# Agriculture: A Review of Federal and Indiana State Information Resources

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griculture has played a profound role in shaping U.S. national economic development and cultural identity and this has also been true with Indiana's economic development and cultural identity. U.S. farmers are among the world's leading agricultural producers capable of meeting domestic food consumption needs, producing nearly all agricultural commodities, and exporting U.S. agricultural products to countries around the world. Total U.S. agricultural exports approached nearly \$82 billion during Fiscal Year 2007 (U.S. Department of Agriculture, National Agricultural Statistics Service, 2008a, xv-4).

U.S. farmers, ranchers, and agricultural producers are involved in cultivating and managing soil using environmentally advantageous practices, managing animal production and slaughter, and producing a variety of fruits, vegetables, and meat products. They seek to influence governmental agricultural policies in ways advantageous to their interests. They also promote exports of U.S. agricultural products, seek to promote the use of biofuels as ways of lessening U.S. dependence on unreliable energy sources, influence some aspects of the U.S. food safety system, engage in cutting edge technological research to promote environmental sustainability, and determine ways of addressing how agriculture can mitigate human-caused climate change (Yacobucci & Schnepf, 2007; Newton, 2007; U.S. Climate Change Science Program, 2008).

Libraries provide access to many types of agricultural information for their users. This article describes authoritative national, state, and government online resources, available at no fee, on the topic of agriculture. U.S. and Indiana agricultural department resources and legislative information resources are covered, along with Indiana Academic Institution resources These resources may be used by librarians and libraries for a variety of purposes, such as public access, reference, teaching, research, and library website and course guide improvements.

# Agriculture in the U.S.: A Brief Historical Introduction

The early years of U.S. history saw limited direct federal government involvement in U.S. agricultural production and supply aside from including agricultural statistics in the decennial census of 1840 (U.S. Department of Agriculture, National Agricultural Statistics Service, 2008b). This involvement would increase throughout the 19th century with creation of the U.S. Department of Agriculture, the 1862 and 1890 Morrill Land Grant acts creating land-grant universities, the 1887 Hatch Act creating agricultural experiment stations, and the 1915 Smith-Lever Act creating the Cooperative Extension Service. This federal involvement would further accelerate with the Depression and New Deal. In subsequent post World War II developments, the federal government become intimately involved in setting agricultural production levels and commodity prices; providing direct financial support for individual farms and farmers; developing soil conservation practices; providing crop insurance; and extending federal influence in numerous other areas. Such increasing federal support and regulation continues despite the decline in the number of U.S. farmers and individual farms due to the high financial costs of operating a farm and to ongoing technological enhancements in agricultural productivity. A variety of historical literature examines and assesses the multiple factors prompting the origins, evolution, and results of this increasing federal agricultural policymaking activity (Opie, 1987; Gardner, 1996; Paarlberg & Paarlberg, 2000; Hurt, 2002; and Conklin,

2008). Students, researchers, librarians, and library users may find this historical literature very helpful when using agriculture information.

# **U.S. Department of Agriculture**

A prodigious amount of information on U.S. government agricultural policy is produced by U.S. government agencies. The U.S. Department of Agriculture (USDA, www. usda.gov/) is the principal U.S. agricultural policymaking entity. Established in 1862, USDA seeks to improve and maintain farm income; develop and expand foreign markets for U.S. agricultural products; reduce and cure poverty, hunger, and malnutrition; enhance the environment and maintain production capacity by helping landowners protect the soil, water, forests, and other natural resources; ensure food safety through inspection and grading services; and conduct research to assist in these activities (U.S. National Archives and Records Administration, 2008, 105).

The USDA website provides access to information resources produced by departmental offices. It also contains information resources produced by agency headquarters offices such as its Office of Inspector General, Office of the Chief Economist, and Office of Congressional Relations, as well as information on the 2008 Farm Bill authorizing U.S. agricultural programs for the next five years. Detailed coverage of these resources will now be provided.

# **Agricultural Marketing Service**

The Agriculture Marketing Service (AMS, www.ams.usda.gov/) established in 1972, administers standardization, grading, certification, market news, marketing orders, research and promotion, and regulatory programs for USDA. This information is used to assist agricultural producers, processors, and distributors in orderly marketing and distributing of farm commodities in areas such as commodity classification and grading, marketing agreements and orders, promoting efficient rural transportation, and developing national organic standards through the National Organic Standards Board. AMS information is also used in managing the Pesticide Recordkeeping program in coordination with the National Agricultural

Statistics Service (NASS) and Environmental Protection Agency (U.S. Agricultural Marketing Service, 2000; U.S. National Archives and Records Administration, 2008).

AMS online information resources include material on Country of Origin Labeling; details on how to get products certified as being organic; and the text of relevant agency regulatory actions. AMS publications cover topics as varied as meat grading, dairy market news and statistics, seed publications, and wholesale and farmers markets, including information about individual farmers markets nationwide.

