

THE LANDSCAPE OF

ARKANSAS



Welcome to Arkansas Agriculture

ARKANSAS is home to:

- **Wal-Mart**, the largest food retailer in the world
- **Tyson Foods**, the largest poultry and meat processor in the United States
- **Riceland Foods**, the largest rice exporter in the United States
- **Producer Rice Mill**, Arkansas' second-largest rice miller
- **Keo Fish Farms**, the largest producer of striped bass in the world
- **Anderson Fish Farms**, the largest producer of baitfish in the world
- **J.B. Hunt**, one of the largest transportation logistics companies in North America

Agriculture is Arkansas' largest industry, adding around \$16 billion to the state's economy every year.

ARKANSAS has a strong ag infrastructure:

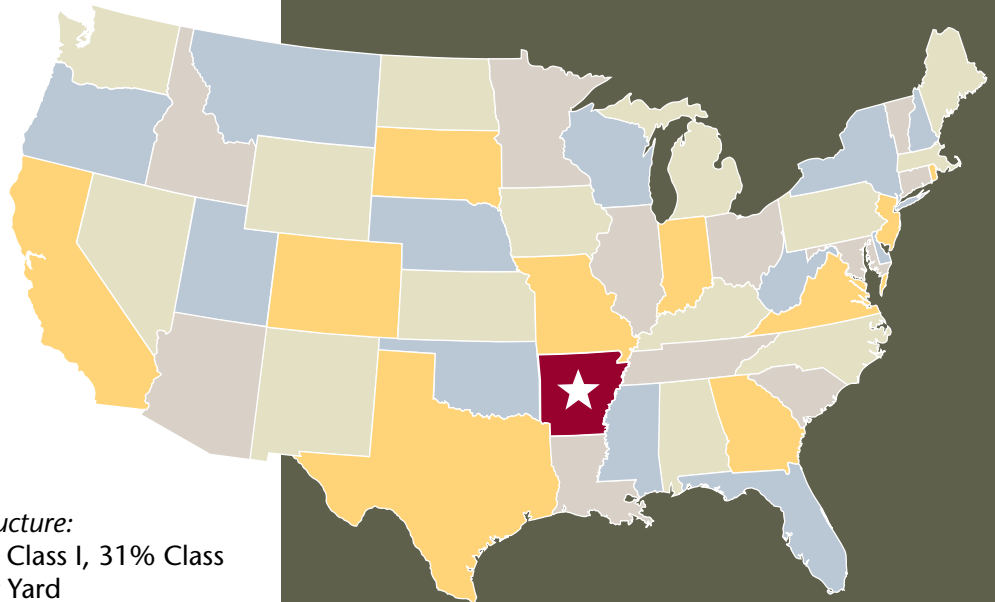
- 2,750 miles of railroads (69% Class I, 31% Class II), including the Marion Container Yard
- 99,055 miles of highway, of which 16,440 miles are state highways
- 1,000 miles of navigable waterways
- 196 million bushels of permanent grain storage
 - ▶ 115 million bu farm
 - ▶ 81 million bu commercial

Agriculture and Forestry utilize more than 95% of Arkansas land resources:

- 14.5 million acres of farmland
- 6.2 million acres of crops
- 8.3 million acres of livestock and hay
- 18.8 million acres of forest

TOP AGRICULTURE PRODUCTS IN ARKANSAS

Commodity	National Ranking
Rice	No. 1
Baitfish	No. 1
Catfish	No. 2
Broilers	No. 2
Cotton	No. 2
Turkeys	No. 3
Forestry	No. 3
Grain Sorghum	No. 5
Eggs	No. 8
Soybeans	No. 10



ARKANSAS' MAJOR EXPORTS

Commodity	Rank	Value <i>(in millions)</i>	% of crop exported
Rice	No. 1	\$640	60
Soybeans & products	No. 10	\$428	40
Cotton & lint	No. 2	\$416	80
Poultry & products	No. 2	\$380	13
Feed grains & products	No. 18	\$112	25
Overall	No. 12	\$2,164	27



