

FEATHER SEXING DAY-OLD CHICKS IN THE HATCHERY

- It is often necessary to sort day-old chicks by sex at the hatchery.
 - To identify females at the parent generation.
 - To separate male and female broilers so that they can be managed according to their differing requirements.
- When a fast-feathering male is mated to a slow-feathering female, the sex of their chicks can be determined by observing small differences in the wing feathers at the time of hatch.
- Not all chicks can be feather sexed. The majority of Aviagen® products are feather sexable at the broiler generation. Some Aviagen parent female crosses can be feather sexed. However, if the parent female is feather sexable at day-old, her chicks will not be.

ADVANTAGES OF FEATHER SEXING

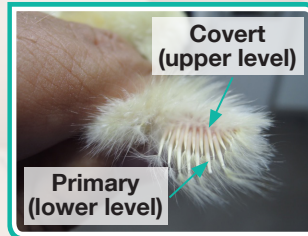
Compared with vent sexing:

- People can be trained to feather sex fairly quickly, and soon develop good speed and accuracy. As such, feather sexing can be carried out by hatchery employees, trained in-house.
- Feather sexing is fast (up to 4,500 chicks per person per hour).
- Less risk of damage or infection.
- Reduced cost.



PRINCIPLES OF FEATHER SEXING

- The slow feather gene is sex linked and dominant and affects the relative growth of the primary and covert feathers on the outer blade of the wing.
- These feathers are usually easy to identify because they have a longer shaft than the surrounding down.
- By spreading the wing gently with your fingers and looking down on the upper surface of wing, the line of covert feathers on top of the wing surface, with the line of primary feathers below it can be identified.



FEMALES

If the primary feathers are longer than the covert feathers, then the chick is female.



MALES

If the coverts and primaries are the same length, or the primaries are shorter than the coverts, then the chick is male.



PROCEDURE

SET UP

- Feather sexing must be done under a good, bright light source if it is to be accurate.
- Set up each station so that the as-hatched, male and female chicks can be clearly and consistently identified.
- The set up may be very simple or fully automated.



- Chicks must be sorted accurately and gently.
- The sexer must be able to place the sexed chicks gently into the correct boxes without difficulty. It should not be necessary to throw the chicks into the box – if this is happening the layout is not working and needs to be changed.



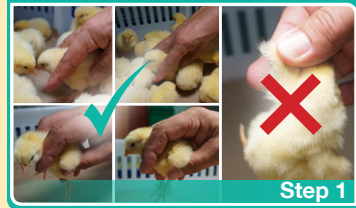
As-hatched chicks are in the metal box, with the males going into blue boxes and the females into red boxes through easily accessible chutes.

PROCEDURE

SEXING THE CHICKS

- Step 1** Pick up the chick by gently holding the neck between the index and middle finger. Ring and little finger will automatically support the rest of the chick's body.

Chicks should not be picked up or handled by the wing - this puts unnecessary stress on the chick and can damage the joint.



- Step 2** The chick's wing will present between the thumb and index finger; bring your thumb upwards pushing gently against the index finger. This will spread the wing open facing towards you.



- Step 3** Look into the covert and primary feathers and determine whether the chick is a male or female.



- Step 4** Gently place the sexed chick into the appropriate box or chute.

When sexing parent females, any chicks that are not clearly female should be put with the male off-sexes.

TROUBLE SHOOTING

- The ratio of males to females will normally be around 48:52 (48% females, 52% males). If the ratio deviates from this, then action needs to be taken.
- Accuracy and sexing speed will vary depending on when the chicks are taken out of the hatcher. If chicks have been pulled too early ('green') they will be harder to feather sex due to the very short length of both primary and covert feathers.
- If sexing errors have not all been removed from the breeding flock producing the eggs, they will produce a small percentage of chicks which are not feather sexable. When this happens, feather sexing of their progeny will be less accurate, and the sex ratio of the hatch will deviate from 48:52.
- As each breeding flock comes into lay, the sex ratio of the chicks after feather sexing should be checked so that the farm can be asked to find and remove any sexing errors as soon as possible.