

Less Pesky Pests Possible Through Genetic Engineering

WASHINGTON — Tiny needles swirling in salt water pierce holes into cells, and foreign genes rush in. This new process may one day mean house flies that produce fewer eggs or mosquitoes that don't bite.

The genetic engineering technique, which is at least a thousand times faster than the method currently used to alter fly eggs, was developed for house flies by U.S. Department of Agriculture geneticist Andrew F. Cockburn. He shared it with University of Florida scientists who have successfully transferred DNA into citrus tissue.

"Genetic engineering of insect pests and possibly crops could now be feasible and practical where it never has been before," said Cockburn of USDA's Agricultural Research Service.

He stressed that genes to cause beneficial changes still need to be found.

Working at the Insects Affecting Man and Animals Research Laboratory in Gainesville, Fla., Cockburn transferred material — either a test gene or dye — into eggs of the house fly, stable fly, Caribbean fruit fly and the non-pest drosophila fly. Mosquito eggs have harder shells, but Cockburn is confident that he can penetrate those with new genes.

Scientists have been trying for years to genetically engineer these insects. "Insect eggs and plant cells are designed to keep things out — things like viruses, bacteria and any DNA we might try to insert," Cockburn said.

Another technique tested for fly eggs — microinjection — could only alter one egg per year. In the latest issue of Agricultural Research magazine, Cockburn reported that his new technique can alter eggs at the rate of one per hour.

That's because this quick method transfers genes into thousands of fly eggs in a few minutes, he said. With microinjection, scientists can only inject two or three eggs in the same time period.

With either technique, tens of thousands of eggs must be successfully engineered in order for just one fly to show the new characteristics.

ARS has applied for a patent on Cockburn's new technique. To use it, a scientist concocts a mix of cells, genes, and microscopically thin whiskers into a saline solution and spins it on a laboratory blender called a vortex mixer. Made of silicon carbide, the whiskers' usual job is to give ceramic the strength to hold together in such stress-bearing products as car engines.

"It's kind of like being in a jacuzzi with a porcupine," Cockburn said. "Each time a whisker hits an egg, a tiny hole results. That hole allows some of the genetic material to enter the egg."

With microinjection, scientists painstakingly insert a miniature hypodermic needle into an egg while watching it under a microscope. Microinjection equipment costs a lab about

\$15,000, compared to the \$180 price tag on the vortex used in the new method. "Almost every lab has one," Cockburn said.

He originally began trying to genetically engineer pest flies two years ago. He and chemist David Carlson tested a gene gun that propels gene-coated pellets into cells. Carlson made the gun in his garage from his grandfather's 22-caliber pistol. In most cases, the pellets either didn't penetrate insect cells or "squashed them completely," he said. Pellets did penetrate a few eggs, but not enough to be useful.

Cockburn began work on the "jacuzzi" method, which he also calls the "silicon carbide whiskers"

technique.

He had planned on using a sonicator, in which sound waves shake a mixture rapidly. But that afternoon in Gainesville, torrential rainfall discouraged technician Henry Meier from walking across the parking lot to the lab next door—where the sonicator was housed. He suggested they try the vortex, located right in their own lab. Cockburn said, "I laughed and said, 'That's silly, but go ahead.' He did, and he got such incredible results we didn't bother trying the sonicator."

The two will continue their research to get even faster results than the ones they already have.

N.C. A&T Athletes Scores Big At Penn Relays

GREENSBORO — Two North Carolina A&T State University athletes were among the top performers at the Penn relays held in Philadelphia. Long jumper, Derrick Homesley and Joan Kellman had good performances as they finished first and second respectively in their event.

Homesley etched his name in the record books, and at the same time, won the College Division of the Relays with a leap of 7.86 meters. Translated into feet and inches, Homesley's jump of 25'9 1/2" beat his nearest competitor by one foot and four inches. It was also good enough to earn Homesley the sixth best jump in the history of the Penn Relays, which dates back to 1899. The jump also qualified for the NCAA national championship, scheduled for May 30-June 3, at Duke University. Homesley's jump was beyond the NCAA qualifying standard.

Homesley finds himself in the "world class" company of Eric Metcalf, Carl Lewis, Mike Conley, Ralph Spry and Evan Toffer. "If Derrick can find a sponsor and continues to train, he will be a serious contender for the '92 Olympic games," said track coach Roy Thompson.

"His jumps are comparable to Mike Conley and Carl Lewis when they were his age," Thompson continued.

The Clinton, Maryland native graduated at A&T's 99th Commencement with a degree in transportation economics. Although he was recruited by major schools as a high school senior, Homesley followed a family tradition by attending NC A&T, where his mother and father both attended.

Senior, Joanel Kellman led the field throughout the first five jumps, while suffering a nagging knee injury, before losing the lead to Lataya Archie of the University of Houston, who beat Kellman by one and one-fourth inch to win the women's long jump.

Kellman went into her event as the defending champion, winning last year's event with a jump of 20'9". Kellman came in second this

year with a jump of 19'11 3/4". Although she came up short this year, Kellman still can boast of having the third best jump in the history of the Penn.

A native of the Island of Barbados, Kellman will graduate this year with a degree in accounting. Her immediate plans are to go to graduate school and prepare to become a certified public accountant (CPA).

"Joanel will probably be one of the first women inducted into A&T's Hall of Fame," said coach Thompson. "She was the MEAC outdoor champion for three years. She is the first woman in the school's history to win individual honors in the Penn Relay, and she is the first woman from A&T to participate in the NCAA nationals, where she placed 15th last year," Thompson added.

Kellman was also the first leg of A&T's 4x100, 4x200 and the 1600 meter relay team that is rated among the top ten in the nation.