# **Agricultural Research Service**

The Agricultural Research Service (ARS, www. ars.usda.gov/) is USDA's primary research and development entity. The ARS creates, applies, and transfers knowledge and technology to provide affordable food and fiber, ensure food safety and nutrition, and support rural development and natural resource needs by conducting integrated research and statistical programs. This research is conducted at numerous domestic and international facilities in cooperation with state university partners and with the assistance of the National Agricultural Library (U.S. National Archives and Records Administration, 2008; Kelley, 1993).

ARS online information includes summaries of ongoing research activity such as summaries from the searchable Tektran research database; articles from *Agricultural Research* magazine (1995–present); newsletters, for example, the *Food and Nutrition Research Briefs* (1995–present); and research reports. Some research reports of interest include *Diagnosis of Honey Bee Diseases* (2000); and *Federal Entomology: Beginnings and Organizational Entities in the United States Department of Agriculture, 1854–2006, With Selected Research Highlights* (2008).

# Animal and Plant Health Inspection Service

The Animal and Plant Health Inspection Service (APHIS, *www.aphis.usda.gov/*) current institutional charter dates from March 14, 1977. Its mission is to conduct regulatory and control programs with the aim to protect and improve animal and plant health in order to benefit people and the environment. APHIS cooperates with state governments to administer federal laws and regulations on animal and plant health and quarantine, humane animal treatment, and controlling and eradicating pests and diseases. It enforces regulations seeking to prevent the spread of animal or plant pests and diseases. APHIS also conducts research and operational activities to reduce crop and livestock damage caused by birds, rodents, and predators (U.S. National Archives and Records Administration, 2008; U.S. Animal and Plant Health Inspection Service, 2008).

APHIS online covers information on how to report agricultural smugaling and animal or pest diseases to APHIS authorities. Other online information resources includes the text of laws and regulations APHIS enforces such as the Horse Protection Act; the Fruit and Vegetable Import Requirements Database (FAVIR); the text of news releases from February 2001-present; and descriptions of agency-issued permits covering topics like biotechnology, plant health, and veterinary biologics. APHIS publications include *Center* for Plant Health Science and Technology Accomplishments 2007 (2008); 2007 United States Animal Health Annual Report (2007); and Goat 2009: An In-Depth Look at the U.S. Goat Industry (2009).

# **Center for Nutrition Policy & Promotion**

The Center for Nutrition Policy & Promotion (CNPP, www.cnpp.usda.gov/) is responsible for coordinating USDA nutrition policy and providing nutrition education leadership for the public by coordinating with the U.S. Department of Health and Human Services to review, revise, and disseminate *Dietary* Guidelines for Americans. (U.S. National Archives and Records Administration, 2008; U.S. Department of Health and Human Services, 2006). A noteworthy CNPP online resource, www.mvpvramid.gov/, features information about personal nutrition requirements and the nutritional assets provided by various food groups. Mypyramid. gov also includes the healthy eating index and the interactive Cost of Raising a Child *Calculator* database. It includes publications such as The Low Cost, Moderate Cost,

and Liberal Food Plans 2007 (2008); and *Expenditures on Children By Families, 2007* (2008).

#### **Cooperative State Research, Education, & Extension Service**

The Cooperative State Research, Education, & Extension Service (CSREES, www.csrees, usda.gov/) was initially established in 1923 as part of the 1924 Agricultural Appropriations Act (Batten, 2000; Rasmussen, 1989). An important earlier development, the 1914 Smith-Lever Act, established the Cooperative Extension Service within the nation's landgrant universities to disseminate agricultural experiment station findings to farmers and the general public (Chapman, 1999). CSREES current organizational structure dates from 1994 when legislation was passed uniting the Cooperative State Research Service and Extension Service into a single agency (U.S. Cooperative State, Research, Education, and Extension Service, 2009).

CSREES programs seek to leverage USDA educational resources and activities with national land-grant institutions to increase scientific and public knowledge or agricultural and environmental sciences with the aim to benefit individuals, communities, and the nation. This is accomplished through a variety of programs including the popular 4-H program (U.S. National Archives and Records Administration, 2008).

CSREES online provides descriptions of its research covering agricultural and food biosecurity, animals, biotechnology and genomics, climate change, food and nutrition, natural resources, and pest management. Agency budget information and links to state extension resources are also provided.

#### **Economic Research Service**

Established in 1961, the Economic Research Service (ERS, www.ers.usda.gov/) is responsible for informing and enhancing public and private decision-making on agricultural, food, environmental, and rural development issues and publishes a wide variety of information resources to further its mission (U.S. National Archives and Records Administration, 2008; Batten, 2000).

Examples of accessible ERS information resources include datasets such as the Agricultural Baseline Database, Agricultural Exchange Rate Data Set, Farm Income Data, Foreign Agricultural Trade of the United States, Livestock and Meat Trade Data, and Wheat Data. Agricultural economic fact sheets are provided for individual states. Webcasts of ERS subject experts speaking are also accessible along with contact information and subject specialties for these individuals. ERS posts many analytical reports online including Adoption of Bioengineered Crops (2002); Commodity Payments: Farm Business Survival and Farm Size Growth (2007); Factors Shaping Expanding U.S. Red Meat Trade (2009); and Consequences of Higher Input Costs and Wheat Prices for U.S. Wheat Producers (2009).

