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Traceability in poultry production

Traceability in poultry production

➤ Poultry presented for slaughter for human food purposes

➤ and poultry products

    shall be identified in a manner that enables the tracing of

        (A) each animal to any premises or other location where the animal was held at any time before slaughter; and

        (B) each poultry product from slaughter through processing and distribution to the ultimate consumer.
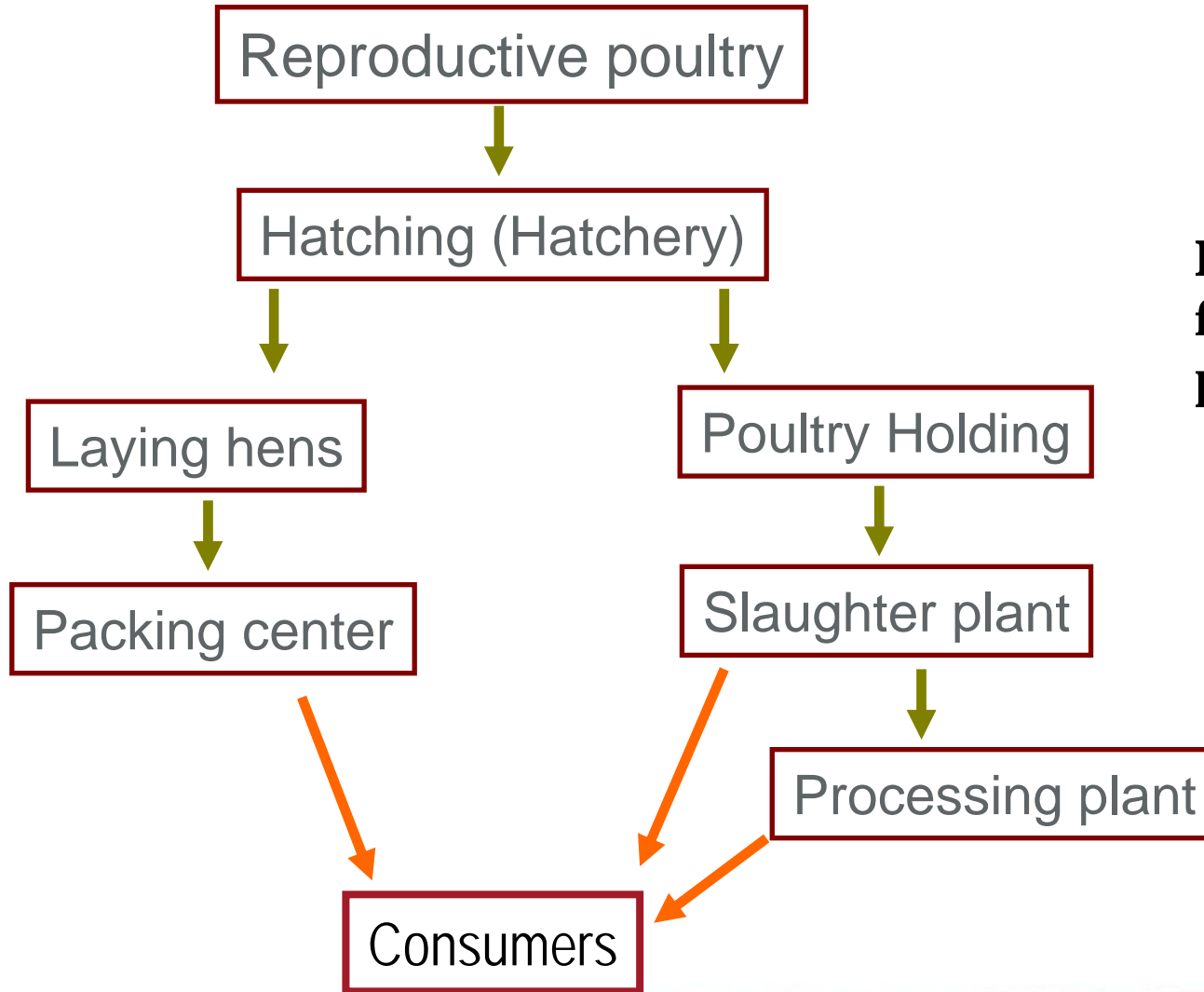
Traceability in poultry production

➢ It is not an identification of each poultry or egg with an individual number

but a batch number (premises : building or the entire holding)

➢ Depending on the production system and organisation of the various activities,

each bird or egg may be identified individually or not.

