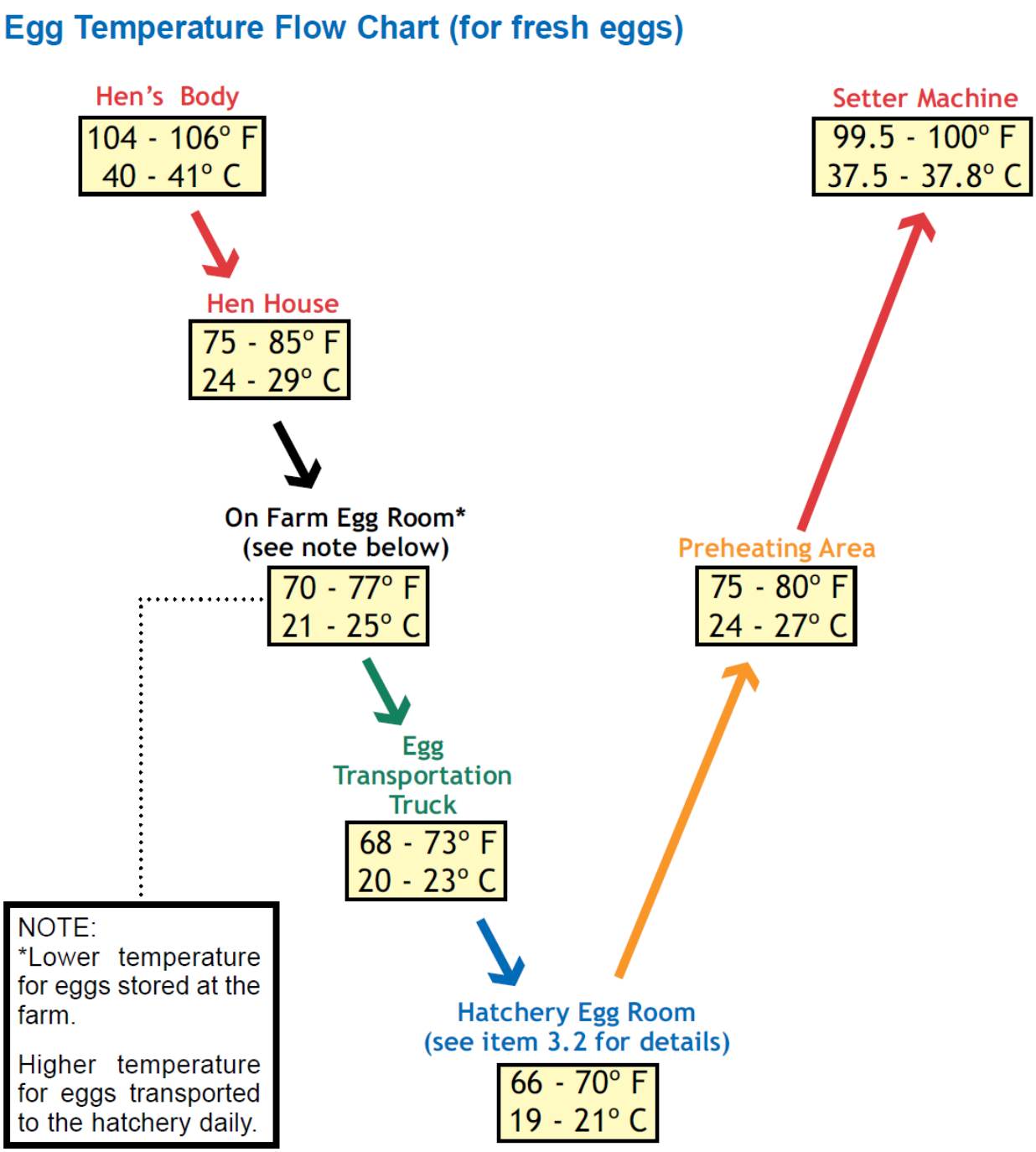
Key points on egg storage



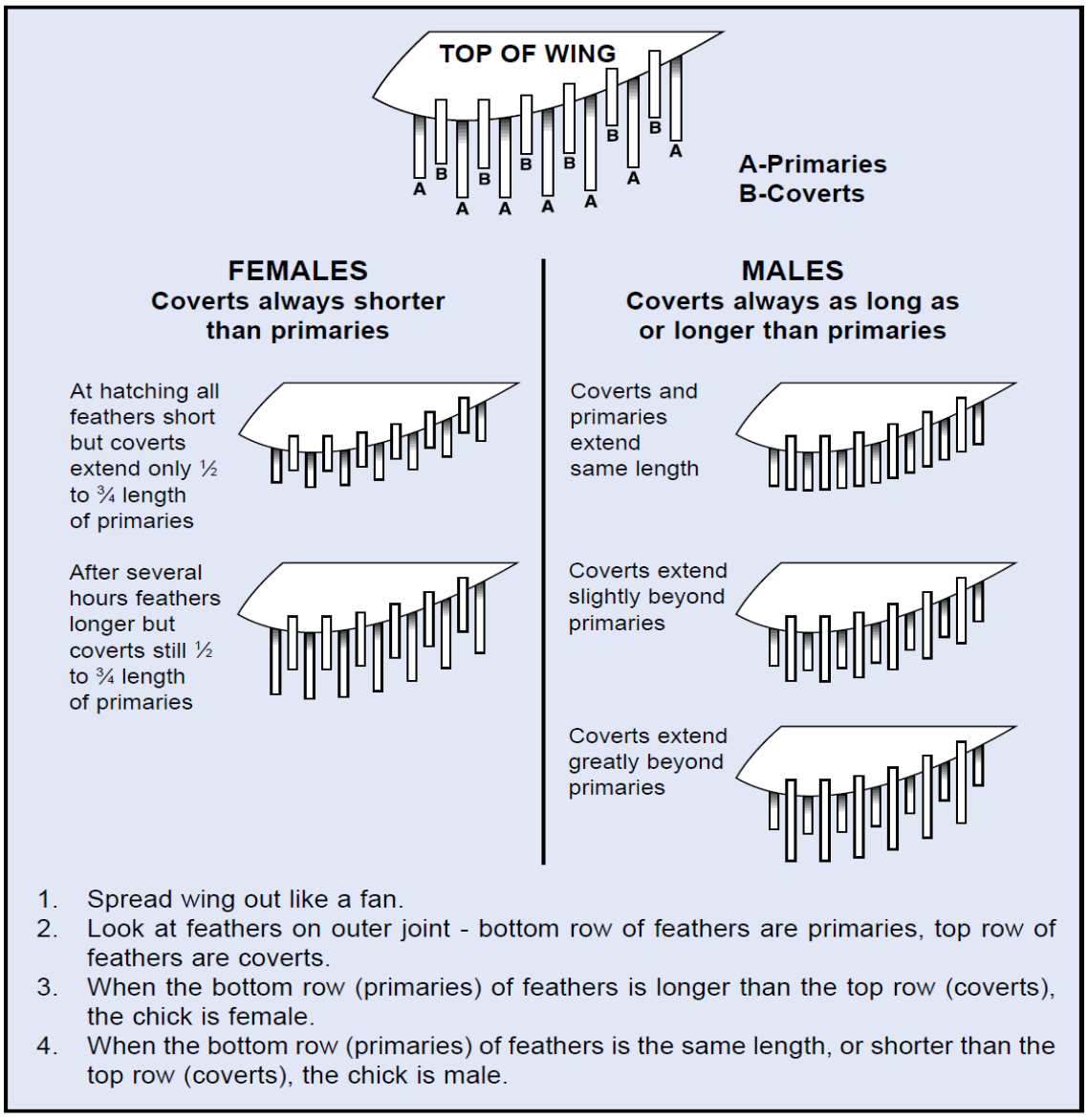
HATCHERY SERVICES:

The number of services rendered by hatcherymen varies among hatcheries, but usually include sexing, vaccination and debeaking.

