



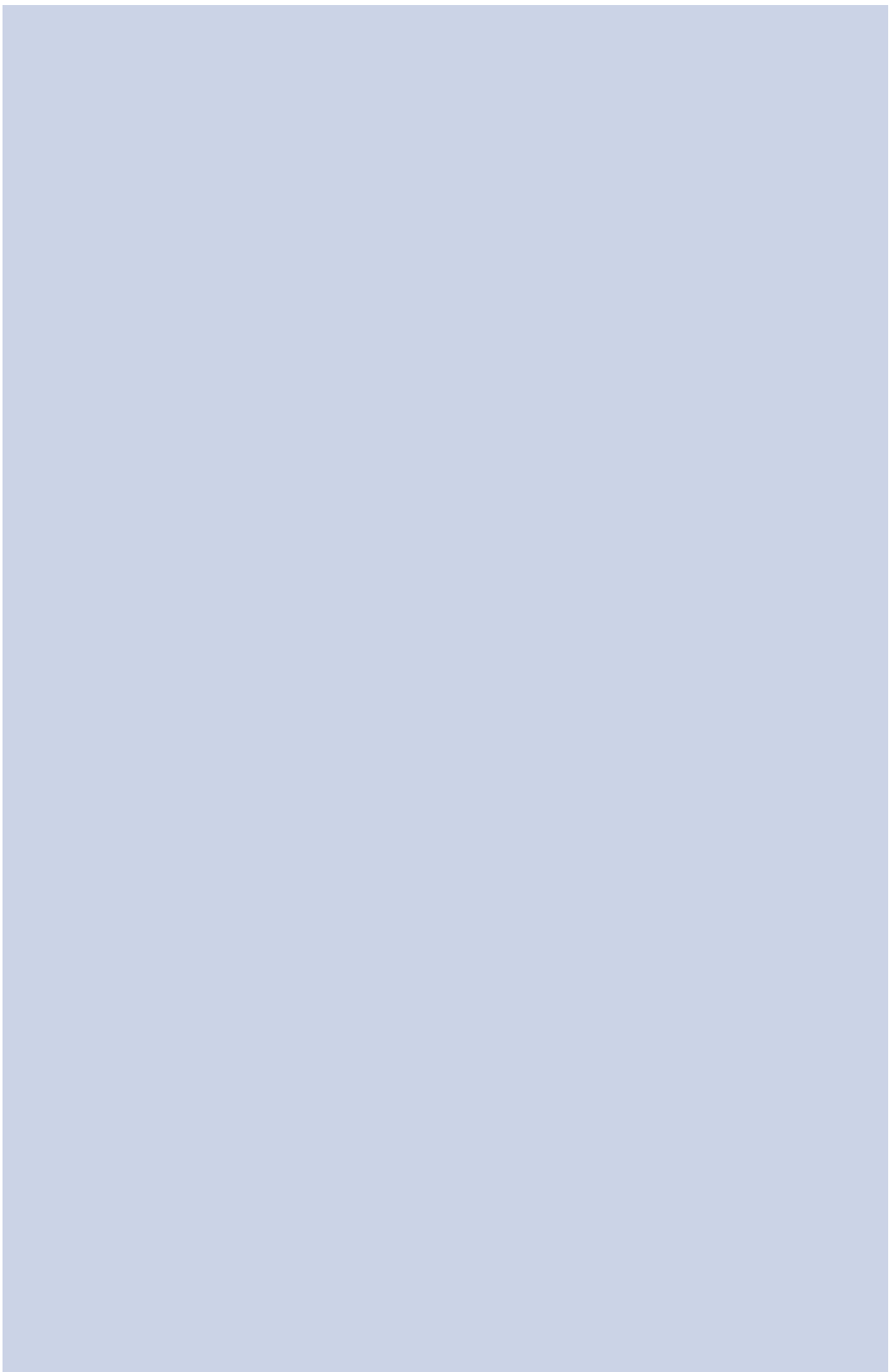
United States Department of Agriculture

Agricultural Research Service



Office of
Technology
Transfer





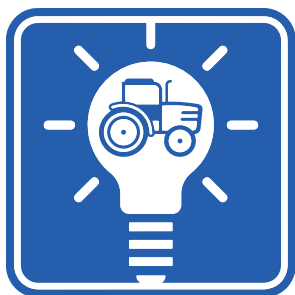
OFFICE OF TECHNOLOGY TRANFER

The Office of Technology Transfer (OTT) helps move Agricultural Research Service (ARS) research discoveries to the marketplace and expand the economic impact of ARS research and development. The mission of OTT is to encourage, promote and facilitate the adoption and commercialization of technology resulting from ARS research and to foster cooperation between users and ARS.



