

Changes Coming In Poultry Industry, Says Penn State Expert

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Small animals in captivity will give their owners and caretakers more profound questions in years ahead. Chickens, turkeys, guineas, quail, chukar, waterfowl and others such as rabbits will find people in management pursuing improved, more reliable methods.

Some people will succeed by reducing vaccination in the life of an animal to zero to three times. Fewer, safer, purer vaccines, or less variable biologicals, will be used. Vaccines will be higher quality, more costly and capable of delivering more effective results. More care will be taken in administration of these vaccines. Improved results will come from new knowledge regarding timing, diagnosis and treatment taking into account age, sex, feed and water consumption. A selection of more precise pharmaceuticals will be available and attention to the drug of choice will be critical. Protocol of vaccination will be adapted to the breeding, environment, age, nutrition, health and behavior of the animal and the economic condition of the owner and the marketplace.

Common needles without sanitation between uses will no longer be employed on large numbers of birds. This will prevent vertically transmissible diseases being transferred from youngster to youngster.

Labor will decrease; technical help will take over, and mechani-

zation will continue to grow in the poultry industry.

Debeaking, detoeing, desnooding, dubbing, some vaccination, caponizing and wingbanding will be recognized as a form of surgery, and more refined research will investigate method, result, post-operative infection, trauma and recovery. Surgery is a traumatic experience for an animal. Surgery, even ear marking rabbits, will be considered a challenge if the poultryman, as a true surgeon, expects 98 to 100 percent recovery. Precisely controlled pre-operative and post-operative methods will result in few animal problems. Debeaking and detoeing will be curtailed completely or used only where necessary.

Moisture, once again, will be reduced in poultry feedstuffs. In the 1950s, nine percent moisture in mixed feeds was considered normal for a high quality mash. In the 1960s, moisture rose to 10 percent and was considered tolerable. In the 1970s, 11 percent was accepted and growers hoped for the best. Now some believe 12 percent moisture in feed is normal. But if the feed becomes warm or attains an age of three days or more after grinding, microbes will increase so numerous that the animal consuming the feed will become ill.

Caring husbandry will return as a necessity for raising all species, including rabbits which USDA considers as poultry. More human time will be invested in flocks to keep them happy, to nurture them toward health and productivity.

It has been noted that some

handicapped people can care for animals well, and it will be recognized that everyone is handicapped at different tasks.

Cod liver oil or vitamin-mineral-electrolytes will be used to build a stronger immune response to disease. Nutrient therapy, environmental therapy and behavioral conditioning will replace medicines in some cases.

Animal welfare will become a primary consideration in animal productivity. The animal will no longer be viewed as a commodity by businessmen ignorant of what causes animals to be healthy or sick, feel pain, develop social order or be comfortable. Entrepreneurs with no ability to read signs of a bird, whether it exhibits normal or abnormal behavior or condition, will have to hire such expertise or houses will stand empty. Experience in observation will have to be refined or enhanced since many high school and college graduates today cannot adequately interpret what they see.

For some species the open shed or range or pole building will return to use. Insulated, power-ventilated, windowless buildings will have limited employment. Natural lighting and ventilation only will be supplemented by their electrically powered alternatives. Earthen floors, sunlight, fresh air, variation in temperature, humidity and wind (limited exposure to weather extremes and precipitation) can grow a healthier animal, all of which is vital because the immune system of many species of small animals has been decreasing

or weakening for years.

Miscellaneous costs will increase as we see people design toys for animals. Toys in densely housed flocks or herds will encourage animals to exercise, alleviate boredom, reduce pecking and foster stronger growth. "Happy toys" for animals will become a thriving business.

Labor will decrease as fewer people are employed in favor of technical help. Herdsmen, flock supervisors and farmers will spend less time but glean more favorable results from time spent with animals or with those in direct care of the animals. Knowledge and the ability to observe, evaluate and decide will become necessary for every animal caretaker.

Oxygen will be administered to birds through avenues other than the lung. For instance, ammonia, hydrogen sulfide, methane and other toxic gases will be reduced to near zero in pens, and fresh air will be made more available to ani-

mals. Agitators or bubblers will be placed on waterers to aerate water prior to the birds' drinking it. This may help reduce anerobic bacteria in water as well as deliver dissolved oxygen and nitrogen to the birds' systems for better health. Fresh air bubbled or stirred through water, litter, manure, feed or earthen floors will improve animal health.

Interest on equity will no longer be charged on a producer's own equity. Instead, profit sharing will enter the industry so that, as animal health and performance improve, and repeat sales to customers increase, profit margin will rise, thus increasing the pay checks for all. Interest on borrowed money will be adjusted from zero to nine percent and no more. The cost of stock or new animals will increase as geneticists learn to breed animals capable of dealing with environment in captivity. Breeding for specific purposes will become essential.

Greenhouse Erected For Del. State Fair

NEWARK, Del.—People who grow plants for pleasure and profit will have lots to look at when they visit the University of Delaware exhibit area at this year's Delaware State Fair in Harrington. Extension plant specialists and researchers in the department of plant science will erect a 20-foot by 30-foot, hoop-type, plastic-covered green-

house next to the university tent.

According to extension agent Jay Windsor, who is supervising the greenhouse installation, the displays should appeal to both commercial greenhouse operators and home gardeners. One section will feature plants being propagated conventionally under mist from seeds and cuttings. Plants propagated in test tubes using tissue culture techniques will also be showcased. Another display will explain fluid drilling—a procedure which uses pre-germinated seeds to establish field or greenhouse crops.

Other exhibits inside the greenhouse will cover root zone heat, crop spacing, growth media, and insect and disease control. In addition, there will be a display of new commercial flowering crops suitable for home garden use under Delaware growing conditions, including Lisianthus (a hybrid Texas bluebill), Melampodium (a small-flowered, drought-tolerant member of the sunflower family native to the Central and Southwestern United States) and the Nippon daisy (a type of chrysanthemum).

Inside the university's adjoining tent, extension master gardeners under the direction of Delaware State College extension agent Glenn Layton will install a 16-foot by 20-foot demonstration garden featuring herbs and space-saving, container-grown vegetables and flowers. During fair week the master gardeners will also conduct a garden clinic where the public can bring plant problems for diagnosis.

The University of Delaware fair tent will open Friday, July 17, at 5 p.m. From July 18 through July 25 it will be open daily from noon to 8 p.m.

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