#### **Farm Service Agency**

The Farm Service Agency (FSA, www.fsa. usda.gov/) is responsible for administering farm commodity, disaster and conservation programs for farmers and ranchers. It makes and guarantees farm emergency ownership, and operating loans through various state and county offices. FSA-managed programs cover commodity and livestock disasters, loans to family farmers and ranchers to purchase farmland and finance agricultural production, and catastrophic crop loss protection for crops such as Christmas trees and aquaculture not otherwise covered by federal crop insurance programs. One significant FSA program is the Commodity Credit Corporation (CCC, www. fsa.usda.gov/ccc/) which stabilizes, supports, and protects farm income and prices while also striving to maintain balanced and sufficient agricultural commodity supplies and facilitating their orderly distribution (U.S. National Archives and Records Administration, 2008).

FSA information resources include the full text and programmatic breakdowns of the 2008 Farm Bill; information about FSA-administered laws and regulations; detailed descriptions of program areas such as disaster assistance, environmental and cultural resource compliance; farm loans; commodity operations; and price supports. Detailed statistics to the county level are provided about participants in crop replacement programs. FSA analytical research products include the annual *Foreign Holdings* of U.S. Agricultural Land (2004–present); Evaluating the Relative Cost Effectiveness of Farm Service Agency's Farm Loan Programs (2006); and Fish and Wildlife Response to Farm Bill Conservation Practices (2007).

#### Food & Nutrition Service

The Food and Nutrition Service (FNS, www.fns. usda.gov/) administers U.S. food assistance programs. These include the Food Stamp Program which provides food benefits through state and local welfare agencies to help needy individuals enhance their food purchasing powers. It also administers the Special Supplemental Program for Women, Infants, and Children (WIC). WIC's mission is to improve the health of low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, infants, and children up to age five, by providing them with nutritious food supplements, nutrition education, and health care referrals and other programs including the National School Lunch Program (U.S. National Archives and Records Administration, 2008; Rural development, 1999; U.S. Congress, House Committee on Agriculture, Subcommittee on Department Operations, Oversight, Nutrition, and Forestry, 1999).

FNS information resources describes the programs it administers, and provides information on service programs to combat obesity and nutrition education programs such as the State Nutrition Action Plans. FNS publishes online research reports including *Guide to Measuring Household Food Security* (2000); *WIC Participation and Program Characteristics 2006* (2007); and *Direct Certification in the National School Lunch: State Implementation Progress* (2008).

# Food Safety & Inspection Service

The Food Safety & Inspection Service (FSIS, www.fsis.usda.gov/) was established by the Secretary of Agriculture on June 17, 1981. FSIS responsibilities include ensuring national commercial supplies of meat, poultry, and egg products are safe, wholesome, and correctly labeled and packaged. It also inspects all raw meat and poultry sold in interstate and foreign commerce, including imported products. Two Hoosiers, Purdue University chemistry professor Harvey Washington Wiley (1844–1930) and Senator Albert Beveridge (R) (1862–1927) played major roles in passing the 1906 pure food and drug and meat inspection laws which are the foundation of the modern U.S. government food safety and inspection system (U.S. National Archives and Records Administration, 2008; Young, 1989; Young, 1992).

FSIS online resources provide product recall listings, descriptions of agency scientific research and testing practices, and risks assessments of various animal diseases in food products such as avian influenza, bovine spongiform encephalopathy, and e-coli. Also available are the locations of FSIS laboratories and accredited commercial food inspection laboratories. FSIS produced publications include consumer food safety factsheets; *Quarterly Progress Report on* Salmonella Testing of Selected Raw Meat and Poultry Products (2006-present); Quarterly Enforcement Reports (1998-present); the text of laws and regulations FSIS enforces; and 2006 National Residue Program Data (2007).

#### **Foreign Agricultural Service**

The Foreign Agricultural Service (FAS, www. fas.usda.gov/) was established in 1953 and is responsible for improving foreign market access for U.S. agricultural products; building new markets and improving the U.S. agricultural sector's international competitiveness; and providing food aid and technical assistance to foreign countries. Its activities encompass trade agreements and negotiations and collecting and analyzing international agricultural statistics and market information (Batten, 2000; U.S. National Archives and Records Administration, 2008; U.S. Congress, House Committee on Agriculture, Subcommittee on Foreign Agriculture and Hunger, 1994).

FAS information resources include guidance on selling agricultural products overseas; descriptions of U.S. agricultural trade policy; information on foreign agricultural agreements; announcements of upcoming trade shows; and statistics about agricultural trade for commodities such as biofuels, cotton, dairy, fish and seafood, grains, planting seeds, wine, and wood products. A valuable feature of FAS online is the agricultural attaché reports on foreign agricultural market conditions compiled by U.S. diplomatic personnel globally (1995– present). Examples of these reports include Brazil: Biofuels Annual Ethanol (2008); New Zealand: Kiwifruit Industry Annual Report (2008); Thailand: Agricultural Situation (2009); EU Action Requires Germany to Revise Changes to Biofuel Law (2009); and China, People's Republic Of, Guangdong Furniture Industry Faces Strong Head Winds (2009). In addition, the online magazine FAS Worldwide provides articles and news on agricultural trade developments from 1996–present.

