Judith V. Downer, a Ph.D. candidate in animal nutrition from Williamstown, N.J., won the association's certificate of excellence in the category of poultry nutrition/metabolism.

Downer and her advisor, William W. Saylor, have been trying to identify the mechanisms

of copper absorption in chickens. Copper is added to poultry feed as an antimicrobial. Although it is an essential nutrient, excessive amounts can prove toxic to birds. However, chickens have an internal mechanism that keeps excess copper from entering the bloodstream. Downer and Saylor hypothesized that the mechanism may involve a copper binding protein in the birds' intestines.

In their laboratory isotope work with radioactive copper, they were able to isolate the protein in question.

Downer, who will complete her

doctoral work in December, plans to continue her studies of trace mineral metobalism in poultry.

Ray Freeman, of Swarthmore, Pa., took the top award in the physiology/environment section of the competition. He is a master's degree candidate working with Larry A. Cogburn on a study of thyroid hormone rhythms of chicks. Thyroid hormones are involved in the regulation of metabolism.

Feeman and his advisor studied the changes in hormone rhythms as they varied the amount of light and heat in the chicks' environment.

They found that both light and temperature affect hormone rhythms, but temperature has the greater effect.

Freeman came to the University of Delaware's department of animal science with the ultimate intention of becoming a veterinarian. During the next

year, as he completes his master's thesis, he'll decide whether to pursue his original goal or to earn a Ph.D. and continue environmental physiology research.

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It's a Vacation

(Continued from Page B28)

When asked what he liked best, he replied, "The pigs." however, that answer came after a little coaching from Ryan.

One thing about city life deserved a higher rating than farm life, according to David.

"There's more people," he said. While David enjoyed his stay in July and his second vacation in August, the pleasure was not all on his side. There were some benefits for the Hess' also.

"It really made us thankful for what we have," Deena said. "We wouldn't give up living on the farm for anything.'

Dennis agreed with his wife.

"We enjoyed it," he said. "It was something new for us, and it was an opportunity for us to get a young person out of the city and let him see what farm life was about."

The Shared Holiday program allows the family to remain in contact with the child who stayed with them.

"We can have him again year after year," Deena said. "He really likes it here, so we'll just keep having him.'

Judging by the happy squeals and laughter coming from David and Ryan as they raced off to continue playing, both boys will enjoy David's trips to the farm.



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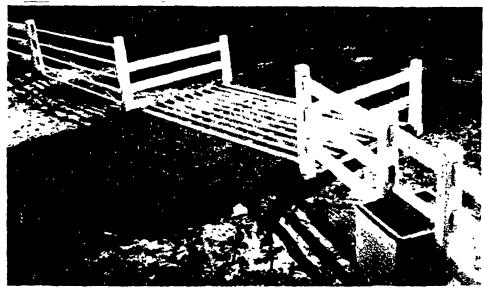
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