Traceability in poultry production

Laying hens

Poultry for meat production

Reproductive poultry

→

Hatching (Hatchery)

Laying hens

Poultry Holding

Packing center

Slaughter plant

Processing plant

Consumers

Different patterns:
- Traditional
- Industrial
- Specialised

Traceability in poultry production

Reproductive poultry

- 1 male for 100 females

- Identification of reproductive poultry with a ring or wing tag

- Register entry and exit

- Production of fertilised eggs on lines

- Fertilised eggs sent to the hatchery

- Trolley identified by a label

    Name of breeder
    Identification number of the farm
    Date of laying
    Batch number
    Line
    Trolley number

Traceability in poultry production

Reproductive poultry

> ## Identification of reproductive poultry using a ring

The ring used for the identification of poultry is a numbered closed ring, made of plastic. On the ring the country (e.g. F for France), the diameter in mm, and an identification number is marked. The color is different for each year (blank in 2009; black in 2010). The ring is put on before the bird is 2 months old.

Different diameter of ring according to the breeds: between 16 mm and 24 mm with a maximum of 27 mm

How to put the ring in place =>

Traceability in poultry production

Reproductive poultry

> Identification of the reproductive poultry with a wing tag

The wing tag used for the identification of poultry can be a plastic or metallic tag.

The wing tag is put after the birth of the animal
Printing in INK JET for permanency and contrast to improve readability.
All tags are boiled in clean water before dispatch

Traceability in poultry production

Reproductive poultry

For economy and accuracy of data retrieval in primary poultry breeding establishments.
The pouch is securely fixed but can be re-opened to recover the eD glass transponder.
Readable numbers can be printed on the other side of the wing tag.
Pins are moulded from hard and sharp materials to minimise their diameter.
The target zone on day old chicks is tiny !
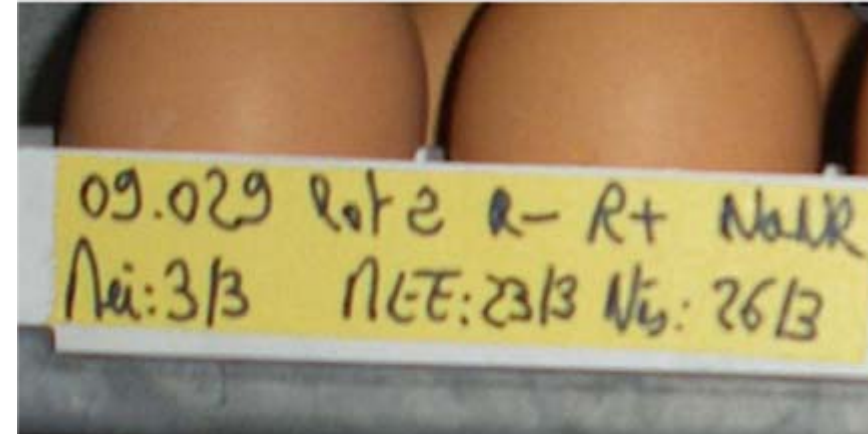Various pin sizes (lengths and diameters) are available for different species

Traceability in poultry production

Hatching

➢ Incubation period - hatching - delivery

➢ Label by tray or trolley in the incubator

Paper data on each incubator

Incubation start date and time
Date moved to hatchery
Date of hatching

Traceability in poultry production

Hatching

➢ Paper data by hatch

 Hatching date
 Number of eggs
 Number of non-hatched eggs
 Number of dead chicks
 Number of live chicks

➢ Delivery: label on trolley and delivery note

 Hatchery name
 Batch number
 Line
 Delivery date
 Number of chicks

➢ Destination of the chicks: laying hens or poultry for meat production
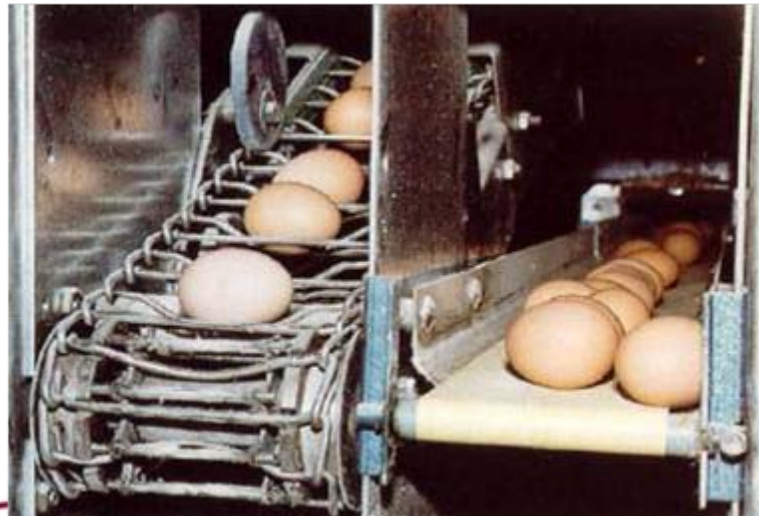
➢ Register with entrance and exit