#### **Forest Service**

The United States Forest Service (FS, www. fs.fed.us/) was established in 1905 in legislation transferring federal forest reserve management from the Interior Department to USDA. The FS missions include achieving quality land management under a sustainable management concept to meet diverse public needs. Some of these missions involve advocating a conservation ethic to promote the beauty, conservation, diversity, and productivity of forests and associated lands; providing technical and financial assistance to state and private forest landowners to help them promote stewardship and quality land management; assisting states and communities in wise forest use for economic development and a quality rural environment; and expanding scientific and technological knowledge about forests and grasslands (U.S. National Archives and Records Administration 2008; Williams, 2007; Robbins, 1985).

A rich variety of information resources are provided on the FS website. These include links to individual national forest or grassland websites such as Hoosier National Forest or Kansas' Cimarron National Grassland; links to regional forest service research stations such as the Southern Research Station in Asheville, NC; how funding from the American Recovery and Reinvestment Act of 2009 will be used by the Forest Service to promote agency objectives and stimulate local economies; and text of FS-administered laws and regulations. Users may access national forest and grassland maps and brochures and information on Forest Service fire fighting and management policies.

Numerous forestry and forest policy research reports are accessible on FS online including agency annual reports from 1996–present; *Fire and Fuels Buildup* (n.d.); the annual

Land Areas of the National Forest System (1994–present); Forests, Carbon, and Climate Change: A Synthesis of Science Findings (2006); Helimulching: Equipment and Techniques (2007); and Biofuels, Bioenergy, and Bioproducts From Sustainable Agricultural and Forest Crops (2008).

#### **Grain Inspection, Packers, & Stockyards Administration**

The Grain Inspection, Packers, and Stockyards Administration (GIPSA, www.gipsa.usda. gov/) was established in 1994 to market livestock, poultry, meat, cereals, oilseeds, and related agricultural products and promote fair and competitive trading practices to benefit consumers and American agriculture. GIPSA's mission is executed by the Federal Grain Inspection Service which provides federal quality standards for the U.S. grain market. The Packers & Stockyards Programs enforces the 1921 Packers and Stockyards Act to promote competitive marketing environments for the livestock, meat, and poultry industries (U.S. National Archives and Records Administration, 2008; Skaggs, 1986; Hill, 1990; U.S. Congress, Senate Committee on Agriculture, Nutrition, and Forestry, 2000; Labbé & Lurie, 2005).

GIPSA-produced information resources include news releases from 1997–present; the text of agency-enforced laws and regulations such as the United States Grain Standards Act; and data and statistics on U.S. grain and livestock markets. Various publications include GIPSA's Annual Report to Congress (1996–present); Instructions for Weighing Livestock: Scales and Weighing Memorandum No. 3 (1996); Assessments of the Cattle and Hog Industries (2000–present); and United States Standards For Whole Dry Peas (2008).

# **National Agricultural Library**

The National Agricultural Library (NAL, www. nalusda.gov/) serves as the primary U.S. source for information about food, agriculture, and natural resources. It is also responsible for assisting agricultural policymakers, specialists, research scientists, and the general public. In addition, the National Agricultural Library prepares the AGRICOLA database of agricultural research (U.S. National Archives and Records Administration, 2008). AGRICOLA, http://agricola.nal.usda.gov/, indexes printed works from as far back as the 15th century and includes materials in all formats, including books and journal articles.

Other information resources on the NAL website include guides for conducting research on agricultural products such as crops, plants, and pests; the text of agricultural laws and regulations such as the Animal Welfare Act; information on U.S. agricultural history; and a wide variety of digital collections of important USDA publications. It includes online graphics and visual images including posters. NAL provides online publications: *Agriculture Handbook* series; *Home and Garden Bulletin* series; *Technical Bulletin* series; and *Yearbook of Agriculture* (1894–1992), as well as nursery and seed trade catalogs.

#### **National Agricultural Statistics Service**

The National Agricultural Statistics Service (NASS, www.nass.usda.gov/) is responsible for preparing estimates and reports on agricultural production, supply price, chemical use, and other items to ensure the orderly operation of the U.S. agricultural economy. NASS is also responsible for conducting the Census of Agriculture every five years to provide comprehensive agricultural economic data to the county level (U.S. National Archives and Records Administration 2008; Allen, 2007).

A rich variety of information resources are provided by NASS online. These include the annual Agricultural Statistics reports (1994-present); the text of agricultural census reports dating back to 1840 with some gaps; regular reports on various agricultural commodities including Agricultural Chemical Usage: Dairy Cattle and Dairy Facilities (2002present); Cattle on Feed (1949-present); Grain Stocks (1973-present); and United States and Canadian Cattle (1998-present). The NASS website also links to individual state agricultural statistical services websites, features a calendar of upcoming statistical releases, and provides access to agricultural weather related information.

