

Parasites fight pests in stored products

COLLEGE PARK, Md. — University of Maryland Agricultural Experiment Station entomologist has been "using fire to fight fire," so to speak, in a research project aimed at controlling destructive insects.

The entomologist, Earlene Armstrong, has been studying the feasibility of using very small parasites to control insects that infest stored products such as grains, cereals, fruits, vegetables and nuts. Roughly 10 to 30 percent of the food produced in the U.S. each year is damaged by these pests after harvest.

Not only do pests damage or consume marketable products, but they also transmit disease-causing agents through the product they infest, contaminating far more food than they eat.

In recent decades, several methods of control have been used to suppress these stored product pests. Among these are chemicals, including fumigants, dust sprays and pesticides; applications of heat or cold to products to prevent or slow the growth of pests; and better sanitation. Another method now being looked at involves the use of biological agents, such as the parasites in Armstrong's project.

In her research, Armstrong has examined the survival of insects in stored products under varying conditions of light, temperature and humidity and is comparing their growth and developmental rates under those conditions.

She is also trying to determine the susceptibility

of the stored product pests to parasitic infection and to determine the effects of small parasites on susceptible pests.

Thus far, her research has focused on the red flour beetle, although additional emphasis in later studies will be placed on the saw-toothed grain beetle, Indian meal moth, cigarette and drugstore beetles—some other pests of stored products in the Mid-Atlantic states.

While working with the red flour beetle, Armstrong altered environmental conditions and nutritional requirements to spur an increase in the parasite population, the aim being to kill the pest or at least reduce its population below economically destructive levels.

She found that parasitized insects lay fewer eggs, have reduced life spans and show incomplete development to the extent that many do not complete their life cycles. Each of these factors, over a period of time, would naturally reduce the pest population.

Armstrong is now examining the changes induced in the insects by the parasite's presence, an area of research that has received little study so far.

If successful, her experiments could lead to a reduction of stored product pests and the damage caused by them, meaning that less food would be lost for human consumption and that more would be available to feed the people in this country and around the world.



University of Maryland Agricultural Experiment Station entomologist Earlene Armstrong examines pests and parasites before placing them under a microscope for closer study. She is studying the use of parasites to control pests that infest stored products like cereals, grains and nuts.

How to thaw turkey

YORK — Chances are that you'll buy a frozen turkey for your holiday dinner since most turkeys are sold that way. A. Joan Lamberson, Extension Home Economist reminds you that thawing the bird can present a problem. Harmful bacteria which may be present on the surface of the bird, grow rapidly in a turkey that's improperly prepared for the oven.

For frozen, unstuffed turkeys, it's recommended that thawing occur at refrigerated temperatures. Defrost the turkey on a tray in the refrigerator in its original wrappings. Allow 24 hours for each five pounds of turkey. When the bird is pliable, take off the wrapping, remove the giblets and neck, cover with a damp towel and refrigerate until ready to roast.

If you do not have refrigerator space large enough for thawing the whole turkey, you may need to use one of the following methods. However, caution is required to assure that the surface of the bird does not become warm, thereby

permitting growth of harmful bacteria.

Without opening the plastic bag, place the frozen bird in cold water for six to eight hours. Change the water frequently or place the turkey under a running tap. Never use warm or hot water. Allow one-half hour thawing time for each pound of turkey. When the turkey becomes pliable, take off the plastic bag, remove the giblets and neck, cover with a damp towel and refrigerate until ready to roast.

A second alternative is to leave the turkey in its original wrappings, wrap with newspaper, and place in a heavy brown paper bag. Seal the bag and place in a cool room. The newspaper and bag should insulate the turkey so that it will thaw uniformly. Allow approximately one hour thawing time for each pound turkey. Do not allow excessive thawing time. Due to its potential hazards, this method is not recommended.

Follow safe thawing procedures to insure a happy and safe holiday meal.

Cast ballots for Berks ASC Committeemen today

LEESPORT — Mark S. Baithaser, chairman of the Berks County Agricultural Stabilization and Conservation Committee reminds county farmers that elections for Community Committeemen are fast approaching the deadline. All ballots must be in the county office by December 1.