THE LANDSCAPE OF ARKANSAS

By Randy Veach, Arkansas Farm Bureau President

I hope you enjoy reviewing the Landscape of Arkansas, a detailed look at the quality and diversity of Arkansas agriculture, one of the true jewels of our beautiful and wonderful state. From some of the most fertile soils in the world in the Delta regions of eastern Arkansas to the wooded hillsides of western Arkansas, agriculture stands stalwartly at the center of our state's economy as its largest industry segment.

Our farmers and ranchers are among the most efficient and effective in the world, producing reliable, safe and secure products for a global market. Like all successful businesses, the men and women who raise our livestock and grow our crops take personal responsibility for the quality of their products, and are focused on exceeding their customer's expectations.



With our state sitting at the crossroads of America's extensive interstate system, and the Arkansas and Mississippi Rivers at our doorstep, Arkansas agriculture offers significant transportation advantages for our

business partners. Our products can be to the Gulf of Mexico is four days, for example, with efficient delivery throughout the world from there.

Whether it is rice, poultry, soybeans and other feed grains, beef, timber, fish, cotton or fresh vegetables, Arkansas produces a broad set of commodities that appeal to worldwide tastes.

With 30 percent of our state's agricultural products exported annually, we stand as a strong advocate for free and open trade. As global demand rises, the Arkansas farmer stands ready and capable, of increasing production to feed a growing population.

As you learn more about the state's agriculture industry, you will undoubtedly feel a closer connection to Arkansas.

Enjoy the Landscape of Arkansas.



Quality & Safety of U.S. Food Products

The USDA and FDA are pursuing a farm-to-table approach to food safety by taking steps to improve the safety of meat and poultry at each step in the food production, processing, distribution and marketing chain.

This approach covers three major areas:

- 1. Sanitation Standard Operating Procedures***
- 2. Microbiological Testing***
- 3. Hazard Analysis Critical Control Point (HACCP) system***

FGIS

The Federal Grain Inspection Service provides sampling, inspection, process verification, weighing and stowage examination services that accurately and consistently describe the quality and quantity of the commodities being bought and sold. FGIS establishes standards for quality assessment, regulates handling practices, and manages a network of federal, state, and private laboratories that provide impartial, user fee funded official inspection and weighing services for grain and related agricultural products.

HACCP

www.fda.gov/Food/FoodSafety/#haccp

Hazardous Analysis & Critical Control Points (HACCP) is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.

On the farm actions such as monitoring feed, maintaining farm sanitation, and practicing good animal health management practices help prevent contamination from occurring.

HACCP plans prevent contamination during slaughter and processing and once meat and poultry products leave the plant, controls are in place to prevent contamination during transportation, storage and distribution.

IREGS

International Animal Product Export Regulations provide exporters with our best understanding of importing countries requirements for certain animal-origin products.



Responsibility for food safety rests with both the Food and Drug Administration and the U.S. Department of Agriculture

GIPSA

The **Grain Inspection, Packers and Stockyards Administration** is an agency of the USDA that facilitates the marketing of ag products and promotes fair and competitive trading practices for the overall benefit of consumers and American agriculture.

P&SP

The **Packers and Stockyard Program** encompasses a wide range of activities including: 1) Conducting major investigations involving fraud, unfair competition, and deceptive practices. 2) Ensuring accurate scales and accurate weighing of livestock, meat, and poultry. 3) Monitoring market performance. 4) Reviewing stockyard services, handling practices, and facilities.

APHIS

The **Animal & Plant Health Inspection Service** provides phytosanitary certification for agriculture commodities and export certification for processed plant products.



The **United States Department of Agriculture** is the U.S. federal executive department responsible for developing and executing U.S. federal government policy on farming, agriculture, and food. It aims to meet the needs of farmers and ranchers, promote agricultural trade and production, work to assure food safety, protect natural resources, foster rural communities and end hunger in the United States and abroad.