Partnerships

Seeks and facilitates collaborative research partnerships with industry and organizations of all sizes to bring new products to market that benefit the public.



Patenting

Pursues patent protection for ARS technologies and inventions some of which arise out of collaborative research partnerships. ARS has in-house patent staff with specialized expertise to handle complex inventions.



Licensing

Drafts and negotiates licenses with industry, academia and nonprofits for inventions to facilitate commercialization.

'Scarlet Royal'



DESCRIPTION

ARS practically invented the red seedless table grape industry when it developed the 'Flame' variety in 1973 with its large, sweet globes. It set the standard by which all other red seedless grapes are judged.

'Scarlet Royal' with large, sweet and beautiful dark red grapes, was developed by ARS to fill the midseason harvest window between 'Flame' Seedless and 'Crimson' Seedless.

Inventors

David W. Ramming and Ronald E. Tarailo

ARS Lab & Location

Horticultural Crops Research
Laboratory, Parlier, CA

Intellectual Property

Patent number: US PP16,229

Company

California Table Grape Commission

Preventing Cut Fruit from Browning



DESCRIPTION

Enhancing the demand for fresh-cut fruits and vegetables.

A natural coating from ARS that protects fresh-cut produce from changes in color, taste and texture. Once dipped with a blend of vitamins and minerals, fresh produce like apples, pears and avocados have a 21-day shelf life. The formulation keeps sliced apples from browning, as used in McDonald's Apple Slices.

Inventors

Chao Chen, Thomas A. Trezza, Dominic W. S. Wong, Wayne M. Camirand, and Attila E. Pavlath

ARS Lab & Location

Process Chemistry and Engineering Unit, Albany, CA

Intellectual Property

Patent number: US 5,939,117

Company

NatureSeal, Inc., a subsidiary of Mantrose-Haeuser Co., Inc.

Product Name

NatureSeal®

Keeping Pigs Healthy



DESCRIPTION

Developing a vaccine for an economically important pig disease is an example of how collaboration efforts between public and private entities combine the expertise of both parties to get a product to market.

Porcine Reproductive and Respiratory Syndrome (PRRS) causes reproductive failure in sows and respiratory disease in pigs, leading to huge economic losses for the swine industry. A collaboration between ARS and Boehringer Ingelheim Vetmedica resulted in a modified-live PRRS pig vaccine that helps reduce disease caused by the PRRS virus.

Inventors

William L. Mengeling, Ann Vorwald, Kelly Lager, Kelly Burkhart, David E. Gorcyca, and Michael Roof

ARS Lab & Location

Virus and Prion Diseases of Livestock Research Unit, Ames, IA

Intellectual Property

Patent numbers: US 6,660,513 and US 6,641,819

Company

Boehringer Ingelheim Vetmedica

Product Name

Ingelvac® PRRS ATP

Sunscreen for Plants



DESCRIPTION

ARS created a spa treatment that protects plants from sunburn, heat stress and insects.

The product is a clay-based coating used like a spray sun screen to protect crops, greenhouses and nursery plants. The clay particles create a film barrier against pests, sun and heat, which leads to more efficient photosynthesis and reduces pesticide use.

Inventors

Dennis G. Sekutowski, Gary J. Puterka, and David Michael Glenn

ARS Lab & Location

Appalachian Fruit Research Station,
Kearneysville, WV

Intellectual Property

Patent number: US 6,156,327

Company

NovaSource, a business unit
of Tessenderlo Group

Product Name

Surround®

'TifSport'



DESCRIPTION

A tough turf that stands up to the stress and demands of even major league sports.

For years professional and collegiate football teams have exploded onto fields of ARS-developed 'TifSport' bermudagrass. You are as likely to find it growing on your neighborhood recreation fields and lawns. It tolerates frequent low mowing and recovers quickly from wear and tear.

Inventors

Wayne William Hanna

Intellectual Property

Patent number: US PP10,079

ARS Lab & Location

Crop Genetics and Breeding Research
Unit, Tifton, GA

Company

University of Georgia (UGA)

'Autumn King'



DESCRIPTION

More than half of the top ten varieties that make up the country's \$137 billion seedless table grape industry come from ARS research.

ARS developed 'Autumn King', a green seedless table grape with very large berries that can be stored, shipped and sold long after harvest while staying sweet and firm. It is a domestic seedless grape that continues your snacking pleasure later in the year.

Inventors

David W. Ramming and Ronald E. Tarailo

ARS Lab & Location

Horticultural Crops Research
Laboratory, Parlier, CA

Intellectual Property

Patent number: US PP16,284

Company

California Table Grape Commission

Improved Cotton Ginning



DESCRIPTION

A computerized system for cotton ginning that gives custom quality cotton.

