A-MAZE-ING: IDAHO FARMER HAS PATH INSIDE JIMMY FALLON'S HEAD

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WSU APIARY PROGRAM

BREEDING A BETTER HONEYBEE

Brandon Hopkins/Washington State University

A researcher collects semen from a honeybee. Washington State University researchers are importing bee semen from other countries to improve genetic diversity among U.S. honeybees.

Researchers travel the world to deepen gene pool of the important pollinators

By MATTHEW WEAVER
Capital Press

PULLMAN, Wash. — Honeybees buzz freely around the lights in Brandon Hopkins' office and in the hallway outside.

The bees enter the building on equipment Hopkins and his co-workers bring indoors, drawn by the smell of the honey-laden frames.

Hopkins and several workers converse casually about the day's work, lightly brushing bees off their sleeves and out of their hair.

"We're just used to it," Hopkins said of the visitors.

Hopkins is a research associate at Washington State University, where he manages the laboratory and germplasm repository for WSU's apiary program.

He's part of a team of researchers working to breed a better U.S. honeybee.

Genetic diversity

Hopkins, WSU entomology professor and department chairman Steve Sheppard and research associate Susan Cobey want to improve the genetic diversity in the U.S. honeybee population by importing bee semen from Europe and Asia. They hope to breed bees more capable of warding off pests and diseases, surviving over winter and pollinating in inclement weather.

They produce breeder queen bees, which they provide to commercial queen bee producers, who in turn can produce thousands of queen bees for the nation's beekeepers. WSU can produce 300 to 400 queen bees a year, Hopkins said.

The U.S. honeybee population is a "mongrelized" or "mutt" mix of races, Hopkins and Cobey said.

"We're trying to separate them out more and show the true traits of different species," Cobey said.

Honeybees are not native to the U.S. The federal government closed the border to honeybees in 1922, restricting their importation to prevent the introduction of parasitic tracheal mites.

"What was established before that date is what our industry is based on, which is full of genetic bottleneck issues," Cobey said. "There's 28 subspecies of honeybees, and basically our industry is built on two. There's a real need to conserve that diversity worldwide, because different combinations of things will give us different results, different ability to deal with these pathogens, problems."

Genetic diversity offers improved bee fitness and productivity. A genetically diverse colony handles diseases better, Hopkins said.

The biggest need in the U.S. honeybee population is anything that would increase resistance to parasitic Varroa mites, Hopkins said.

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Matthew Weaver/Capital Press
Brandon Hopkins, apiary and laboratory manager at Washington State University, shows frozen bee semen samples at the Pullman, Wash., campus on Aug. 30. Hopkins and other WSU researchers are working to improve the genetic diversity in the U.S. bee population by breeding starter queen bees for commercial queen bee producers.

Kathy Keatley Garvey/University of California-Davis
Washington State University research associate Susan Cobey with queens.

Courtesy of WDFW
The Washington State Department of Fish and Wildlife is removing members of the Profanity Peak pack, but managers say the job is proving difficult because of the rugged terrain in the northeastern part of the state.

Removing Profanity Peak pack challenging

According to WDFW, two adults, pups remain

By DON JENKINS
Capital Press

Washington wildlife managers are hunting for the remaining members of the Profanity Peak wolf pack in rugged timberlands, but will have a difficult time removing them, according to state Department of Fish and Wildlife wolf policy coordinator Donny Martorello.

WDFW has killed six wolves in the pack since Aug. 5, but none since Aug. 22, Martorello said in a Sept. 16 email.

It was the department's first update on the lethal removal of the pack in the Colville National Forest since Sept. 2.

The pack has at least two adults remaining and may have up to four pups. Pups have a high natural mortality rate during their first year, according to Martorello.

WDFW investigators have confirmed the pack has killed or injured eight cattle since July 8. In another five cases, the pack probably attacked cattle, but investigators were unable to positively identify wolves as the predators. WDFW most recently confirmed a depredation on Aug. 31.

The U.S. Forest Service and a rancher report that they are seeing livestock behavior that suggests cattle are being harassed by wolves, Martorello said.

WDFW policy calls for the department to shoot wolves after four depredations and if non-lethal preventive measures employed by ranchers have failed.

Initially, the pack was believed to have six adults and five pups. The pack actually had seven adults, according to Martorello. One pup has been killed.

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Bayer, Monsanto defend proposed $66B merger

Farm groups fear consolidation will increase prices

By MARY CLARE JALONICK
Associated Press

WASHINGTON, D.C. — Top officials for Monsanto and Bayer defended their proposed $66 billion merger before skeptical senators on Tuesday, insisting that the deal would lead to greater investments in technology that could help American farmers.

Monsanto, the American seed and weed-killer, and Bayer, the German medicine and farm-chemical maker, responded to concerns from Iowa Sen. Charles Grassley, the Republican chairman of the Senate Judiciary Committee.

Grassley warned that consolidation and competition in the U.S. seed and agrochemical industry could hurt American farmers who are already dealing with an economic downturn.

"I'm afraid this consolidation wave has become a tsunami," Grassley said as the hearing opened.

After months of negotiations, St. Louis-based Monsanto Co. last week accepted an offer from Leverkusen, Germany-based Bayer AG that will pay $57 billion to Monsanto shareholders and assume $9 billion in Monsanto debt. The deal combines two of the six U.S. and European companies that dominate the agrochemical market, and would create a global agricultural and chemical giant with a broad array of products.

Robb Fraley, executive vice president and chief technology officer of Monsanto, and Jim Blome, president and CEO of Bayer CropScience North America, both testified that the combined investment is needed to meet a

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