Sexing

In egg production, chicks are usually separated into cockerels (male) and pullet (female) at hatching time. Raising pullets without cockerels allow the pullets to develop more uniformly. Chicks can be sexed by three ways. They may be sexed on the basis of down colour (colour sexing), in certain crosses by the relative length of the primary wing feathers (feather sexing) and by the examination of the rudimentary copulatory organs (vent sexing or "Japanese" method). By making some specific mating, breeders have been

Feather sexing:



1. Spread wing out like a fan.
2. Look at feathers on outer joint - bottom row of feathers are primaries, top row of feathers are coverts.
3. When the bottom row (primaries) of feathers is longer than the top row (coverts), the chick is female.
4. When the bottom row (primaries) of feathers is the same length, or shorter than the top row (coverts), the chick is male.

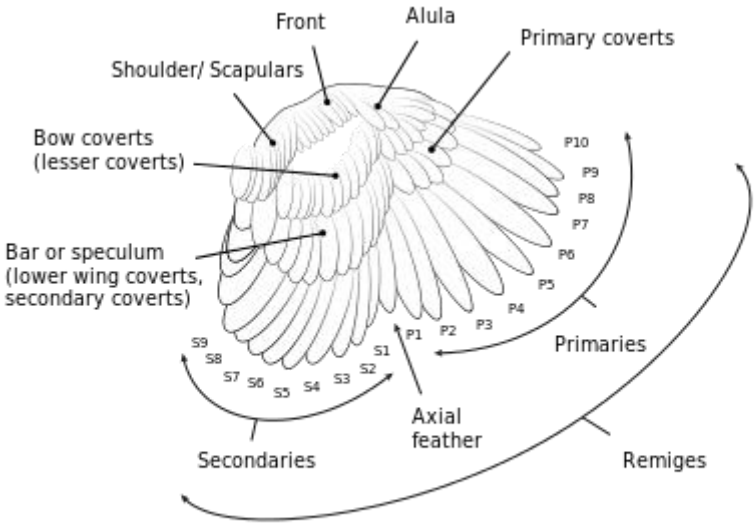


Fig.: Feather of a chicken

Vaccination:

Most of the vaccinations are done outside the hatchery. However, many hatcheries vaccinate against Marek's disease at day-old. This disease usually affects young growing birds and is presently becoming a serious problem in Nigeria. Some hatcheries also vaccinate against Newcastle disease (NCDV) at day-old, the very mild form of the vaccine is usually used. Many of our hatcheries vaccinate against only one disease, the rest are done at customers' request and at maximum charge. It is important to know the type of vaccination given before collecting your chicks from the hatchery.

Debeaking:

Chicks may be debeaked (fig. 8) at day-old, especially if such chicks are meant for broiler production, there is the need to debeak them. For egg-type chicks, debeaking at this age will require a second debeaking later in life, before they start laying. Day-old debeaking can be done in two ways, by cold debeaking using a cold knife or scissors and by hot debeaking with the aid of a debeaking machine with a hot cauterizing blade. Electric debeaking machines are locally available.

Recommendations for baby chick delivery

Regardless of the method of transportation, the chicks must be moved

a. Quickly

b. Comfortably

c. Under optimum sanitary conditions

Especially for summer delivery, speedy shipment and chick comfort are vital.

a. Speedy Delivery

1. Where chicks arrive by plane, allow the chick transport van to be at the airport one (1) hour prior to the scheduled time of arrival of the aircraft. Make sure to maintain sufficient clear space between the chick boxes. Also there should be sufficient air circulation and ventilation.

2. Make sure the van is in good repair, and that its tank capacity is filled before each delivery.

3. Once loaded, the chicks should be moved to their destination without delay so far as practicable.

4. Avoid the rush of traffic and diversions.

5. The driver should drive directly to the place of destination, leaving coffee breaks and lunch interval until off duty.

6. Loading and unloading should be done quickly

b. Chick comfort

1. Use a van specially designed for baby chick transportation. It should be equipped with (a) racks, (b) heating and ventilation facilities.

Temperature in the van body should be at the correct level. In summer, during waiting periods, park the van at a place not in the sun.

2. During the process of loading and unloading never keep chick boxes crooked and do not handle them roughly (don't throw the boxed chicks).