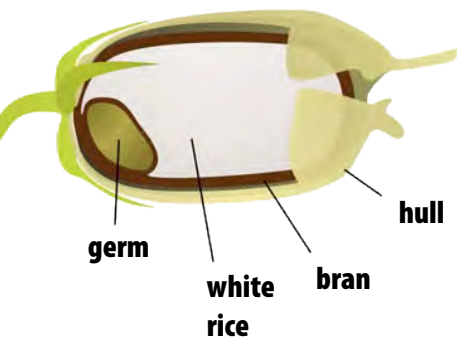
The **Food and Drug Administration** is an agency of the United States Department of Health and Human Services, one of the United States federal executive departments. The FDA is responsible for protecting and promoting public health through the regulation and supervision of food safety, tobacco products, dietary supplements, prescription and over-the-counter pharmaceuticals, vaccines, biopharmaceuticals, blood transfusions, medical devices, electromagnetic radiation emitting devices, veterinary products and cosmetics.



RICE



PARTS



The state's farmers grow primarily long grain rice but also some medium and short grain rice.

Arkansas produces more rice than any other state.

RICE PRODUCTS

Individually Quick Frozen (IQF) Rice:

Cooked rice grains that are individually frozen before packaging to provide a free-flowing ingredient for use in frozen and prepared food products.

Crisped/Puffed/Expanded Rice:

Rice kernels can be processed in a variety of ways to meet particular manufacturing needs. Candy bar, energy and nutrition bars and cereal applications commonly require crisped, puffed or expanded rice.

Rice Meal and Flour:

Whole or broken kernels of rice can be ground and sifted into meal or flour. Rice meal and flour are often

the preferred choice of manufacturers when creating products targeted to consumers with food allergies or who are gluten-intolerant.

Broken Kernels: These are the pieces of the rice kernel that are less than $\frac{3}{4}$ length of the intact kernel. Head rice is between $\frac{1}{2}$ to $\frac{3}{4}$ of the original kernel. Brewers rice is about $\frac{1}{4}$ kernel. Broken kernels can be milled into flour for use in many products including baby food. Broken kernels are used predominantly in pet foods.

Rice Starch, Syrup and Protein:

With further processing, starch, syrups of different sweetness levels and rice protein concentrate can be made for further use in developing food products.

BASIC FORMS

ROUGH (PADDY) RICE is rice as it comes from the field. Rice kernels are still encased in an inedible, protective hull.

BROWN RICE has the outer hull removed, but still retains the bran layers that give it a tan color, chewy texture and nut-like flavor. Retaining the nutrient-dense bran layer makes brown rice a 100-percent whole grain food.

REGULAR-MILLED WHITE RICE has the outer husk removed and the layer of bran milled away until the grain is white. Most U.S. milled rice is enriched after milling.

PARBOILED RICE is rough rice that has gone through a steam-pressure process before milling. This procedure gelatinizes the starch in the grain, and ensures a firmer, more separate grain.

PRECOOKED RICE, also called quick-cooking or instant, is white or brown rice that has been completely cooked and dehydrated. This reduces the time required for cooking.

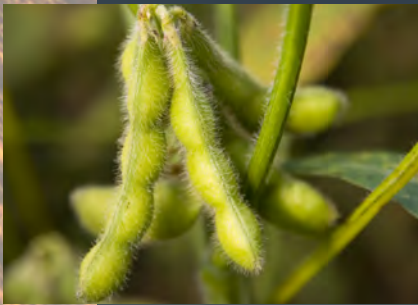
RETORT (OR READY TO HEAT) RICE is precooked rice that can be heated in the microwave in just a couple of minutes.

INDUSTRY

Arkansas is home to Riceland Foods, the largest rice exporter in the U.S.



