on the treated lands. The acreage in Table 14 may be counted multiple times, but the counts suggest, nonetheless, that grazing land conservation practices are the most important ones applied in Wyoming, followed by water quality and fish and wildlife habitat practices. This result makes good sense, given the high portion of Wyoming agricultural land dedicated to grazing. The extensive list of grazing land practices includes brush management, fencing, livestock pipeline, integrated pest management, water wells and watering facilities, and numerous others (NRCS, available at: http://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_wy.html).

Table 14. Wyoming Land Units Receiving NRCS Conservation Program Benefits by Conservation Practice Type, 2012

Conservation Practice Type	Acres Treated	Number of Practices
Cropland soil quality	109,004	1,016
Fish and wildlife habitat	448,845	861
Forest land conservation	8,179	19
Grazing land conservation	1,122,240	1,176
Irrigation efficiency	69,159	701
Water quality	549,556	2,005
Wetlands	10,279	33

Source: USDA Natural Resources Conservation Programs, NRCS Conservation Programs http://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_wy.html

[18] About 90 percent of the state agricultural land is grazing land, and 9 percent is cropland.

Other Programs in Wyoming

Rural development. In FY2012, USDA's Rural Development agencies report of program delivery levels over $279 million to Wyoming communities, businesses, utilities, organizations, and individuals. The largest category by far was for single family housing loan guarantees and other forms of rural housing support (Table 15).

Table 15. Rural Development Agency Program Levels in Wyoming, FY2012

Category	Program delivery level
Housing loans, loan guarantees, preservation grants, rental assistance, and tenant vouchers	$264,453,545
Business guaranteed loans and business enterprise grants	5,496,687
Rural utilities projects (electric programs)	4,887,000
Community facilities loans	3,037,600
Rural economic development loans	1,177,000
Water and waste loans and grants	640,958

Source: USDA, Rural Development, 2012 Wyoming Annual Report, available from: http://www.rurdev.usda.gov/SupportDocuments/WYAnnualReport2012legal.pdf

In 2012, the total program level for Rural Housing Services (including direct loans, loan guarantees, grants, rental assistance, and community facilities loans) totaled $27,558 million, of which almost 1 percent was programmed in Wyoming.[19] According to the 2010 Census, Wyoming has slightly under .4 percent of the country's rural residents (despite being a disproportionately rural state). So, although small in absolute terms in relation to the national totals, Wyoming receives a somewhat larger share of the Rural Housing Services benefits than its share of the country's rural population. Wyoming's share of Rural Development business loans and grants was .6 percent[20] (a bit more than its share of the rural population), and its share of Rural Development Rural Utilities loans, loan guarantees, and grants was .06 percent[21] (less than its share of the rural population).

Research and extension. Wyoming's shares of the nation's rural and farm population are important determinants of the amount of federal formula funding it receives for agricultural research and extension conducted by or under the auspices of the University of Wyoming's College of Agriculture and Natural Resources. Hatch funds are distributed to State Agricultural Experiment Stations according to the following formula: "three percent for Federal Administration, 20 percent equally, 26 percent in an amount which bears the same ratio to the total amount to be allotted as the rural population of the State bears to the total rural population of all the States as determined by the last preceding decennial census; 26 percent in an amount which bears the same ratio to the total amount to be allotted as the farm population of the State bears to the total farm population of all the states as determined by the last preceding decennial census; and 25 percent for the Hatch Multistate Research Fund" (National Institute of Food and Agriculture, Hatch Act Formula Grant, available at: http://www.csrees.usda.gov/business/awards/formula/hatch.html). Once the formula is applied, Wyoming receives about .74 percent of the total Hatch Grant allocation ($1,233,145 out of $165,650,537 in FY2013). Extension formula funds are distributed among the states according to a similar although not identical formula such that Wyoming received about .56 percent of the total ($1,508,455 out of $271,124,607 in FY2013) (Available at: http://www.csrees.usda.gov/business/awards/formula/fy13_smith_lever_final.pdf).

