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Procedure and Checklist for Water Vaccination of Meat Turkey Flocks

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Vaccination for certain diseases is an important component of the health management program for commercial meat turkey production. Because of logistical challenges almost all routine vaccination of meat turkey flocks is administered through the drinking water. Examples of diseases for which vaccination is performed include Newcastle disease, bordetellosis (turkey coryza), fowl cholera, and hemorrhagic enteritis.

Figure 1. Three-week-old turkeys receiving drinking water containing vaccine with added Hi-Light® dye.

The following general procedure is recommended when administering live vaccines through the drinking water.

- Turn off chlorine 48 hours before administering the vaccine.
- Flush powdered milk at rate of 1 lb (1 dry pint)/100 gallons of water through line before vaccine administration.
- Drain and raise water lines.
- Withhold water from turkeys for 1 ½ hours.
- Pre-mix vaccine in 1 gallon of cool nonchlorinated water with 1 tablespoon powdered milk added.
- Mix vaccine into stock solution.
- An appropriate water soluble dye that is harmless to live vaccines may be added to the stock solution at this time. At the Utah State University Turkey Research Facility it was found that 45 mL (3 tablespoons) of liquid Hi-Light® (Becker-Underwood, Ames, Iowa) per gallon stock solution works well; others report that one Hi-light tablet per 20 liters (5 gallons) of drinking water gives an acceptable concentration.*

- Fill water lines until the blue dye is visible.
- Drop lines and let turkeys drink.
- Anticipate enough water volume so that the vaccine is consumed within 4 to 8 hours.
- Two hours after beginning vaccination, pick up at least 50 turkeys and check for stained tongue and/or nostrils.**
- Do not chlorinate or medicate water for 24 hours after all vaccine has been consumed.

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*Optional, but is recommended to be done at least periodically to evaluate vaccine delivery through the water system and as an indicator of vaccine consumption.

** Performed if using a dye. An acceptable vaccine exposure is inferred if at least 85% to 90% of the tongues and/or nostrils are stained blue when using Hi-light.

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