Arkansas exports both rough (paddy) and milled rice.

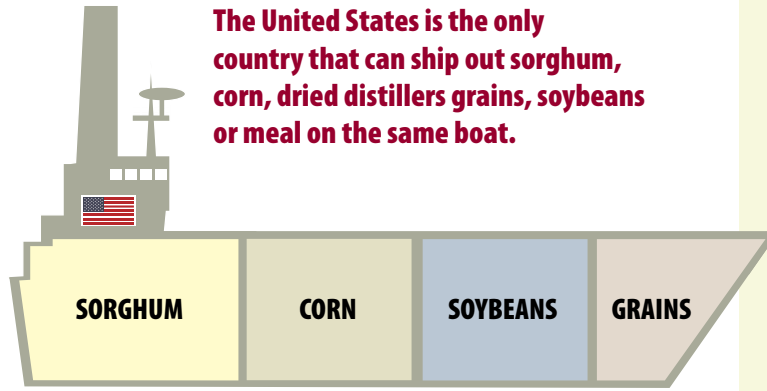


SOYBEANS & Feed Grains



SHIPPING

Arkansas is four days from the Gulf export terminal. Most grain is hauled directly to the river elevator, minimizing handling damage.



PRODUCTS

Major uses for soybeans and feed grains:

- **Soybeans:** protein meal, vegetable oil, biodiesel, protein powder, insulation, tofu and soy milk
- **Corn:** animal feed (starch), vegetable oil, ethanol, high fructose corn syrup, plastics and cereals
- **Grain Sorghum:** animal feed (starch), ethanol, gluten-free flour
- **Wheat:** flour, animal feed

Arkansas is one of the top 10 U.S. growers of soybeans & sorghum.

POULTRY COMPANY SHORT COURSE

The University of Arkansas offers a course for foreign poultry companies that offer training on feed mill management, nutrition, grain storage, production practices, and economics. Additionally, the program offers foreign visitors the opportunity to visit the University poultry farm, feed mill, and processing facility; as well as the opportunity to meet with leaders in poultry genetics.

SHIPPING

Arkansas is home to a number of grain elevators, including those owned by:



QUALITY STANDARDS SET BY USDA

Characteristics	No.2 Corn	No. 2 Soybeans	Sorghum
Minimum Test Weight (lbs./bushel)	54	54	55
Maximum Limits			
Moisture	15.5%	13%	15.5%
Broken/Foreign Matter	3%	2%	7% total, 2.5% foreign matter
Damaged Kernels	5%	3%	5%
Heat Damaged Kernels	.2%	.2%	.5%
Splits		20%	
Soybeans of other colors (not yellow)		2%	

* Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.





COTTON



THE SEAL OF COTTON

The Seal of Cotton provides a branded identification, allowing consumers to readily identify textile products containing cotton. Through point-of-purchase signage, the Seal of Cotton has simplified locating cotton apparel and home fabrics within a retail setting.



Arkansas is the third largest cotton producer in the U.S.

Majority of cotton grown in the U.S. is bound for the export market.

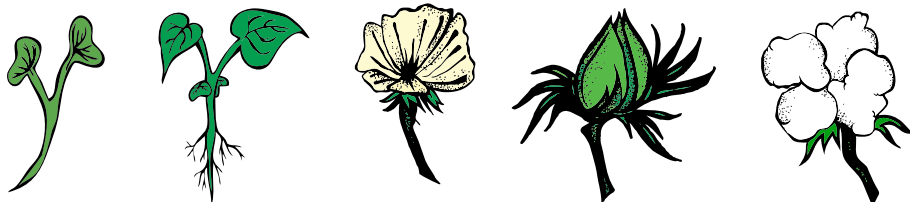
PROCESSING

Arkansas cotton is ginned to remove seeds and trash, then baled into 480-pound bales.

In addition to the fiber, cotton also produces a seed. Cottonseed can be used to make animal feed, vegetable oil, bio-diesel and glycerin, among other things.



