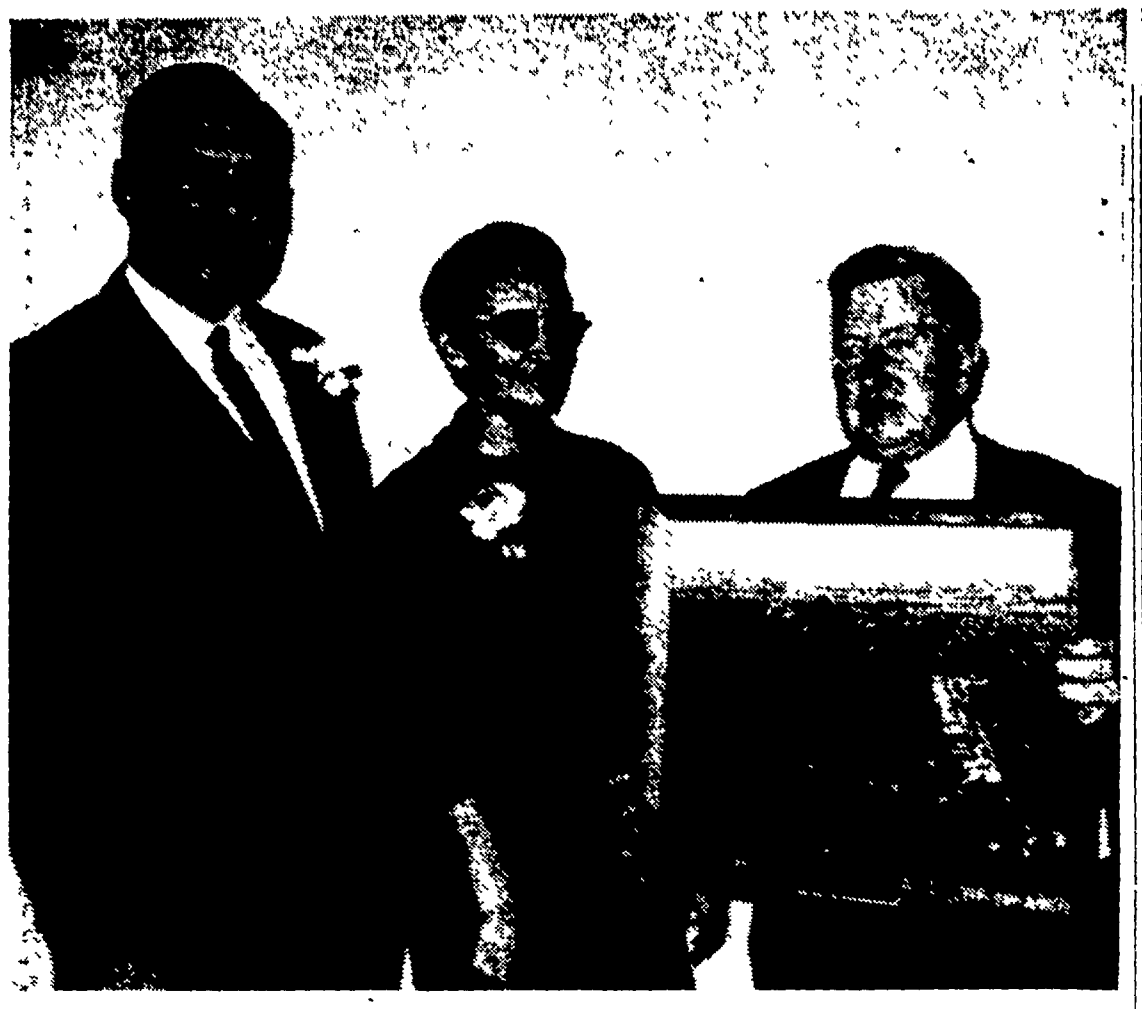
"Actually in bandying about this impressive-sounding deficit the $1.9 billion (travel deficit) to well under $500 million."—John Hughes in the New York Daily News
figures, the politicians ignore many considerations that reduce



MR. AND MRS. LEROY R. PFAUTZ, Stevens R1, received a colored air photograph of their farm Tuesday night, after being named "Conservation Farmer of 1967", by the Lancaster County Soil and Water Conservation District at their annual meeting. Making the presentation at the Quarryville Methodist Church is Abram D. Dombach, (right) County Commissioner. L. F. Photo

● Soil & Water

(Continued from Page 1)

cause of the strip cropping McKeever estimated these strips, if placed end to end would encircle the earth four times

'Pennsylvania was slow in starting conservation," he said "But they have made up for it as the years have passed"

In the awards program, LeRoy R Pfautz, Stevens R1, was recognized for his outstanding work of conservation on his farm and was presented a colored air photograph of his farm by the District Abner J Houseknecht, veteran Soil Conservation Service worker was presented a plaque for "Outstanding Service"

Farmers who have been long-time supporters of conservation were also honored They are

Charles Anderson, Melvin Boyce, John A Breneman, Robert Brinton, Arthur Brown, Levi Brubaker William Bucher, Lehman Burkins Ross Donley Cy-