SPORTSLINE

By Dale Dunlap

Can there possibly be any doubt Ryne Sandberg is the best second baseman in baseball? The 30-year-old Cubs star has been very quietly compiling Hall of Fame numbers entering his ninth full major-league season.

Last season, he led the Chicago Cubs to the National League East crown by hitting .290 with 30 home runs and 76 runs batted in. In doing so, he became the first Cubs second baseman since Rogers Hornsby to hit 30 or more homers in a season. The last second baseman to hit as many was Davey Johnson with the Atlanta Braves in 1973.

He also led the league in runs scored and threw in 15 stolen bases. OK, you say, Ryno can hit. Can he field? Well, he went more than three months without making an error last season. He entered this season with 90 consecutive errorless games and quickly broke Joe Morgan's record of 91 errorless games early this season.

He also won a Gold Glove last year. But that's nothing for Sandberg. He has won seven consecutive Gold Gloves.

So he can hit and field. What can't he do? Well, scouts only can point to the fact Sandberg is not very good on catching pop-ups. (Strange for a Gold Glover, but understandable considering Chicago's notorious winds.)

The man Vin Scully once described as the "Prince Valiant of the Cubs" has had some trouble living up to his superstar billing since his magical 1984 season.

That year Sandberg hit .314 with 19 home runs and 84 runs batted in. He also walked away with the Most Valuable Player award in leading the Cubs to the division title. But day in and day out Sandberg has been the heart of the Cubs, ever since he was acquired as third baseman from the Philadelphia Phillies in 1982 in return for Ivan DeJesus.

Judging by Sandberg's growth since that deal, I think it's safe to say that the Phillies would like to have that trade back. But the Cubs are not going to part with their heart and soul — ever.

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LITTLE ROCK, ARK — Little Rock residents float down what used to be a park on the shores of the Arkansas River. Many homes are flooded, causing million dollars of damage. The river was expected to crest May 9. (UPI Photo)

SPORTS FROM THE PRESSBOX

By Lee Lerner

Wade Boggs, Boston's hitman extraordinaire, had dug himself into the batters' box and was sporting a mask of concentration. He was set, but just before the pitcher went into motion a fan disrupted the scene.

"Hey, Boggs. Hit one for Margo!"

The moment shattered, Boggs stepped out and glared into the seats. It was only spring training, but Boggs is all business when it comes to hitting a baseball.

He stepped back in, but promptly fouled out in back of third.

Help for Home Sellers

In many of the nation's cities and residential areas the housing market has changed dramatically over the past few years. According to a special spring, single-topic issue published by Money Magazine, and called "Money Guide: Your Home," the median home price this year is expected to rise only about 4.5 percent after inflation. Using data from economic forecasters, the WFEA Group, and adjusting for inflation, they predict that average U.S. house prices will appreciate just 5.2 percent over the next six years. In six-year projections for our 50 largest urban areas, Sacramento is dubbed the hottest housing market with a gain of 60.1 percent for 1990-95. Runners-up are Pittsburgh, Portland, Ore., Boston and Memphis, in that order.

If the house you want to sell is located in an area where prices are falling, some experts recommend re-evaluating your plans. You might explore the possibility of renting your home instead of selling, for example. If you are determined to sell soon, despite the changing market, the "Money Guide: Your Home," offers lots of helpful advice on doing so. The Guide is available on newsstands until mid-May or \$3.95, or by mail from PO Box 30626, Tampa, Fla. 33630.

A sample strategy: Choose the best real estate agent you can find, a real pro who knows your area and is with a highly reputable firm. Offer the agent an "exclusive right to sell," so that he or she is the only agent listing the property and will be guaranteed a commission during the agreed-upon exclusivity period even if it is you who finds the buyer. Add an additional bonus to the plan, offering to give the agent more if your home sells for 97 percent or more of the asking price.

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In that at-bat, the pitcher and one of Boggs' detractors won out. Yet most know that Boggs isn't shown up often.

Boggs, of course, is not human. How could he be? How could anyone of flesh and blood, not to mention emotions, go through what he has and still have a .302 lifetime average?

"Margo" is Margo Adams, Boggs' well-publicized mistress of seasons past. For those unaware, Boggs' affair with Adams culminated last season with Boggs' story going nationwide in various magazines and on a Barbara Walters interview.

Obviously, the notoriety didn't affect him adversely. He hit .330 and missed the batting title by only nine points.

"Wade is unbelievable," Red Sox teammate Roger Clemens says. "Year after year, he's a machine."

And the machine didn't take long to warm up this year.

His 3-for-4 outing opening day helped him reach the 1,600-hit plateau faster than the top 10 players on the all-time hit list.

Despite the numbers, some never let Boggs forget his mistakes.

But it's a given that Boggs will cope with those types because the hits just keep on coming.

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SPORTS TRIVIA

1. Who led the NBA in assists in the '88-'89 season?
2. Bo Schembechler has coached teams in 16 bowl games. How many has he won?
3. Where did the Detroit Tigers play before moving to Tiger Stadium in 1912?
4. After giving Sonny Liston a rematch in '65, who did Muhammad Ali fight in his next heavyweight title defense?
5. When QB Doug Flutie of Boston College won the Heisman Trophy in '84, who finished second in the balloting?
6. Who beat the Chicago Bears to deny them a perfect season in '85?
7. Who was the winner of the inaugural Boston Marathon?

1. John Stockton of the Utah Jazz led in assists with an average of 13.6 per game.
2. Five.
3. The Tigers played at Bennett Park from 1901-1911.
4. Ali stopped Floyd Patterson in the 12th round in a title defense on Nov. 22, 1965.
5. Keith Byars of Ohio State.
6. The Miami Dolphins.
7. John McDermott of New York in 1897.

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