

Should you supplement vitamin A for improved cattle production?

NUTELY, N.J. — Vitamin A can help cattlemen realize good production efficiencies, says Hoffmann-LaRoche Inc. This vitamin is essential to help the animal's body build various defenses against infectious disease and stress.

According to research conducted at the University of Florida, adding supplemental vitamin A to cattle rations, presumed to

have adequate nutrients increased rate of weight gain of stressed fattening steers, compared to stressed cattle receiving no vitamin A fortification.

In another university study, researchers studied vitamin A metabolism in cattle subjected to hot weather stress.

Fattening cattle exposed to a temperature of 110° lost three times the vitamin A activity from liver storage,

compared to cattle maintained between 75° F and 89° F. In additional studies, cattle without shade lost two and half times as much of their vitamin A liver stores as cattle with access to shade.

While vitamin A does not occur in feedstuffs of vegetable origin, these feedstuffs do contain carotenes that can be converted to vitamin A activity in the intestinal wall of the animal. But the efficiency of conversion depends on the amount of carotenes consumed and the types of carotenes supplied by feedstuffs.

Of the dry roughages commonly used in beef cattle rations, dehydrated alfalfa meal has very high carotene content, averaging 28 milligrams per pound, while non-legume hay has very low carotene content, averaging 6 milligrams per pound.

However, cattle do not efficiently convert carotene to vitamin A activity. Rats generally convert 1 milligram of beta-carotene to 1,667 I.U. of vitamin A activity, while cattle normally convert 1 milligram of beta-carotene to 400 I.U. of vitamin A activity.

Vitamin A should be supplemented in cattle rations to offset variations in carotene content of feedstuffs, says Hoffmann-LaRoche. These variations are due to lower carotene levels in moldy and light weight corn, compared to sound corn, and carotene losses occurring in feed-

stuffs during harvesting, processing and storage, they claim.

Supplemental vitamin A should also be fed to compensate for variations in the ability of the animal to convert carotene to vitamin A activity. Conversion is influenced by breed, nitrate and nitrite intake, intestinal parasites, stress, changes in thyroid function, biological variations among cattle, and phosphorus and protein levels in the ration.

Thus, vitamin A supplementation of cattle rations is important to offset factors that cut vitamin A availability and utilization and, thus, prevent deficiency and allow optimum performance.

Named assistant extension agent

SCRANTON — Ellen R. Katz has been named to Penn State's Cooperative Extension Service staff as assistant extension agent serving as an area farm and home management agent in the Northeast Extension Region.

Thomas B. King, Penn State associate dean for extension, who announced the appointment said that Ms. Katz already has begun her duties.

She is responsible for planning and conducting educational programs focusing on farm business management and family financial planning in the

seven county region which includes Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill and Wayne. Her office is in the Lackawanna county Extension Office in Scranton.

A native of New York City, Ms. Katz graduated from Cornell University with the bachelor of science degree in Agricultural Economics. At Cornell she was a member of the Collegiate Chapter of the Future Farmers of America and the Ag POC-Student Positive Action Council.

She is currently a member of the American Agricultural Economics Association.

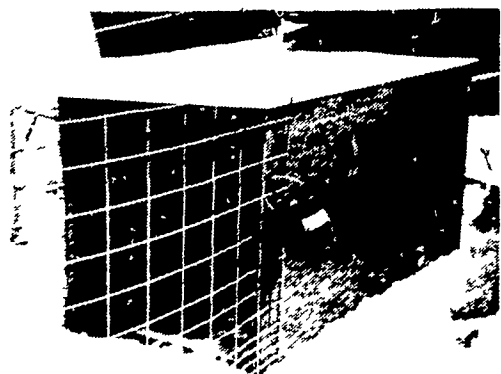
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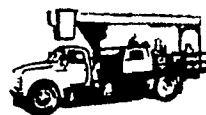


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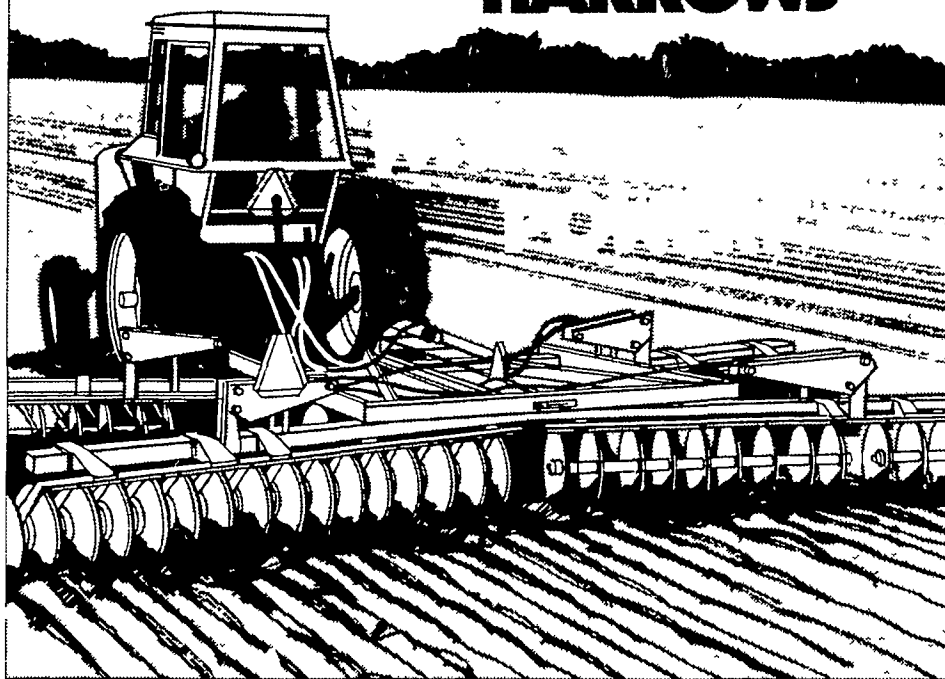
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