



Humane Farm Animal Care
Animal Care Standards
Edition 24

Laying Hen Chick
HATCHERY OPERATIONS

HUMANE FARM ANIMAL CARE

Humane Farm Animal Care is a 501(c)3 non-profit organization whose mission is to improve the lives of farm animals being raised for food and to assure consumers that certified products meet our welfare standards.

Our initial set standards were adapted from the RSPCA Assured program published by Royal Society for the Prevention of Cruelty to Animals in the UK. Since then, the Humane Farm Animal Care standards for the Certified Humane® program have been refined and expanded to provide standards for the rearing, handling, transport, and slaughter of even more food animals under the Certified Humane® program, applicable worldwide. These dynamic documents are always informed by scientific research, veterinary advice, and the practical experience of farmers.

Animal welfare is improved when livestock managers adhere to the following:

- Access to wholesome and nutritious feed
- Appropriate environmental design
- Caring and responsible planning and management
- Skilled, knowledgeable, and conscientious animal care
- Compassionate and respectful handling, transport, and slaughter

HUMANE FARM ANIMAL CARE'S SCIENTIFIC COMMITTEE

Leading animal scientists, veterinarians, and producers work with Humane Farm Animal Care to develop the *Animal Care Standards* for humane farming and continue to work with Humane Farm Animal Care to continually review new information pertaining to improving the lives of farm animals.

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APPROVED HATCHERY OPERATIONS

THIS IS AN OPTIONAL PROGRAM

The Certified Humane® claim **will be authorized for use by hatchery operations** that apply for certification and inspection for compliance and practice one or both of these two protocols.

1) Practice in ovo sexing (per protocols below) to identify the viable female embryos for continued incubation and hatching to become active laying hens
(see A. below).

or

2) Incubate and hatch all viable chicks for on-farm placement for use as layers or meat
(see B. below).

All certified hatcheries must also follow the Chick handling after hatching standards
(see C. below)

& the Operation traceability standards
(see D. below)

Certified Humane® producers who source female chicks from inspected and approved hatchery farms, facilities or operations for their egg production may use the authorized claim on associated egg product packages and cartons once they too are inspected for Chain of Custody integrity.

A. INCUBATING AND HATCHING FEMALE CHICKS FOR ON-FARM PLACEMENT

S 1: Embryo sexing techniques

In ovo sexing techniques are used to determine the sex of a chicken embryo in an early stage of development. The goal is to sort the viable female embryos and ensure proper handling for hatching while enabling the painless elimination of embryos that are male PRIOR to development of pain perception.

a. Identification of an embryo's sex be carried out using proven methods that do not negatively impact embryonic viability or laying hen productivity.

b. In ovo sexing may be carried out up until and through embryonic day 14* (ED 14) only for the purpose of identifying male embryos for elimination prior to sentience or further development. The embryonic development period (embryonic day 0 - zero) begins when the incubation area temperature reaches 100° F (37.8° C). Eggs that are identified as nonviable may also be removed from incubation at this time.

HFAC will keep our standards and expectations of compliance current with the most up-to-date scientific studies. HFAC aim is to ensure our processors are following best welfare practices for in ovo sexing as well as the safe and painless elimination of the embryos that are not destined for full development and

S 2: Egg handling at hatcheries practicing in ovo sexing

- a. The hatchability % of female embryos must not decrease due to the handling of the sexed eggs. Records must be made available for verification.
- b. The interval between removal of trays from an incubation area to the sexing area and back, or any other handling of incubated eggs, must not compromise the survivability of the female embryos.
- c. Individual sexed eggs must be visually identified, for instance, with a nontoxic dye or stamping, as they exit the sexing device.
- d. Visual egg identification must be able to be carried out until the time of hatching.
- e. Facility condition, thermal controls, and functionality of equipment used for incubation of sexed eggs must be monitored daily and auditable records maintained

B. INCUBATING AND HATCHING ALL CHICKS FOR ON-FARM PLACEMENT

S 3: Hatching and rearing chicks

A hatchery may choose to incubate and hatch all viable embryos (both male and female) into chicks to be raised by their own farm(s) or transported to other farms and operations for raising to maturity.

C. HANDLING AFTER HATCHING

S 4: Handling of live chicks after hatching

- a. After hatching, all chicks must be handled and processed in a compassionate manner by trained personnel.
- b. Hatched chicks must be assessed for vitality before being transported.
 - c. Hatched nonviable or male chicks (miss-identified through the sexing process) can only be eliminated (if necessary) by approved humane practices that result in painless, instantaneous death (AVMA, 2020).
 - d. Equipment used for vaccinating, any processing or chick handling must be kept in good working order. Checks and maintenance records must be kept.

- e. Facility condition, thermal controls, and sanitation must be monitored daily according to written SOP's and records kept for auditing.

D. OPERATION TRACEABILITY

S 5: Operations shipping Certified Humane® sexed eggs and day-old female chicks

All processing systems must be inspected by *HFAC* for traceability to ensure that:

- a. There is no commingling certified sexed eggs and female chicks with non-certified eggs and female chicks.
- b. That the Certified Humane® logo, claim or wordmark is only being used for female chicks (hatched from sexed eggs) on transport containers or shipping documents
- c. *HFAC* will audit the plant for traceability according to the Policy Manual, which can be found at www.certifiedhumane.org, to ensure that all the sexed eggs and female chicks are labeled with the Certified Humane® logo, claim or workmark designation on shipping documents or containers.
- d. Annual mass balance information must be recorded in an auditable format for sexed eggs and female chicks.

*Footnote:

1. Balaban E, Desco M, Vaquero JJ (2012). Waking-like brain function in embryos. *Current Biology* 22, 852–861.
2. Kollmansperger S, Anders M, Werner J, Saller AM, Weiss L, Süß SC, Reiser J, Schneider G, Schusser B, Baumgartner C, et al. (2023). Nociception in chicken embryos, part II: embryonal development of electroencephalic neuronal activity in ovo as a prerequisite for nociception. *Animals*, 13, 2839.
3. McIlhone AE, Beausoleil NJ, Kells NJ, Mellor DJ, Johnson CB (2018). Effects of noxious stimuli on the electroencephalogram of anaesthetised chickens (*Gallus gallus domesticus*). *PLoS ONE* 13(4): e0196454.
4. Mellor DJ, Diesch TJ (2007). Birth and hatching: Key events in the onset of awareness in the lamb and chick, *New Zealand Veterinary Journal*, 55:2, 51-60.
5. Weiss L, Saller AM, Werner J, Süß SC, Reiser J, Kollmansperger S, Anders M, Potschka H, Fenzl T, Schusser B, et al. (2023). Nociception in chicken embryos, part I: analysis of cardiovascular responses to a mechanical noxious stimulus. *Animals*, 13, 2710.
6. Süß SC, Werner J, Saller AM, Weiss L, Reiser J, Ondracek JM, Zablotski Y, Kollmansperger S; Anders M; Potschka H, et al. (2023). Nociception in chicken embryos, Part III: analysis of movements before and after application of a noxious stimulus. *Animals*, Sep; 13, 2859.