

Information On The West Nile Virus Threat And Its Aftermath

Anthony E. Castro, DVM, PhD
Virologist (PADLS)

The occurrence of West Nile virus (WNV) in birds, horses, and humans in the northeastern United States in 1999 was the first encounter of this arbovirus in the USA. Arboviruses are those viruses that are transmitted by an insect vector from one species to another. The WNV is a typical arbovirus (flavivirus) which is transmitted by the bite of a mosquito vector from an animal which is viremic (ie. virus circulating in the blood stream) to a susceptible species.

The strain of WNV presently in the USA is genetically related to the WNV strains found in the Middle East. It has been seen to be extremely lethal to crows which when infected, die in high numbers, thus crows provide a sentinel for the presence of the WNV in a vicinity. The virus also infects horses when bitten by mosquitoes carrying the virus. In horses, the illness is usually expressed as neurologic signs (encephalitis) or ambulatory deficits.

Transmission from animal-to-animal, birds-to-horses or animal to human has not been known to occur. In horses, an "influenza-like" syndrome occurs with weakness and circling. Incoordination also follows, which may lead to eventual death. Thus, all horses and also humans are considered "terminal hosts." Nevertheless, horses usually have a low viremia

which allows them to produce antibodies to the WNV. Such immune animals are not sources of virus and should not be euthanized. In areas where the disease has been identified susceptible horses should be kept indoors to avoid mosquito contact.

The WNV can be isolated in approved state and federal laboratories. Usually, the virus can be obtained from cerebrospinal fluids or identified in tissues by molecular procedures (ie., reverse transcriptase polymerase chain reaction). Serum is used to detect specific antibodies (IgM and IgG) to WNV. Pools of trapped mosquitoes can be used to detect WNV by antigen capture ELISAs.

A passive surveillance program can be instituted by animal owners by informing veterinary personnel of neurologic illness in horses, excessive death of birds, specifically crows, and increases in the mosquito populations. In humans, public health departments should be informed of flu-like illnesses, skin rash, with neurologic symptoms and flaccid paralysis when they are seen as these can lead to death. Suspected human cases can be tested for their exposure to WNV by serology (serum antibodies). However, most human infections by WNV are usually clinically inapparent.

Vertical transmission of WNV occurs in mosquitoes (ie, Culex

and Aedes genus), but has not yet been seen in the strain isolated in the northeastern US. The viral RNA has been shown to exist in mosquitoes that have overwintered in New York City. Nonetheless, persistence of infectious WNV has not yet been proven to occur in the virus isolated in the USA. Vector control is critical by mosquito abatement programs and destruction of breeding areas for mosquito larvae.

Precautions to follow include the use of gloves and face protection when handling dead birds or horses. At present, the WNV has not been detected or has not occurred clinically in animals located in Pennsylvania. A surveillance program has been instituted by the Department of Agriculture to insure the rapid detection of WNV should it occur in the Commonwealth.



A little money buys a lot of Action.
USE CLASSIFIED ADS

The Pennsylvania Feeder Calf Roundup

Dr. John Comerford
Penn State University
Extension Beef Specialist

Pennsylvania feeder calf producers are at a disadvantage in the marketplace because of small herd sizes and variability of management and genetics. The roundup program began in 1993 as a means to make production, health programs, and marketing more consistent among small herds.

Calves are consigned to the program in the summer. Vaccinations for the respiratory complex, including pasturella, begin in late August on the farm. Booster shots are given 2 weeks later with the addition of deworming, ear tags, and optional implants. After another two weeks, the calves are transported to a weaning center, where they are weighed, comingled, graded by PDA, sorted into truckload lots for sale, and started on limited grain rations. Calves that are overweight, under weight, improperly castrated, not graded M1 or L1, or have health problems are rejected.

Calves are offered for sale on a teleauction in late September or early October from a sale originating at Buckhannon, WV. Delivery from the weaning center usually occurs 10-14 days after the sale, for a total weaning period of 20-22 days. Consignors are paid based on the weight of the calves at delivery. Costs for consignors include

the health program, feed, yardage at the weaning center, and sale commissions.

Pennsylvania Roundup calves have developed an outstanding reputation for health and feedlot performance. The objective of "feed them and forget them" cattle has been attained. Morbidity after the sale has averaged less than 1%, and only one calf has been lost from traceable records. These results are attributed to the waiting period after the booster shots are given before transportation and weaning occur.