As a percent of the total Wyoming Agricultural Experiment Station budget ($7.5 million in FY2013), the USDA formula funds for research represent 16 percent. As a percent of the total Wyoming agricultural extension budget ($6.47 million in FY2013), the USDA formula funds for extension represent 23 percent (University of Wyoming Budget Information and Forms, available at: http://www.uwyo.edu/oia/budget/). While the state share of the national totals may be small, the federal contribution might be said to be relatively important to supporting agricultural research and extension in the state.

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[19] $264,453,545 (for housing) plus $3,037,600 (for community facilities) as a share of $27,558 million (for all Rural Housing Services), from USDA Budget Performance and Annual Performance Plan FY2014, pages 41-50.

[20] $5,496,687 (for business loans) plus $1,177,000 (for rural economic development loans) as a share of $1,057 million (for all Rural Business-Cooperative services), from USDA Budget Performance and Annual Performance Plan FY2014, pages 41-50.

[21] $4,887,000 (for rural utilities projects) plus $640,958 (for water and waste loans and grants) as a share of $9,150 million (for all Rural Utilities Services), from USDA Budget Performance and Annual Performance Plan FY2014, pages 41-50.

Summary

The U.S. farm bill is a large, complicated, and daunting (to most any reader) piece of legislation. Programs mandated and authorized by the farm bill are carried out by USDA, and they affect farms and ranches, households, and rural communities across the country. The 2014 farm bill continues the long history of an extensive role for government in U.S. agriculture. The complexity of the farm bill programs, the introduction of new programs in the 2014 legislation, and the difficult nature of the participation decisions that must be made by individual farmers and ranchers, all suggest a continuing need for information and decision making tools provided by colleges of agriculture and extension services.

Simply by virtue of being the least populated state in the nation, Wyoming receives a small share of all USDA payments and other program benefits. But farm bill programs are not inconsequential in the state. Some of the highlights this report include:

Six and a half percent of the Wyoming population receives SNAP (food stamp) benefits. SNAP participation among the eligible population is lower in Wyoming than at the national level. If all eligible individuals in Wyoming received SNAP benefits, a rough estimate suggests annual retail sales in the state could be as much as $38 million higher.

Between 1995 and 2012, Wyoming received only a very small share – just a quarter of 1 percent – of all USDA commodity programs, conservation programs, and farm income support payments; however, during this time period, Wyoming ranked 37th out of 50 states in terms of the value of such payments, so it is not the smallest state recipient.

For some Wyoming growers, and in some years, commodity and farm income support payments can be an important source of supplemental revenue. For example, in 2011 wheat program payments to Wyoming equaled 16 percent of Wyoming cash receipts from wheat sales. Corn, barley, sugar, wool, and sheep meat payments can be important to state growers in some market environments.

Wyoming's shares of total USDA conservation and disaster payments are larger than its shares of commodity and farm income support payments. This suggests that at the state level Wyoming may have a stronger interest in those programs, including livestock disaster programs, the Conservation Reserve Program, easement programs, and the Environmental Quality Incentive Program. The 2014 farm bill provided indefinite extensions for three livestock disaster assistance programs, a change of particular interest to the state.

CRP payments rank among the highest in the nation in the southeastern district of Wyoming, where crop production is concentrated, but CRP-enrolled acreage in Wyoming has not been entirely limited to this portion of the state. EQIP payments valued at over $59 million supported the adoption of conservation practices on over a million Wyoming acres in 2012 and are most important for grazing land conservation practices; however, based on the national average acreage treatment rate, Wyoming's participation in EQIP programs appears to be somewhat lower than it could be.

Given the very rural nature of Wyoming's population, USDA's Rural Development programs may merit special attention (more than this report gives them). Wyoming receives a somewhat larger share of USDA's Rural Housing Services benefits than its share of the country's rural population.

Last but not least, USDA federal formula funds for agricultural research and extension represent significant shares of University of Wyoming's agricultural research and extension budgets.

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