

Gene silencing may shorten insect lifespan

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U.S. entomologists have discovered interfering with the salivary glands of insects might result in a shortened life span.

The Kansas State University scientists said their findings might lead to an understanding of how to breed pest resistance into important food crops.

The researchers found that by using technology to silence a gene in the salivary glands of pea aphids, the insect's lifespan was cut by more than 50 percent.

"What we found is that when we silenced the most abundant transcript (gene), the aphids died in a few days," said entomology Professor John Reese.

He said the findings could lead to new ways to control insects in crops such as wheat, alfalfa, soybeans, corn and sorghum. And that, in turn, might lead to a lesser agricultural dependence on pesticides, as well as helping the environment and lowering growers' input costs.

"If we can figure out how to get a plant to prevent the functioning of an insect pest's gene, we can turn that plant into a non-host for that pest," Reese said.

The study, which involved Assistant Professor Yoonseong Park and former graduate student Navdeep Mutti, appeared in the Journal of Insect Science.

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