Traceability in poultry production

Laying hens

➢ One building = one batch

➢ Different systems: aviary, cage, alternatives

➢ Register with entrance and exit, and broken eggs and incorrect size

➢ Each egg is collected and can be marked at the farm level with food ink

➢ Label on trolley

     Name of breeder
     Identification number
     Laying date
     Batch number
     Number of eggs

Traceability in poultry production

Packing center

➤ Register entrance and exit

➤ Selection of eggs that are suitable for consumers

➤ Identification on the shell of the egg with food ink:
> breeder identification number
> and rearing system number
> + possible date of laying

| 0 | FR | AAA | 01 |

Country code   Farm code   Building code

1 code for the rearing system:
0 for biological production,
1 for out door access, 2 for aviary, 3 for cage
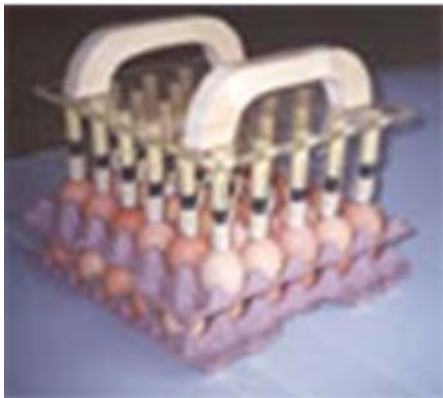

➤ Packaging label with bar code

Traceability in poultry production

Identification of the egg: tools

Number of the producer
+ date of the day
with food ink

Egg marker with engraved print
engraved print fixed on a dense foam cylinder

Egg markers with bellows (1 or 6 eggs together)
the system of bellows adapts to the shape of egg

Egg marker with plugs
they should be pressed on an inking plate before pressing them on eggs

Egg marker with jet of ink Speed-I-jet 798
It makes it possible to mark eggs WITHOUT CONTACT and very quickly

Traceability in poultry production

Poultry for meat production

➢ After hatching

=> selection for the destination
(laying hens or poultry for meat production)

➢ For specialised production
   identification by a tag at 1 day old

➢ Packaging label with bar code

Traceability in poultry production

Poultry for meat production

➤ On farm: register entrance and exit
(link with the document of arrival of a new band)

➤ Minimum: identification of the buildings/area
of the farm in addition to the identification of the
holding

➤ Possible identification with a wing tag
(for labeled chickens before 6 weeks age)

➤ Transport to the slaughterhouse
in baskets identified with labels (and possible
bar code)

Traceability in poultry production

Poultry for meat production

For specialized production of poultry (organic field, labeled poultry)
=> Identification with a ring

Various types of identification of chicken is variable:

An example: name of the producer

Another example: inscription Bio 01 9362
        Bio for Organic farming
        01 for certification by ECOCERT (they control the products for certification)
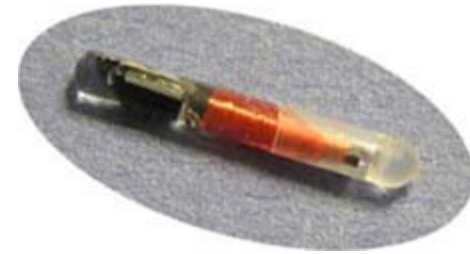   9362 is the identifier at ECOCERT

Traceability in poultry production

Special techniques

Biothermal FID chip (Digital Angel - 2005)

Can be used to support early warning, eg for avian influenza.
Biothermal chips are approximately 10 mm long and are
inserted in the bird's breast with a single inoculation

RFID bird tags

RFID can be used for the management of poultry and birds
of all types for tracking and scientific testing applications

IBM, working with Matiq, has developed radio frequency identification (RFID)
tracking technology to track and trace chickens from the farm to the supermarket
shelf

Traceability in poultry production
Special cases

Rose Poultry A/S uses RFID readable by mobile phone technology

(Denmark's largest manufacturer of chicken products for Danish and overseas customers – 290,000 chickens a day)

Rose Poultry engaged in a partnership with an aim to use novel technology to map consumer behaviour and consumer relationships by connecting the Nokia Mobil telephone technology and poultry products using RFID technology.

=> Survey in supermarkets in Denmark in April 2008

75% of respondents think that RFID labeling is a very good idea for traceability.
Respondents were interested in several aspects, such as the chicken's feed, information on testing for salmonella and other bacteria, and whether or not the production is organic

65% would choose a product with RFID labeling over a product without

85% are willing to pay about DKK 2 extra for a product with RFID labeling.

World organisation for animal health

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