ARS developed a gin process control system that measures the quality of cotton at various stages of gin processing. It allows cotton ginners to customize their ginning process to maximize yield, reduce costs and get the highest quality fibers available, benefiting both the cotton producer, cotton spinner and ultimately the consumer.

Inventors

William S. Anthony

ARS Lab & Location

Cotton Gin Research Unit,
Stoneville, MS

Intellectual Property

Patent numbers: US 5,087,120

Company

Uster Technologies

Product Name

USTER® INTELLIGIN

Controlling Bugs with a Natural Ingredient



DESCRIPTION

A naturally occurring purple-pigmented bacterium named *Chromobacterium subtsugae* provides a bio-based insecticide.

The bacterium controls a broad-spectrum of sucking and chewing insects, flies and mites for agricultural and ornamental crops. It is not limited by pre-defined spray windows, timing, or resistance spray restrictions, which provides flexibility to incorporate it into an integrated pest management program.

Inventors

Phyllis A. W. Martin, Ashaki D. S. Shropshire, Dawn E. Gundersen-Rindal, and Michael B. Blackburn

ARS Lab & Location

Insect Biocontrol Laboratory,
Beltsville, MD

Intellectual Property

Patent numbers: US 8,691,219 and
US 7,244,607

Company

Marrone Bio Innovations

Product Name

Grandevo®

'Summer Royal'



DESCRIPTION

Sweet, convenient, low in calories and bursting with healthy nutrients, more than half the seedless grapes eaten every year come from ARS research.

ARS developed 'Summer Royal,' a black seedless table grape with large, firm berries with pleasant aroma and a sweet flavor. It ripens in late August when there are usually no other American-grown black seedless grapes on the market.

Inventors

David W. Ramming and Ronald E. Tarilo

Company

California Table Grape Commission

ARS Lab & Location

Horticultural Crops Research
Laboratory, Parlier, CA

'TifBlair'



DESCRIPTION

Providing the landscape industry a cold tolerant and low maintenance turf.

ARS developed 'TifBlair' centipede grass for landscapes, roadsides, commercial lawns, parks and airports. 'TifBlair' can survive prolonged severe winter temperatures, is easy to maintain and requires only a small amount of fertilizer.

Inventors

Wayne William Hanna

ARS Lab & Location

Crop Genetics and Breeding Research
Unit, Tifton, GA

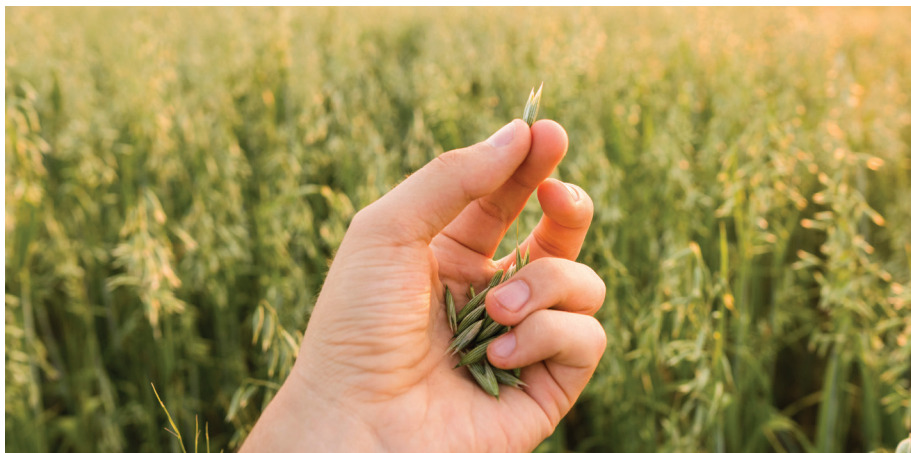
Intellectual Property

Plant Variety Protection Certificate
number: 9600255

Company

University of Georgia (UGA)

Unleashing the Power of Oats



DESCRIPTION

A food ingredient made from barley and oat bran may contribute to a healthier diet for some people.

ARS invented a way to concentrate beta-glucans from oats and barley while maintaining the nutrition of whole grains. The resulting product is a mild tasting, easy to mix powder. Beta-glucan has been shown to lower cholesterol in certain people, when eaten in the right proportions in a low-fat diet.

Inventors

George E. Inglett

ARS Lab & Location

Biopolymer Research Unit,
Peoria, IL

Intellectual Property

Patent number: US 6,060,519

Company

FutureCeuticals Direct, a division of
VDF FutureCeuticals, Inc.

Product Name

Nutrim®

Healthier Poultry Houses



DESCRIPTION

Improving the health of poultry houses by lowering ammonia.