STAGES OF GROWTH



New varieties and improved management are improving staple length and strength.

Arkansas grows Upland-type cotton.

CLASSING

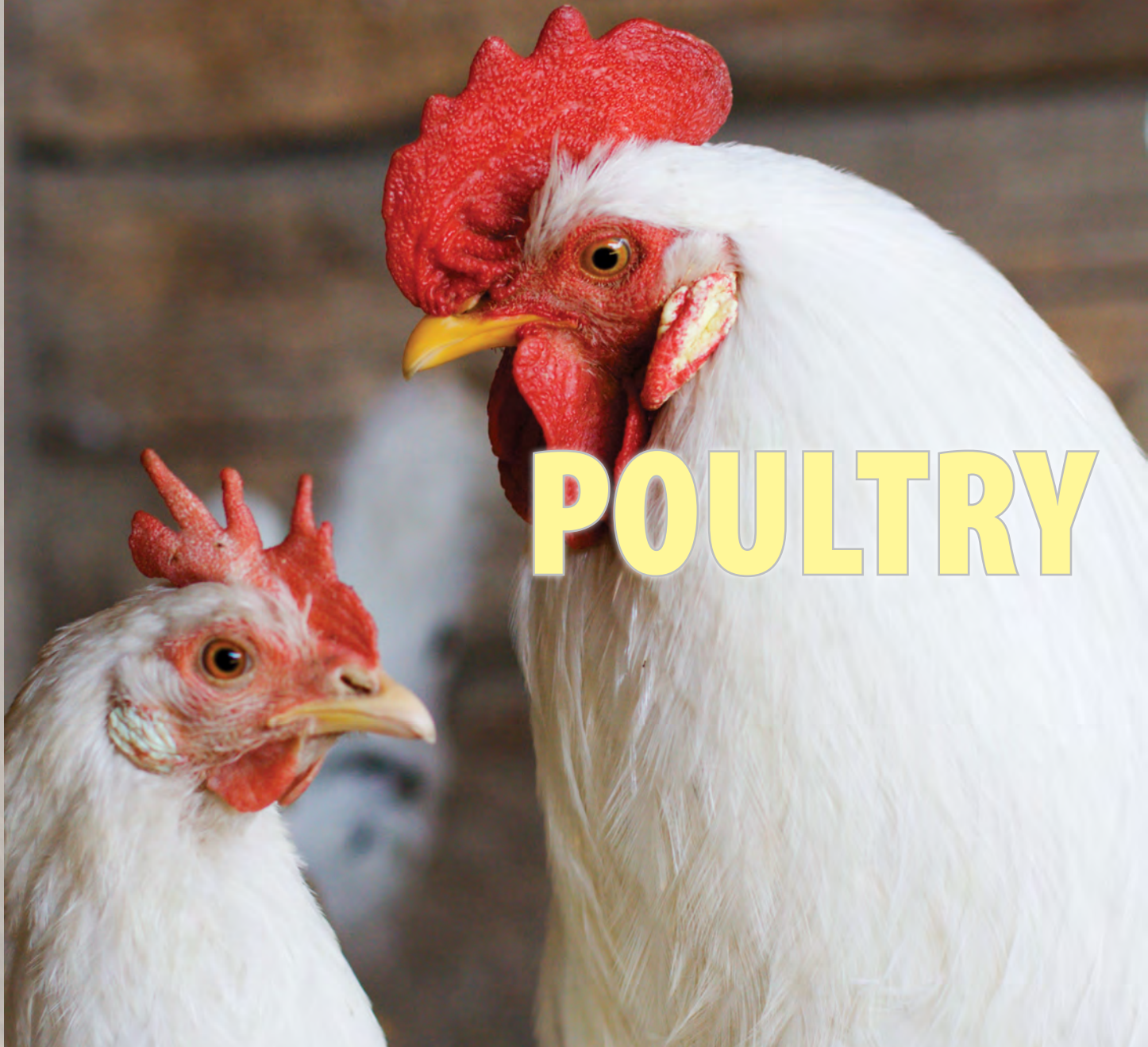
USDA's cotton standards are used almost exclusively within the U.S. and are broadly accepted in the foreign marketing of Upland-type cotton, especially that grown in the United States.