See Other Photo Page 13

rus Ferguson, Walter Ferguson, Claud Fuller, Amos Funk,

J Clarence Garber, Monroe Garber Norman Garber, Earl Groff, Owen Groff, Paul Groff, P M Habecker, Charles Hart, Abram Harnish, A Huber Harnish, J Lloyd Harnish, Sam Harnish, Henry H Hackman, Harold C Herr, Ivan Herr,

John Herr, Ezra Hershey, James Hess Paul Hess, Harry Houser, G Jackson, Roy Keene Victor Keene, Clayton Keener, John Kindig, Clyde Kreider, John Kreider, Edgar Lefevre, Joseph Lesley, John J Long,

Milo McClune, John McCollough, Clyde McSparren, Richard Mellinger, Elam Mull, Clyde K Mylin, R V Pennington, Charles Preston, Elmer Probst, J A Railing, Charles Ressler, William C Ressler, Carl Reynolds, Claude T Roland, Herman Shirk,

Almus Shoemaker, Arthur Shoemaker, Lewis Shoemaker, John Slaymaker, A B Stottlemyer, Mrs Howard Wagner, Roy H Weaver, Mrs Gertrude Weicksel, Samuel Wiker, Clair H Witmer, James Wood, Richard Reese, W Martin Muth, Ivan McKeever, Ralph Ruble, Abner J Houseknecht

Penn State Researchers Find Cure For Ketosis

A highly effective treatment for ketosis — a puzzling disease that afflicts cows at the peak of milk production — has been developed by a team of researchers from Penn State University

One injection of a vital nutrient called methionine, followed by treatment with capsules containing a well-known poultry feed supplement, quickly brings diseased cows back to normal, report R D McCarthy and G A Porter of Penn State's Department of Dairy Science and L C Griel Jr of the Department of Veterinary Science

Their findings, supported in part by the Penna State Department of Agriculture, appear in the March issue of the Journal of Dairy Science

Ketosis — which bears a superficial resemblance to human diabetes — annually afflicts about a million cows in this country, causing them to go off feed, lose weight and reduce milk output At the same time, their milk develops an off flavor, due to the accumulation of substances called ketones in the blood stream In some cases, the disease results in serious mental disorders in the affected cows

A major advantage of the injection-capsule combination is that the farmer can continue the treatment himself after a single visit from the veterinarian, the report explained The new experimental treatment appears to give quicker recoveries than other treatments which involve insulin and cortisone-like drugs, the scientists pointed out

Within three days after diseased cows were injected with methionine, then given daily doses of the poultry feed chemical in capsule form, the cows were brought back to high level milk production At the same time, the metabolic upset responsible for the disease was corrected

The material in the capsules is chemically related to methionine and has been used for years as a poultry feed supplement Its official chemical name is DL alpha hydroxy gamma methylmercapto butyrate calcium The Penn State team suggests that the capsules might also be used to prevent the disease from developing while it is still in the "sub-clinical" stage

Scientists have been studying ketosis for about 45 years, but until now they haven't been able to prove why it appears suddenly and spreads quickly through an entire dairy herd They knew that it was not caused by a "germ" or virus, but was probably due to variations in the cow's feed

Because the disease usually occurs when the cow's system is in "high gear", producing milk at such a level that she can't eat enough to keep up, the research team theorized that ketosis was linked to the temporary lack of some vital nutrient

The Penn State researchers believe that they have now pinpointed the cause of the disease as a methionine deficiency which triggers off a chain of detrimental events in the cow's milk-producing machinery Previously an upset in carbohydrate metabolism had been blamed

Their suspicions were aroused by the fact that methionine — an amino acid building block for good milk protein — is produced at a very low level by the versatile bacteria in the cow's first stomach or rumen Any drain on the methionine supply could therefore have serious nutritional repercussions

Careful analysis of the blood of the University's Holstein dairy herd clarified what may happen when the methionine-deficient cow gets ketosis The analysis showed a decline in certain blood serum proteins and a rise in the amount of "fatty acids" that the blood contained

In the complex chemistry underlying milk production, methionine appears to help hook up essential proteins with substances in the blood called phospholipids, the Penn State team found.

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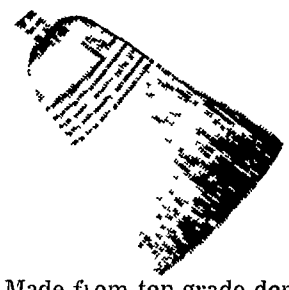

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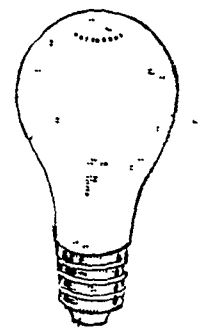

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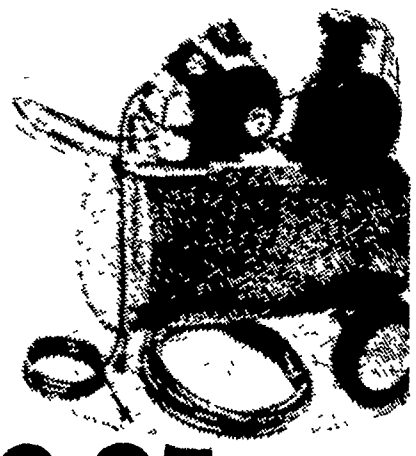

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