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For immediate release

KIFCO DEBUTS FOAMING SYSTEM TO DEPOPULATE BROILER HOUSES Manufacturer's Avi-FoamGuard is first safe, effective system for mass depopulation

(CHICAGO – November 8, 2006) Kifco/Ag-Rain, Inc., a Havana, IL-based manufacturer of irrigation equipment and specialized applications for the agricultural industry, today announces the introduction of its Avi-FoamGuard foam system for mass depopulation of broiler houses.

Commercial poultry producers and emergency management personnel can use the Avi-FoamGuard to safely mass depopulate broiler chickens that have become sick or infected with avian influenza (AI).

Concurrently, Kifco is announcing the sale of the first two Avi-FoamGuard systems: one to the University of Delaware's Department of Agriculture & Natural Resources, and a second to Baldwin, GA-based Fieldale Farms.

The launch of Kifco's Avi-FoamGuard system comes as the USDA has approved the foam method for mass depopulation. Dr. Ron DeHaven, Administrator of the USDA's Animal and Plant Health Service, first announced this approval at the Delmarva Poultry Industry's annual meeting on Poultry Health & Processing, in Ocean City, MD, on Oct. 12, 2006.

Commercial poultry companies have been seeking a practical method for mass depopulation during an outbreak of AI or similar pathogens, to limit the spread of the disease. Current methods are impractical and time-consuming, and risk exposing workers to the risk of infection.

Researchers and commercial poultry companies recently established that non-toxic water-based foam presents a practical, effective, and humane method for mass depopulation. Foam of the right bubble size creates an occlusion in the trachea of birds, causing a rapid onset of hypoxia—the same cause of death as the approved method using carbon dioxide gas (CO²).

Until the debut of the AviFoamGuard, safely delivering foam into a broiler house with the right bubble size and at the right volume to achieve 100% effectiveness had been a hurdle. Kifco's system dispenses a medium-expansion foam with small bubbles optimal for inducing physical hypoxia.

"Flu season is nearly upon us and concern about high-path AI is growing," said Ray Francis, President & CEO of Kifco. "Kifco's equipment gives producers, agricultural agencies, and emergency management personnel an easy-to-operate method to safely and quickly depopulate broiler houses—especially under the difficult conditions likely if a high-path infection is found."

The Avi-FoamGuard combines Kifco's proprietary Water-Reel®, industry-standard foam generators, a water pump, and an injection pump for the foam mixture. Available in two production models, the Avi-FoamGuard can pump between 85 and 170 gallons of water and foam chemical per minute.



“With the input we received from agricultural experts and veterinarians, we designed the Avi-FoamGuard to minimize human contact with sick animals, reduce stress on birds, and ensure a swift, safe depopulation,” said Francis. “Protecting workers while offering a humane alternative have been at the forefront of our thinking.”

“The Avi-FoamGuard is a safe and effective solution—and these first sales to the University of Delaware’s poultry research group and Fieldale Farms are evidence of its effectiveness,” said Francis.

Kifco’s equipment achieves an optimal bubble size while maintaining sufficiently high expansion ratio to ensure a height adequate to covering the infected broilers. The Avi-FoamGuard allows a single operator to dispense a large amount of environmentally-friendly medium-expansion foam in even the largest broiler houses.

“Our large machine can fill an average broiler house to a depth of three to four feet in less than 30 minutes,” said Francis. “At the height this foam achieves, it’s ideal for turkey houses as well.”

Poultry companies and veterinarians agree that depopulating an affected broiler house is the best way to prevent spread of disease and protect human health in the event of an outbreak. In the past, achieving that goal in large poultry houses with thousands of birds has been time-consuming, inefficient, even dangerous.

The Avi-FoamGuard dispenses through a generator system modified to achieve a smaller, more dense bubbles. In optimal conditions, the larger model of the Avi-FoamGuard can dispense as much as 4,500 cubic feet of foam per minute. Without distressing animals in the poultry house, a three- to four-foot wave of foam gently fills the house.

The Avi-FoamGuard was developed at the suggestion of poultry researchers at the University of Delaware. During demonstrations and testing, Kifco also sought input and advice from commercial poultry companies and from the Delmarva poultry industry in the tri-state region of Delaware, Maryland, and Virginia.

In these three states, the risk of a disease’s spreading is particularly acute. The Delmarva Poultry Industry (DPI), the trade association for this area, has recommended depopulating every broiler house within two miles of an infection by the high-path H5N1 strain of AI.

“In some cases, over 100 poultry houses may be within a two-mile radius of an infected farm. At an average of 25,000 broilers per house, that could mean needing to depopulate 2.5 million birds in less than 48 hours,” says George “Bud” Malone, poultry extension specialist at the University of Delaware.

“Foam is a proven method for depopulation. The Avi-FoamGuard system effectively and easily achieves whole-house depopulation without undue stress to poultry—and with minimal exposure of its single operator,” said Malone. “Compared to previous depopulation methods used on Delmarva, Kifco’s system reduces labor by up to 95%, with far less exposure of personnel and with far less physical activity.”

Malone, the researcher who identified foam as an alternative method for mass depopulation, is an international authority on options and procedures for depopulating poultry flocks infected with AI. He and other poultry research scientists at the Universities of Delaware have validated and developed the use of foam in broiler house depopulation for several years.



Previous methods for mass depopulation in the event of avian disease remain time-consuming, costly, and impractical for the types of houses used in the U.S. Methods include covering affected birds with plastic and pumping carbon dioxide gas (CO²) underneath, whole-house CO² gassing, and live-cage-haul, which requires workers to catch the diseased broilers, which are then carried outside the facility.

With these methods, workers risk heat exhaustion and exposure to CO² gas. Other methods, such as cervical dislocation, are impractical for large houses, where large numbers of diseased birds must be put down.

“Many in the industry recognize that existing methods are impractical in large U.S.-style houses,” said Kifco’s Francis. “Pumping CO² in a broiler house is cumbersome and time-consuming. Cage-haul brings sick birds outside the house—and handling birds for hours. Both require many people to work inside the house.”

“Alternative methods include spraying foam at birds from high-pressure nozzles,” said Francis. “We feel that approach stresses the animals due to the impact of the foam, and it uses twice as much water as the Avi-FoamGuard. Ensuring the right mixture of foam is also more difficult.”

Water use is a concern during an outbreak of avian flu. Water can be supplied by fire engines, poultry company tanker trucks, municipal water supplies, or the farm’s own pumps. “Kifco’s machine is highly efficient in using existing water supplies,” notes Francis.

Commercial producers are also interested in the Avi-FoamGuard’s wider application in the industry. Recent testing showed that Kifco’s system is also an effective method to dispense disinfectant foam in a poultry house, and could be used to kill insects such as the darkling beetle.

KIFCO/AG-RAIN

Kifco/Ag-Rain, Inc. is a specialized designer, manufacturer, and marketer of high-volume irrigation systems, slurry pumps and reels, and other specialized applications for agriculture. Sold around the world, Kifco’s products are based on its proprietary Water-Reel® technology, and range from small, portable irrigation systems for sports fields, parks, and golf courses up to large, high-volume water-delivery systems for agricultural customers. Kifco was established in Havana, Illinois in 1966. More information is at www.kifco.com.

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