#### **Natural Resources & Conservation Service**

The Natural Resources Conservation Service (NRCS, www.nrcs.usda.gov/) was established as the Soil Conservation Service in 1935 and became NRCS in 1994 (Batten, 2000; Code of Federal Regulations, 2008). The NRCS mission is to help U.S. farm owners, ranchers, and other private landowners develop and carry out voluntary efforts for conserving and protecting natural resources. The Natural Resources Conservation Service accomplishes this by providing conservation technical assistance to reduce soil erosion; enhancing water quality, improving and conserving wetland habitats; mitigating damage to water supplies from natural disasters; and offering various programs to enhance environmental quality and protect farmland and forestry assets (U.S. National Archives and Records Administration, 2008; Helms, 1992).

The NRCS website publishes the text of public comments on the 2008 federal farm bill provisions; news releases 2000-present; program factsheets covering topics such as aging watershed infrastructure; a photo gallery of service programs and research; guidance on engaging in environmentally friendly farming and ranching; and the text, photos, and maps from soil surveys for individual U.S. counties with examples from Indiana including *Elkhart County* (2002), *Floyd County* (2007), and *Switzerland County* (1987).

# **Risk Management Agency**

The Risk Management Agency (RMA, www. rma.usda.gov/) was established in 1996 and is responsible for managing the Federal Crop Insurance Crop Corporation. Crop insurance is offered to qualifying producers through 16 private sector crop insurance companies. Under the federal crop insurance program, RMA provides reinsurance, pays premium subsidies, reimburses insurers for administrative and operating costs, and oversees the financial integrity and operational performance of the system for delivering these reimbursements. Examples of crops covered by RMA include apples, barley, citrus products, clams, corn, grain sorghum, green peas, livestock, rangeland, rice, sugarcane, and many others. (U.S. National Archives and Records Administration, 2008; U.S. Department

of Agriculture, Risk Management Agency, 2008; U.S. Congress. House. Committee on Agriculture, Subcommittee on General Farm Commodities and Risk Management, 2006).

Information resources provided by RMA include the text of laws and regulations it enforces and its program eligibility rulings. RMA online also offers statistical profiles of crop insurance developments in each state; a public database for calculating crop insurance premiums; actuarial documents organized by states, crops, and counties; and program manuals such as *Manual 14: Guidelines and Expectations For Delivery of the Federal Crop Insurance Program* (1997); *Pasture, Rangeland, Forage Vegetation Index: Insurance Standards Handbook* (2008); and *Succeeding Crop Years* (2007).

#### **Rural Development Agency**

The Rural Development Agency (RDA, www. rurdev.usda.gov/) seeks to enhance rural Americans economic opportunities and improve their life quality. It does this by fostering relationships among government, industries, and communities while also serving as a capital investment bank to provide financing for rural housing, economic development, telephone and high-speed Internet access, and electricity, water, and sewer infrastructure (U.S. National Archives and Records Administration, 2008; Sullivan, 2007).

RDA information resources cover energy initiatives such as the Rural Energy for America Program and Biobased Products and Bioenergy Program. RDA online also offers statistics on rural development program expenditures by state from 2001–2008; rural development provisions of the 2008 Farm Bill; and publications such as *Rural Development Progress Report* (2005–present); *A Guide For Evaluating the Requirements of Ethanol Plants* (2006); and USDA Rural Development: Bringing Broadband to Rural America (2007).

# **Non-USDA Agencies**

Additional U.S. government agencies outside of USDA produce agricultural information and implement agricultural policy. These agencies include the Commodity Futures Trading Commission and Farm Credit Administration.

# **Commodity Futures Trading Commission**

The Commodity Futures Trading Commission (CFTC, www.cftc.gov/) was established in 1974 by the Commodity Futures Trading Commission Act. CFTC responsibilities include regulating trading on U.S. futures markets that offer commodity futures and options markets contracts. The commission regulates designated contract markets and registered transaction execution facilities. It also regulates various trading professionals such as brokerage houses, futures industry sales personnel, and commodity trading advisers. CFTC regulatory and enforcement efforts are intended to promote transparent and financially sound markets; encourage market competition, efficiency, and integrity; and protect market participants and the public from fraud, manipulation, and abusive practices (U.S. National Archives and Records Administration, 2008; U.S. Congress, Senate Committee on Agriculture, Nutrition, and Forestry, 2003; Markham, 1987).

Information resources produced by CFTC include general press releases and press releases on enforcement actions from 1995– present; the text of laws and regulations it enforces; descriptions of CFTC consumer protection activities; description of how futures markets affects agricultural prices; and reports. Examples of reports include *This Month in Futures Markets, Cotton On-Call, Economic Purposes of Futures Markets* (2007), and *Commodities and Equities: A "Market of One"*? (2008).