Ammonia is hazardous to the environment and is a negative when it comes to the health and performance of birds in poultry houses. ARS discovered that aluminum sulfate reduces ammonia levels making the houses safer for both farm workers and the birds.

Inventors

Phillip A. Moore, Jr.

ARS Lab & Location

Poultry Production and Product
Safety Research,
Fayetteville, AR

Intellectual Property

Patent numbers: US 5,622,697,
US 5,865,143 and US 5,928,403

Company

Chemtrade Logistics Inc.

Product Name

Al+Clear®

Moth Control



DESCRIPTION

Controlling codling moths means apple, pear and walnut growers use less pesticide and keep costs down.

ARS developed an effective lure that makes insect traps and monitoring stations for codling moths work. It gives growers a pesticide-free early warning and control tool for both female and male codling moths.

Inventors

Douglas M. Light and Clive A. Henick

Intellectual Property

Patent number: US 6,264,939

ARS Lab & Location

Foodborne Toxin Detection and Prevention Research, Albany, CA

Company

Trécé, Inc.

Product Name

Multiple products

'TifEagle'



DESCRIPTION

Delivering a premier putting surface for golfers.

'TifEagle' is a third-generation bermudagrass variety developed by ARS.

'TifEagle' was bred to handle the aggressive management practices necessary to deliver superior speed, consistency and overall quality.

'TifEagle' also recovers quickly from mechanical injury, and is extremely drought-tolerant and disease resistant.

Inventors

Wayne William Hanna

Intellectual Property

Patent number: US PP11,163

ARS Lab & Location

Crop Genetics Breeding Research
Unit, Tifton, GA

Company

University of Georgia (UGA)

Protecting Corn and Peanuts Naturally



DESCRIPTION

Minimizing contamination of corn and peanuts with a natural biocontrol agent.

Aflatoxin is a human carcinogen produced by certain fungi that also can attack agricultural crops such as corn and peanuts. ARS discovered and developed a nontoxic strain of the fungus that produces aflatoxin. The benign strain successfully competes against the toxic strain for the limited space and nutrients each needs to grow and thrive. It significantly reduces aflatoxin contamination levels to help improve the marketability of corn and peanuts.

Inventors

Margaret Lyn, Hamed K. Abbas, and Robert Zablotowicz

ARS Lab & Locations

Commodity Utilization Research,
New Orleans, LA and
Biological Control of Pests Research,
Stoneville, MS

Intellectual Property

Patent numbers: US 9,011,891 and
US 7,361,499

Company

Syngenta

Product Name

Afla-Guard® GR

Chromium as a Dietary Supplement



DESCRIPTION

Getting enough chromium.

Chromium is an essential trace element. ARS developed a chromium supplement to be taken by some people as a diet supplement. Chromium in the body may improve glucose tolerance.

Inventors

Richard A. Anderson, Marilyn M. Polansky, and Noella A. Bryden

ARS Lab & Locations

Food Composition and Methods Development Laboratory, Beltsville, MD and Nutrient Requirements and Functions Laboratory, Beltsville, MD

Intellectual Property

Patent number: US 6,689,383

Company

Nutrition 21, LLC , a wholly owned subsidiary of JDS Therapeutics, LLC

Product Name

Chromax

'Sweet Scarlet'



DESCRIPTION

A healthy snack with a sweet and unique flavor and a natural source of polyphenols.

ARS developed 'Sweet Scarlet,' a colorful, red, seedless grape with a surprise inside: The crisp flesh of this grape has a light, pleasant, muscat flavor, an unusual treat that gives this grape a different taste than most red seedless varieties.

Inventors

David W. Ramming and Ronald E. Tarailo

ARS Lab & Location

Horticultural Crops Research
Laboratory, Parlier, CA

Intellectual Property

Patent number: US PP15,891

Company

California Table Grape Commission

ARS Research Contributions to Making Life Better

Explore LabTech in Your Life. A virtual experience that showcases the commonly used, everyday technologies developed by ARS and other federal laboratories: www.federallabs.org/successes/labtech-in-your-life

Note: The LabTech environment is best viewed via Chrome or Safari web browsers.



Here are a few examples of ARS technologies you will learn about when viewing LabTech in Your Life.



Large-Breasted Turkey



Lactose-Free Milk



Orange Juice Concentrate



Permanent Press Cotton

ARS Research Contributions to Making Life Better



Techniques for Freezing Foods



DEET Insect Repellent



Blueberries



Guayule-Rubber



Super Slurper-Absorbent Materials for Diapers and Other Products



Bar Soap and Lime Soap Dispersants



United States Department of Agriculture

Agricultural Research Service

Office of Technology Transfer

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