Each of the eleven communities in the county has a slate of six candidates from which to choose. Voters are asked to vote for three or less; the candidate getting the highest vote will be the chairman of the community committee, the next highest will be the vice chairman, third will be a regular member, and the fourth and fifth will be first and second alternates.

COMMUNITY 1
Bethel Marion Tulpehocken
John C. Bartsch Bethel Frederick J. Bohn R1 Myerstown Earl L. Brown R1

Myerstown Donald E. Landis R1
Myerstown Frank Troutman
Womelsdorf Bruce T. Younker Bethel

COMMUNITY 2
Jefferson Upper Tulpehocken Penn Twps

LaVerne C. Koenig R2 Bernville
Harvey C. Krill R1 Bernville Charles D. Moyer R2 Bernville Evald B. Wicks
Strausstown Curtis G. Wolf R1 Bernville
James R. Yost R1 Bernville

COMMUNITY 3
Tilden, Upper Bern Center Twps
Roscoe Haag R1 Mohrsville Rae M. Hix R1 Mohrsville Nicholas Kopcz R1
Mohrsville Clarence R. Luckenbill R1
Bernville James W. Regel R1 Bernville
Woodrow W. Werley R1 Hamburg

COMMUNITY 4
Perry Windsor Bern, Ontelaunee Middleburg Twps
Ernest H. Epting R2 Hamburg Harry R. Kaulman R3 Hamburg J. Bruce Leiby R2 Hamburg Robert L. Seidel R1
Lenhartsville Lawrence T. Sunday R1
Lenhartsville Ronald Weyer R2 Hamburg

COMMUNITY 5
Albany Greenwich Twps
Clyde K. A. Bayer R3 Kutztown Brian A. Bond R2 Kempton Guy W. Long R1
Lenhartsville Carl S. Miller R3 Kutztown
Ralph G. Sanner R3 Kutztown
Richard C. Wieder R2 Kempton

COMMUNITY 6
Longswamp Rockland Maxatawny District Hereford Twps
Harold L. Angstadt Fleetwood George R. DeOny R1 Kutztown Gordon G. Gruber R1 Kutztown Earl W. Latshaw

R1 Alburtis Wilson H. Rohrbach R1
Mertztown Charles A. Savidge R2
Mertztown

COMMUNITY 7
Richmond Maiden Creek Ruscombmanor Twps

Warren W. Berger R3 Kutztown Leroy J. Riehl R1 Kutztown Arthur F. Hoch
Fleetwood Kermit C. Schlegel Fleetwood
Feryl J. Treichler R3 Kutztown
Marshall Worrell R3 Kutztown

COMMUNITY 8
Oley Pike Alsace Lower Alsace, Exeter Twps

J. Andrew Glick R3 Boyertown David Hausman R4 Boyertown Mark G. Hoch
R2 Oley Daniel E. Levensgood R1 Oley
Earl Mensch R4 Boyertown Marlin R. Stoltz R2 Douglassville

COMMUNITY 9
Caleb Brookdale, Armt, Amity, Douglas Washington Twps
Ralph Drey R2 Douglassville Paschal

J. Gehring Bally Earl R. Haler R2
Douglassville Wilson R. Hoffman R1
Barto Ralph T. Spencer R3 Boyertown
Frederick J. Walters R2 Douglassville

COMMUNITY 11
Caernarvon Robeson Union Brecknock Cumru Twps

Gregg Esbleman R3 Mohnton David L. Glass R1 Birdsboro Wilmer G. Kraybill R2 Elverson Samuel Schlouch R3
Mohnton David O. Shrey Geigertown
Gary Stoltzfus R2 Elverson

COMMUNITY 12
N. Heidelberg, Heidelberg, S. Heidelberg, Lower Heidelberg Spring Townships

Norman H. Bare R5 Sinking Spring
Edwin E. Gelsinger R1 Wernersville
Charles R. Kissing R1 Robeson Phillip Luckenbill R1 Wernersville David Schaefer R3 Wernersville Forrest Stricker R1 Wernersville

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