# Farm Credit Administration

The Farm Credit Administration (FCA, www.fca. gov/) is an independent agency established by Executive Order 6084 on March 27, 1933. FCA is responsible for ensuring the safe and sound operation of banks, associations, affiliated service organizations, and other entities which are part of the Farm Credit System. This system was created to provide adequate and dependable credit and related services to farmers, ranchers, and producers or harvesters of aquatic products; persons providing onthe-farm services; rural homeowners; and associations of these groups operating cooperatively and engaging in marketing, processing, supply, or business service functions to benefit their memberships (U.S. National Archives and Records Administration, 2008; Fitzgerald, 2003).

FCA online resources include descriptions of how it governs farm credit institutions; news releases from 1996–present; the text of laws and regulations it enforces; and various publications including *Annual Report on the Farm Credit System* (1996–present); financial reporting information provided by individual lending institutions; and *Mission-Related Investments Annual Report 2006* (2007).

# **U.S. Congressional Sources**

Congressional information sources are critical for effectively understanding federal agricultural policy. Users may examine the text of congressional bills affecting the change of federal agricultural laws from 1993-present at www.gpoaccess.gov/bills/. GPO Access, www.gpoaccess.gov/, also provides access to congressional committee reports on legislation and the text of U.S. laws in the United States *Code*. It provides access to regulations used to enforce laws in the Code of Federal *Regulations*. Announcements of proposed federal regulations in the Federal Register and the ability to comment on these proposed regulations are available via http://regulations. qov/.

Congressional committees are also excellent sources of agricultural policy information because these committees are responsible for approving and revising legislation, conducting oversight of federal agencies programs, and funding these programs. These committees have the legal authority to subpoena witnesses. The transcripts of committee hearings include committee members questioning witnesses, sometimes in heated discussion, and the text of reports inserted into the transcript by members and witnesses (Sullivan, (2007). An exceptionally important congressional function is to provide funding every five years for farm programs and commodities such as rice, sugar, and wheat and setting farm production and price levels in a particularly controversial and expensive process involving billions of dollars (Johnson, 2008; Riedl, 2007). Regular agriculture and appropriations committee hearings are a rich resource for students and researchers.

# **House Agriculture Committee**

The House Agriculture Committee is a major player in congressional agricultural policymaking. Its website lists committee members during the 111th Congress (2009-2010), one of these being Representative Brad Ellsworth (D-IN), and information about committee subcommittees including those covering conservation, credit, energy and research, horticulture and organic agriculture, and livestock, dairy, and poultry. It also publishes press releases from 1998-present and a glossary of agricultural terms including carbon sequestration. Examples of recently published committee hearings include *Review* the Market Structure of the Livestock Industry (2008) and Review of the Impact of Imported Contaminated Food and Feed Ingredients and of Recent Food Safety Emergencies on Food Safety and Animal Health Systems (2008).

# **House Appropriations Committee**

The House Appropriations Committee, http://appropriations.house.gov/, plays a significant role in federal agricultural policy through its agricultural and rural development subcommittee. Congressional appropriations committees are responsible for determining how much money can be allocated to annual federal agency budgets. *Agricultural, Rural Development, Food and Drug Administration, and Related Agencies Appropriations for 2008* (2007) is an example of a recent hearing by this committee containing exhaustive coverage of the annual budget requests submitted by these agencies and congressional responses to these requests.

# **Senate Agriculture Committee**

Senate committees are particularly important because they are responsible under the U.S. Constitution for confirming presidential appointments like the Secretary of Agriculture and members of various commissions and treaties with foreign countries. The Senate Agriculture, Nutrition and Forestry Committee website, http://agriculture.senate.gov/ lists, committee members including Senator Richard Lugar (R-IN) who has served as committee chair and lists committee subcommittees: Subcommittee on Hunger, Nutrition and Family Farms; Subcommittee on Rural Revitalization, Conservation, Forestry and Credit; Subcommittee on Energy, Science and Technology; Subcommittee on Domestic & Foreign Marketing, Inspection, & Plant & Animal Health; Subcommittee on Energy, Science and Technology; and the Subcommittee on Production, Income Protection, and Price Support. The site also links to the text of general agricultural legislation.

Additional committee resources include the text of bills considered by the committee from 1977–present, recent news releases, committee hearing webcasts, and witness opening statements. Examples of recent Senate Agriculture Committee hearings include Northern Plains Priorities in the 2007 Farm Bill (2007); Next Generation Biofuels: Cellulosic Ethanol and the 2007 Farm Bill (2007); and Investing in Our Nation's Future Through Agricultural Research (2007).

#### Senate Appropriations Committee

The Senate Appropriations Committee, http://appropriations.senate.gov/, handles agricultural funding through its agriculture and rural development subcommittee. Examples of its recent hearings include *Grazing Policy Changes Proposed by the U.S. Forest Service* (2006) and *International Food Assistance* (2007).

# **Congressional Support Organizations**

Congress' extensive oversight responsibilities require it to rely on support organizations possessing substantive expertise beyond that held by members, congressional committees, and the professional support staff assisting members and committees. The three principal congressional support organizations providing analytical expertise to assist Congress in overseeing agricultural issues are the **Congressional Budget Office** (CBO), **Congressional Research Service** (CRS), and **Government Accountability Office** (GAO).