The standards provide a sound base for establishing market values that gain more acceptance with each year's crop. International trading disputes are settled by utilizing U.S. standards. The check test programs contribute to the growing confidence in USDA's cotton standards and also ensure a common level of test results for all users.

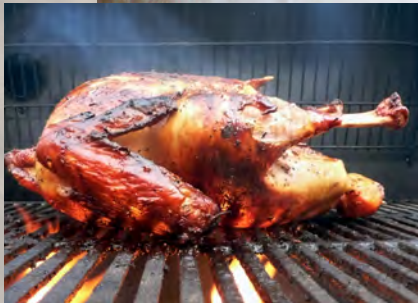
Samples from each bale are classed using USDA Agriculture Marketing Service (AMS) standards for:

- color grade
- leaf grade
- fiber length
- length uniformity index
- fiber strength
- micronaire

A tag is then placed on each bale displaying the quality of the cotton within the bale. For complete information about cotton classing visit www.ams.usda.gov.



POULTRY



INDUSTRY

Arkansas is home to a number of large poultry companies

Cargill

Tyson

WAYNE FARMS

Cobb

GEORGE'S
INC.

OK
FLORIDA WISLEY

Simmons
Great chicken since 1949

PRODUCTS

WHOLE COOKED CHICKEN

Available baked, smoked, barbecued or roasted, fully cooked whole chickens are marketed hot from the deli. Vacuum packaged, fully cooked, refrigerated chickens need heating to become a meal in minutes.

COOKED CHICKEN PARTS

May be found hot and ready-to-eat or as vacuum packaged items. Fully cooked, sliced, boneless, skinless chicken breast makes ready-to-eat sandwiches. Product sizes, shapes and methods of cooking vary among the numerous companies which produce cooked chicken parts.

CANNED CHICKEN AND CHICKEN DINNERS

Includes products ranging from whole chickens to chicken salads, baby foods, specialty meats and ready-to-heat-and-eat chicken meals. There are a multitude of convenience foods produced by the U. S. chicken industry.

DICED AND PULLED CHICKEN

Diced and pulled chicken (usually made from spent fowl), is boneless, skinless, fully cooked chicken meat. Pulled meat is separated from the bone and skin by hand; diced meat is pulled meat that has been cut into cubes so it may be packaged as breast meat, leg meat or combined breast and leg meat. When packaged in combination, the product label will note "natural proportions."

PRODUCTION PRACTICES

U.S. broilers and turkeys are grown by individual farmers. Fed a diet of high-protein grains such as corn and soy, broilers are grown to market size in just under seven weeks, while turkeys are grown in just 16 weeks, in automated, climate-controlled houses. Vertically integrated companies process, market and distribute the products. Inside the processing plant, cleanliness is an obsession.

Plants routinely shut down daily for a thorough sanitizing washdown.



Arkansas farms produce chickens, eggs & turkeys.

HIGH STANDARDS

The USDA inspection standards for all phases of poultry processing are the toughest in the world. By law, each bird must be inspected individually. At minimum, four separate inspections are required, starting

with the live bird and continuing throughout the slaughter, processing and packaging phases.

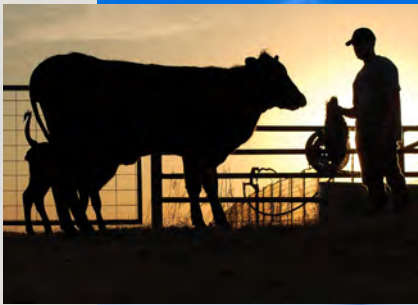


SHIPPING

Products for the export market are blast-frozen at the plant or nearby and generally packed in bulk. Frozen product may travel aboard reefer cargo vessels, or in ocean-going refrigerated containers.