Calves have sold at the top price or near the top of all 1200 cattle sold on the sale annually. Repeat buyers occur regularly. A survey among producers indicates they feel the additional price they receive for the cattle is the most important feature of the program, which often averages \$20/cwt above local markets.

Costs for the program have varied from \$35.00 to \$47.00 per calf, and usually requires a premium price of \$4.00/cwt. Producers also indicate the program has helped them make production and breeding decisions that have improved the value and pride they have in their cattle. Future improvements include the purchase of half-sib sires among consigning herds to increase the genetic consistency, source verification validation, and enterprise financial analysis.

BUY,
SELL,
TRADE
OR
RENT
THROUGH
THE
CLASSIFIED
ADS
IN
Lancaster
Farming

Concrete Walls Built to Your Construction Needs



Lancaster Poured Walls, Inc.
Concrete Construction

2001 Jarvis Road • Lancaster, PA 17601

717-299-3974

Concrete Pumping, **NEW!** 28 Meter Pump

Agricultural • Commercial • Residential



ATTENTION CORN GROWERS HYBRID CORN

Corn planting is coming soon, we have excellent quality and quantity of seed corn this year. Seed corn has been our business for over 54 years.

We have a large selection of varieties. Reasonably priced!

We carry many varieties of Grass Seeds.

We also have Oats, Soybeans, Twine & Chemicals

We sell all kinds of spray materials

HORST SEED AND CHEMICALS

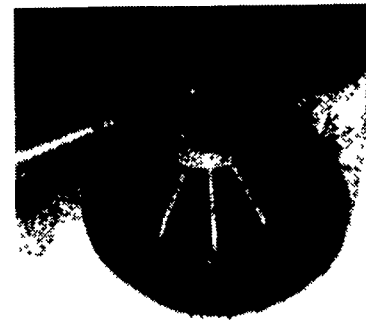
"Hybrid Seed & Corn"

Charles L. Horst
1 Mile East of Marion
(717) 375-2582

Dennis S. Horst
Along Marion - New Franklin Rd
(717) 375-4800



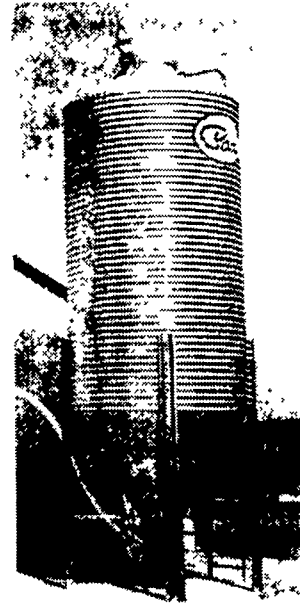
Boosts Your Efficiency and Products with these Innovative Products...



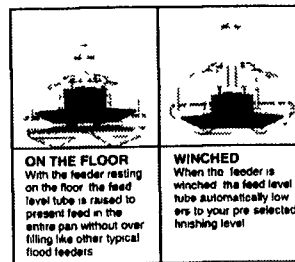
QUICK-START

The Pax QUICK-START™ pan feeding system grows chicks into FINISHED broilers efficiently.

Start chicks with the feeder resting on the floor and the feed pan entirely filled. The Pax QUICK-START™ pan provides easy access to plenty of fresh feed - with no accumulation of stale feed in the drop tube - attracting even the smallest chicks to begin feeding right away



Feed Storage and Delivery Systems

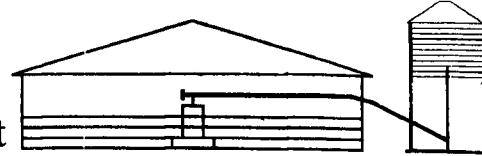


ON THE FLOOR
With the feeder resting on the floor the feed level tube is raised to present feed in the entire pan without overflowing like other typical floor feeders

WINCHED
When the feeder is winched, the feed level tube automatically lowers to your pre selected finishing level

Flexible Auger for Low Volume, Standard Volume, High Volume, as well as High Moisture (up to 25°) and pellet applications

Zeiset
Equipment



2187 North Penryn Rd., Manheim, PA 17545

Phone (717) 665-4056 Fax (717) 665-2240