CBO, www.cbo.gov/, analyzes the U.S. government budget and the budgetary implications of individual federal programs. Examples of relevant agriculture studies on its website include *How Federal Policies Affect the Allocation of Water* (2006) and *The Effects of Liberalizing World Agricultural Trade: A Review of Modeling Studies* (2006). CRS is a branch of the Library of Congress providing congressional members and their staff with expert and unbiased public policy issue analysis. They do not have their own publicly accessible website but access to CRS reports is provided by many academic institutions and nonprofit organizations. Purdue University offers a gateway to some of these resources at www.lib.purdue.edu/ govdocs/leg.html. Examples of recent CRS agriculture studies include *What is the "Farm Bill"*? (2008); *Agricultural Biotechnology: Background and Recent Issues* (2009); and *Air Quality Issues and Animal Agriculture: A Primer* (2009).

GAO, www.gao.gov/, is responsible for issuing reports on the management performance of government programs and their website includes the text of such reports and the testimony of GAO witnesses before Congress. Examples of recently produced GAO agriculture reports and testimony include Federal Farm Programs: USDA Needs to Strengthen Controls to Prevent Payments to Individuals Who Exceed Income Limits (2008); U.S. Department of Agriculture: Improved Management Controls Can Enhance Effectiveness of Key Conservation Programs (2009); and Veterinarian Workforce: The Federal Government Lacks A Comprehensive Understanding of Its Capacity to Protect Animal and Public Health (2009).

# **National Academies of Science**

The National Academies of Science (NAS, www.nas.edu/) is an independent quasigovernmental organization often used by Congress and government agencies to provide rigorous analysis of scientific and technologically oriented issues. NAS' Board on Agriculture and Natural Resources, BANR, www.dels.nas.edu/banr/, analyzes agricultural production and related natural resource issues. Recent examples of accessible BANR reports include Emerging Technologies to Benefit Farmers in Sub-Saharan Africa and South Asia (2008); Changes in the Sheep Industry in the United States (2008); and Transforming Agricultural Education for a Changing World (2009).

#### **Indiana State Information Resources**

Agriculture has always played a critical role in Indiana's economic and cultural development due to the state's significant quantity of arable land. As of early 2009, Indiana ranks 10th among U.S. states in the total value of agricultural products sold; 8th in crop value when nursery and greenhouse products are included; 5th in grains, oilseeds, dry beans, and dry peas sales; 5th in sales of milk and other cow dairy products; 5th in hog and pig inventories; 5th in corn for grain acreage; and 4th in soybeans for bean acreage (Indiana Agricultural Statistics Service, 2009).

Indiana is a major corn producer and this must be considered in the larger Midwest context where corn plays a major role in U.S. agricultural cultivation and production (Hudson, 1994). Indiana's agricultural bounty has also been observed historically by international observers (Harrison, 1972). There has been a wide variety of agricultural production, research, and education in Indiana covering commodities as varied as tobacco, livestock, soybeans, and wheat. Even aquaculture has been studied along with swamp draining in Benton and Newton counties to transform them into significant agricultural producers. Another topic of research has been the impact of Purdue University and Purdue professors such as William Carroll Latta (1850–1935) in developing Purdue's agricultural research and extension programs. Indiana agricultural history also includes the political advocacy roles played by farm interest groups such as the Indiana Farm Bureau and National Farmers Union, Farmers, agricultural researchers, and governmental policymakers in the 21st century are addressing many issues that include Indiana: the increasing growth of crop price support programs; the increasing use of fertilizers and other chemicals in agricultural production; a declining number of farmers and technological enhancements producing drastic agricultural productivity increases; the increasing importance of agricultural exports in state and federal agricultural policy; the emerging importance of biofuels such as ethanol, concerns over food safety; the increasing demand for organic produce, and the desire to promote "environmentally friendly farming"; and growing controversy over whether human-caused climate change may

affect agricultural production. (Baer, 2003; Madison, 1982; Nation, 2005; Neth, 2007; Philips, 1968; Thornbrough, 1992; Whitford & Martin, 2005).

# **Indiana Agencies**

The **Indiana State Department of Agriculture** (ISDA, www.in.gov/isda/) currently serves as Indiana's principal state agricultural policymaking agency. ISDA is organized into several divisions whose responsibilities encompass agricultural economic development; bioenergy; the certified livestock producer program; agricultural diversification including organic and locally-grown produce; soil conservation; the Grain Buyers and Warehouse Licensing Agency which seeks to reduce risks to grain producers; hardwoods; Indiana farmers markets; and the Indiana Land Resource Council which focuses on agricultural zoning, and international trade.

Each of these ISDA entities produces a variety of information resources with sample publications including *Corn-Ranked by Acreage of No-Till Acres* (2004); *Milk Labeling Work Group 2008: Summary Report* (2008); the current ISDA *Annual Report; and A Guide for Local Land Use Planning for Agricultural Operations* (2008).