Poultry is the largest sector of Arkansas agriculture.





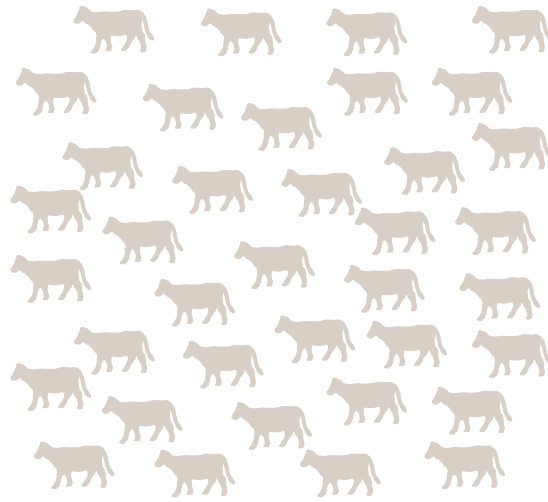
BEEF





A COW'S DIET

Beef cows spend 75 percent of their lives in pastures, where they graze on natural grasses and occasional hay supplements. During the last few weeks of their life, they are fed grain rations as a means to improve marbling and beef tenderness.



The average Arkansas herd has 37 head of cattle. Small herds allow farmers to provide superior care and nutrition.

PRODUCTS

The breeds of cattle used in the U.S. today have been crossbred for uniform and desirable characteristics. That improves the quality of the farmer's product. The ratio of fat to muscle, the animal's resistance to disease, and improved growth rate are characteristics that farmers have worked to improve through genetic selection.

Some of the more popular breeds are:

Hereford: Red body with a white face, belly, feet, and tail switch

Angus: Black (but sometimes red)

Shorthorn: Red, white, red-and-white spotted, or roan (almost always a red with white mixed in)

Charolais: White and thick-muscle

Simmental: Yellow-brown with white markings

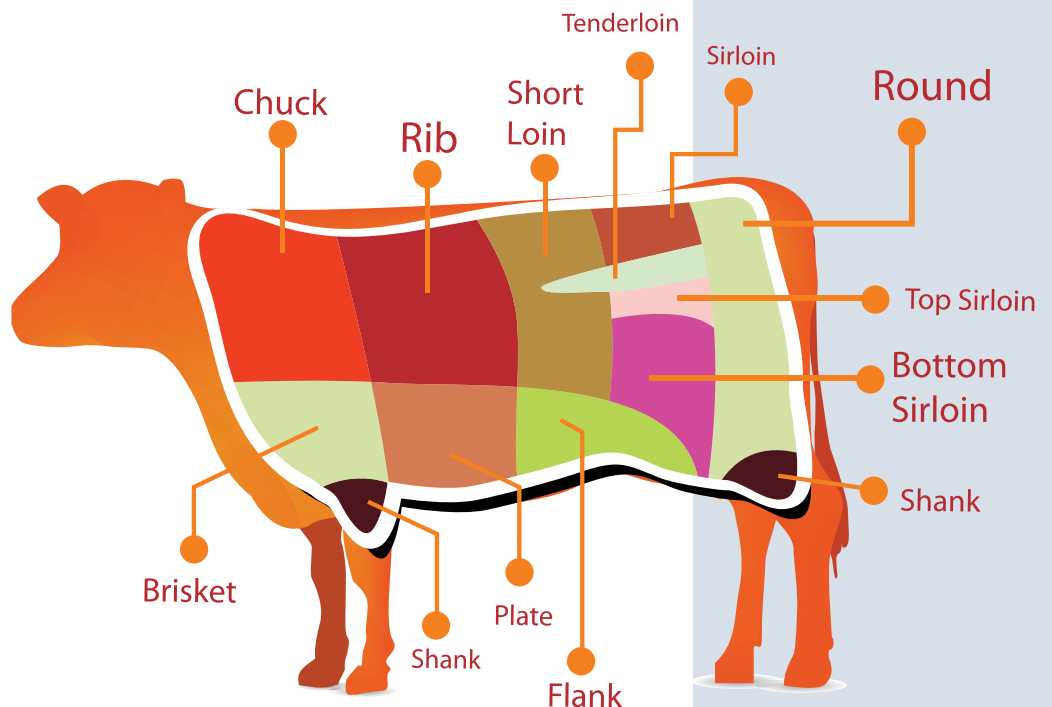
Arkansas cattle ranches are mainly cow-calf operations.