3. Boxes of baby chicks should be stocked in cars and rooms in such a way that sufficient clear space is available between the boxes and sides of the car or walls of the room and between each stock of boxes. Placing boxes of baby chicks too near the sides of the car or walls of the room should be avoided at all times.

4. Prevent the boxes from sliding. Driving over rough roads, too fast driving in sharp turnings and jamming are the chief causes.

6. Protect boxed chicks from direct sunshine.

7. Don't expose filled boxes to draughts.

8. In hot climates, it may be more desirable to deliver as early in the day as possible or at night.

9. Chick boxes should be strongly made. The punched holes should be open to allow free movement of air through the boxes. The inner surface of the bottom should be rough enough to prevent the baby chicks from slipping.

c. Sanitation

1. For disease prevention, the boxes and the filling material in them should be dry and free from disease germs.

2. Persons who load and unload filled chick boxes should use clean outer clothes and footwear. They should make a practice of washing and disinfecting their hands thoroughly before starting the job.

3. Have the van disinfected before each chick transport.

4. Don't allow the driver through areas where epizootic poultry diseases exist

Chicks Transportation

Chicks ready for delivery should be transferred into the chick holding room. Before chicks leave the hatchery be sure that records of breed, fertility, hatchability, per cent hatch, number of saleable chicks and culls have been properly documented. It is customary to give 2-4 extra chicks per box to cover any mortality that may be encountered during transportation. The safe delivery of chicks is the last important step in hatchery management.

Whether the customer comes to collect the chicks or the chicks are to be delivered by the hatchery, it is necessary to ensure that the mode of transportation is appropriate for day-old chicks. Chicks closely packed together generate a lot of heat and so there must be adequate ventilation to remove excess heat. The car boot for example can only be used for short distances. Over long distances, the chicks will get suffocated before reaching their destination especially if this is done during the hot season. Regardless of the mode of transportation, adequate ventilation, protection from rain and cold are critical for chick survival during transportation. Customers must be given adequate information about the breed, anticipated performances and vaccination records of the chicks they purchase. A short guide containing such information should accompany all chicks delivered

SANITATION AND DISEASE CONTROL IN HATCHERY MANAGEMENT

The need for proper sanitation and disease control in hatchery operations cannot be over-emphasized. The proper design and construction of hatchery buildings and its importance in disease control

have already been discussed. Following is a summary of other hatchery sanitary procedures:-

1. Fumigate all eggs soon after collection.
2. Sort out dirty eggs and cracks as soon as possible and dispose them immediately.
3 If hatching eggs are to be purchased elsewhere, ensure that they are from a disease- free flock and of good quality.
4 Fumigate soon after arrival.
5. Setting and hatching trays should be thoroughly washed and disinfected after every hatch. Use pressure washers.

6. Similarly, the incubator and hatcher rooms should be thoroughly washed and disinfected after every hatch. All rooms in the hatchery must be washed regularly and kept spotlessly clean. Table 5 gives a list of common poultry disinfectants and their uses.
7. Dispose hatchery debris properly.
8. Personnel and visitors must always be regarded as possible agents of disease and must therefore be cautiously guarded, regardless of their status.
9. Fumigation of incubator, hatcher and chick rooms between hatches is strongly recommended.
10. Fumigation of chicks is generally not recommended, but if there is an outbreak of omphalitis or pullorum, it becomes necessary to fumigate.

SUMMARY OF HATCHERY MANAGEMENT PRACTICES

For successful hatchery operations ensure:

- Proper hatchery design with rooms for receiving eggs, Traying, Fumigation, Incubators, Hatchers, Sexing, Packing and Dispatch .
- Maintain thorough disinfection, cleanliness and prevent any unnecessary traffic in the incubator room.
- Proper turning of eggs during incubation must be observed.
- The temperature and humidity readings should be checked three times daily, morning, afternoon and evening.
- Provide adequate ventilation to facilitate inlet of oxygen and outflow of carbon dioxide.
- Strictly follow the manufacturer's instructions on the running of incubator.
- When packing, dispatching and transporting the chicks, care must be taken to prevent them being chilled or suffocated in transit.
- Good hatchery records should be kept for performance evaluation.