Indiana's Office of Inspector General, www. in.gov/oig/, evaluates the performance of state agency programs and seeks to uncover waste in these programs. Purdue University and its agricultural units serve as a defacto state Indiana State Department of Agriculture for many years, providing a variety of online agricultural information resources available at no charge.

# **Indiana General Assembly**

The Indiana General Assembly website, www. ai.org/legislative/, publishes the text of Indiana state agriculture laws, regulations, and proposed regulations found in state publications such as the *Indiana Code*, *Indiana Administrative Code*, and *Indiana Register*. The *Indiana Register* publishes proposed state regulations as well as information on how to submit public comment on them. The General Assembly website also provides access to the text of bills being considered by the General Assembly; the status of these bills; member listings for relevant agriculture policy committees such as the House Committee on Agriculture and Rural Development and Senate Committee on Agriculture and Small Business; and the text of selected agency reports submitted to the General Assembly. One example is the *Indiana Biobased Products Advisory Commission: Summary Report* (2008).

#### **Indiana Academic Research Institutions**

Additional government agriculture information policy resources are produced by Indiana academic institutions such as Purdue University which serves as Indiana's land-grant university. The Purdue Libraries research guide *Government Documents on Agriculture* at www.lib.purdue. edu/subjectguides/govagriculture/ provides links to these and additional government information resources on this topic.

The Purdue University **Department of** Agricultural Economics, www.agecon. purdue.edu, seeks to acquire and transmit agricultural economic knowledge to Indiana residents, the nation, and world. Its website lists departmental faculty and their areas of expertise and provides the text of some of their scholarly journal articles, a financial crisis website focusing on agricultural economic issues; and the text of reports from the Purdue Agricultural Economics Report archive. Representative titles from the archive include: Kev Factors for Opportunities Influencing Indiana Agriculture: The Long View (2008); Assessing the Opportunities for U.S. Pork in China (2008); Farmers and the Indiana Sales Tax (2008); An Update on Farm Land Assessment for Indiana Property Taxes (2009); and Weather Disasters in Indiana and Taxes (2009).

The **Department of Agronomy**, www. agry.purdue.edu/, seeks to disseminate information to the public in order to facilitate informed decision-making about agricultural and environmental issues. Its website lists faculty contact information and their areas of expertise and provides the text of some of their scholarly publications and descriptions of ongoing research projects.

#### The Cooperative Extension Service

(CES, www.ces.purdue.edu/) is responsible for communicating agricultural research

information throughout Indiana and working with agricultural constituency groups such as the youth organization 4-H. Information resources on their website include contact information for county extension offices, details on service research activities and specialists in areas such as agronomy, animal sciences, entomology, food science, forestry and natural resources, and horticultural and landscape architecture. A variety of online publications and databases are accessible from the CES website including Weed Control for the Garden and Landscape (2003); Home Storage of Apples (2006); Midwest Vegetable Production Guide for Commercial Growers (2009); and Concentrated Animal Feeding Operations (CAFO, www.ansc.purdue.edu/cafo/).

#### The Indiana Agricultural Statistics Service,

www.nass.usda.gov/in/, is the Indiana branch of the National Agricultural Statistics Service (NASS) operated in cooperation with the Purdue University College of Agriculture. It publishes customized studies and quantitative figures of Indiana agricultural trends and developments. Resources accessible online include news releases, historical agricultural commodity prices, farm acreage, crop acreage and production statistics, and regularly issued reports. Examples of report titles are the *Indiana Equine Summary; Annual Statistical Bulletin* (1925–present, incomplete); *Indiana Agricultural Report* (2001–present); and county agricultural production estimates.

The **Purdue Agricultural Centers** website, www.agriculture.purdue.edu/pac/, features information about agricultural research stations across the state. The Knox County Southwest Purdue Agricultural Center provides information about ongoing research occurring at all these facilities. Purdue also supports a number of other agricultural research facilities through its Discovery Park network and other centers including the Agricultural Genomics Center, Center for Enhancing Foods to Protect Health, Center for Rural Development, and Hardwood Tree Improvement and Regeneration Center. These Centers publish information online about their research activities.

# The Indiana Database of University

**Research Expertise** (INDURE, www.indure. org/) provides access to the names of experts in agriculture and related fields at Ball State University, Indiana University, Purdue University, and the University of Notre Dame along with links to individual professional websites and contact information. Determined researchers will benefit from learning about the individuals working at our major universities that represent Indiana's intellectual capital on the topic of agriculture.

# Conclusion

A tremendous variety of publicly accessible resources on U.S. federal and Indiana state agricultural policy is available online. These resources should stimulate further analysis, debate, discussion, and study of the multifaceted and ambiguous roles agricultural products and services play in our personal lives as well as in local, state, and national economic and political policymaking. Libraries may rely on these authoritative government websites for reference use, online subject guides, and curriculum enhancement. Since agriculture is a global phenomenon, the truly engaged researcher should also consult the abundant proliferation of agricultural information resources and policy documents produced and freely accessible online by other U.S. state and local governments, foreign national governments, and international government organizations for a better understanding of agriculture's importance in early 21st century global politics.

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