SAFETY

Strict safety guidelines are followed to ensure U.S. beef is the safest in the world. It's inspected by government officials at every point of the process to provide a safe, wholesome product. Furthermore, U.S. beef is a natural product, meaning it is minimally processed and contains no additives. Most U.S. beef is finished on a grain diet to enhance flavor and tenderness.



COMMON BEEF CUTS





FORESTRY



INDUSTRY

Arkansas is home to a number of timber companies



Arkansas is home to more than 100 pulp, paper, saw, and engineered wood facilities.



oak



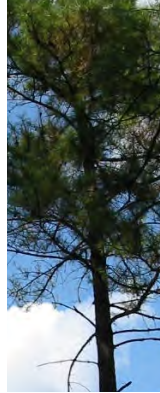
elm



hickory



cedar



pine

Arkansas is the fifth-largest timber producer in the U.S.

PRODUCTS

Lumber, treated lumber, hardwood flooring, wood chips, paper, cardboard, plywood, molding and more.

There are more than 18 million forested acres covering 56 percent of Arkansas.

The first Arkansas settlers found land covered in trees. At that time, Arkansas had 96 percent of its land covered by forests. The early settlers found many tree species including oaks, gums, ash, cypress, hickories and pines. In the late 1800s, many of the trees harvested in Arkansas were sent by railroad to build other cities in the midwestern and eastern United States. Today, there are more than 18 million forested acres covering 56 percent of Arkansas. The top five forested counties are Union, Yell, Scott, Clark and Columbia.

- Private landowners own 58 percent of the forest land in the state.
- 25 percent of forest land is owned by the timber industry.
- One out of every four forest trees in Arkansas is of a hardwood variety.

PRODUCTION PRACTICES

Arkansas landowners are some of the most efficient in the world. Rotations for pine plantations are down to just 25 years! Additionally, Arkansas landowners are among top implementers of Best Management Practices in the U.S. These practices ensure the timber is harvested in a sustainable manner. Finally, to prove our dedication, Arkansas is one of the few states that has seen forest land increase over the past 10 years.



AQUACULTURE





Arkansas is the largest producer of baitfish and the second-largest producer of catfish in the U.S.

IMPORTATION RESTRICTIONS

Most fish are shipped live via UPS or FedEx to their export destination.

Before importing fish, it's important for the importer to know what types of tests are required for the product to clear customs in the importing country.

A number of certificates are available depending on the country's level of restrictions:

- *ornamental and baitfish have a certificate of health through the Arkansas State Plant Board*

- *other fish can receive a disease inspection report from the University of Arkansas Cooperative Extension Service, signed by the state veterinarian.*

- *And many more options are available depending on importing country regulations.*

Arkansas and U.S. aquaculture farmers adhere to the strictest health and environmental standards in the world, making our fish among the safest in the world.

- Arkansas has a large variety of commercial fish farms, which produce catfish, grass carp, baitfish, goldfish, crawfish, hybrid striped bass and many more products.

- Arkansas is the largest producer of baitfish in the United States and is home to the world's largest minnow producer, as well as the largest goldfish producer.





**Arkansas
Farm Bureau
Federation**

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