

## Pork Producers

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contest, the senior division (ages 16-19), first place winner was Jason Woodling, who spoke about "Pork: The Evolution."

Jason, 17, of Troxelville, is from the West Snyder FFA. Other placings include second, Michael Cornman, 18, Carlisle and Timothy S. Lehman, 18, Mechanicsburg, third.

Junior division (ages 12-15) winners included Lisa Zack, 12, first; Ann Yoachim, 15, second; and Adrienne Elkin, 14, third.

### Annual Awards Banquet Held

The announcement of the 1992 Pork All American and the auction to raise funds for promotional activities were highlights of the 14th annual banquet held Wednesday evening.

Steve Wilson, New Freedom, in York County was named Pork All American. Wilson has 130 sows and a finishing operation that includes the Yorkshire, Hampshire, and Duroc breeds. In the Penn State boar test program completed this month, Wilson had the second high pen with a 144 index.

In accepting the honor, Wilson credited his family and his work with FFA and 4-H "as the place where it all started." He will represent Pennsylvania at the 1992 World Pork Expo.

In the auction, hog equipment and supplies donated by agribusinesses sold for a total of \$6,483. Billed as the 1992 legislative fun-

Age group 8-11 winners were Mark Parrish, 11, first and Charlie Glass, 11, second.

Judges for the senior public speaking contest included Mary Jo Cancelmo, executive director, FFA Foundation, Dick Poorbaugh, Clearfield County agent, and Andy Andrews. Judges for the junior division were David Bailey, Northumberland agent; David Hartman, Cumberland agent; and Shirley Speece. Judges for 8-11 year olds were Nancy Poorbaugh, Susan Wertz, and Floyd Huber.

draising auction, the funds will be used where check-off monies may not be used.

Other award winners included Dr. John Cable, retired from the Bureau of Animal Industry, appreciation award; Michelle Vonada, 4-H Youth award and Ginger Kegg, FFA Youth Award.

Kurtis Good was named the Pork Leadership Institute representative. Good graduated from Lancaster Mennonite High School in 1991 and represents the Lancaster pork producers as a spokesman. He plans to study Hatfield's buying system with special emphasis on weights and grades.

The new state officers were introduced. Abe Fisher is the new president; Floyd Huber is vice president and Herb Schick is secretary/treasurer.

More than 275 persons attended the banquet.

## New Terms, Greater Meaning

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NEWARK, Del. — New buzzwords can turn people off, especially when these terms have little meaning to us compared to words like mastitis, ketosis, milk fever, degradable protein, acid detergent fiber, monocalciumphosphate, etc.

These, too, were buzzwords at one time, but because we now understand their significance, we know they can mean big differences in profit or loss in the dairy business.

Two new terms are CATION and ANION (pronounced like "cat" and "iron" without the "r" and like "Anne" and "iron"). We adopt these terms from the disciplines of chemistry and physics as they relate to nutrition and the more correct feeding of our dairy animals.

In simpler, better-known terms, cation and anion mean the acid-base balance in feeding rations, in digestion and in the internal metabolism of the absorbed nutrients afterwards.

Why not stick with the old names?

Well, this is the age of molecular chemistry, and understanding nutrition at the molecular level makes it easier to track down causes of problems.

Ions are the atoms or molecules that make up nutrients. When nutrients are absorbed into the body, they break down into ions.

Either they are the electronically positive-reacting ions like calcium, magnesium, zinc, sodium, potassium, iron, selenium and iodine, etc. Or they are the ions that are electronically negative-reacting like chloride, sulfate, phos-

sphate, nitrate and carbonate, etc.

Acid-base balance, or cation-anion balance, happens from the relative contents of feeds in those compounds. When reacting positively or negatively on balance in the guts and in the body, they create acids or the opposite — an alkaline or base balance.

This is a much more serious business than previously realized, because the reactions mean a change in pH (a pH of 7.0 is neutral; less than 6.9 is more and more acidic; more than 7.1 is more and more alkaline).

This can only be balanced if the body has buffers in its bloodstream or takes buffers from its bones, or the dairy farmer feeds buffer supplements like sodium bicarbonate or magnesium oxide with the ration.

For example, calcium and magnesium in the feed ration mean an alkaline or cation reaction.

Producers who grow potatoes or alfalfa are more conscious of these facts than those of us engaged in feeding animals or in human nutrition. Crop growers and agronomists agree that you can't grow alfalfa without liberal fertilization of the field with limestone, a good source of calcium, while the opposite is true for growing potatoes. And fertilizer on fields is to plant nutrition as dairy animal feeding ration is to animal nutrition.

When do dairy animals need feeding rations that are going to be alkaline or acidic; that is, cation or anion? And when does ignorance of this (or ignoring it) cause problems and financial losses on the dairy farm?

High-milking dairy animals excrete in their milk lots of calcium in addition to other cations, which have to be replaced daily.



Indiana County came in second place at the Keystone Pork Bowl. Front, from left, Lisa Zack, Adrienne Elkin, and Tonya Anthony. Back, from left, Beth Elkin and Sue Glass, coach.



Chester County placed third in the Keystone Pork Bowl. Team members are, front row, from left, Matt McAllister, Christin Eyrich, Chris Gay, and Norman Gay. Back, from left, Titus Beam and Nelson Beam, coaches.



President Kent Strock presents the Pork All American award to Steve Wilson. In the photo, left to right, are Janet, Cindy, and Steve Wilson; and Strock.

If not replaced, then two things will happen: (1) milk production will drop, and/or (2) the milking cow, goat or sheep will draw calcium from her own bone substance, leading to serious consequences, such as brittle bones or worse.

In the beginning of lactation especially, paralysis and the dreaded milk fever are typical of a calcium deficiency in the bloodstream, which will kill cows quickly if they are not administered an emergency intravenous calcium treatment.

During the dry period when dairy animals do not secrete milk and do not lose those large amounts of calcium daily, the nutrition requirements are quite different and the animals do not

require as much cation. In fact, just the opposite is true.

The same is valid for male animals, which do not secrete large amounts of cations because they do not give milk. Serious damage can occur to them, including kidney stones, when a change of

ration content is not implemented, because the animals are trying to get rid metabolically of the unwanted, unneeded and surplus cations, while they have a shortage of anions or acid-producing feeds such as grass, grass hay, grass silage, grass haylage, starchy feeds, sulfate, chlorides, etc.

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