Identification Tools and Technologies for Pigs
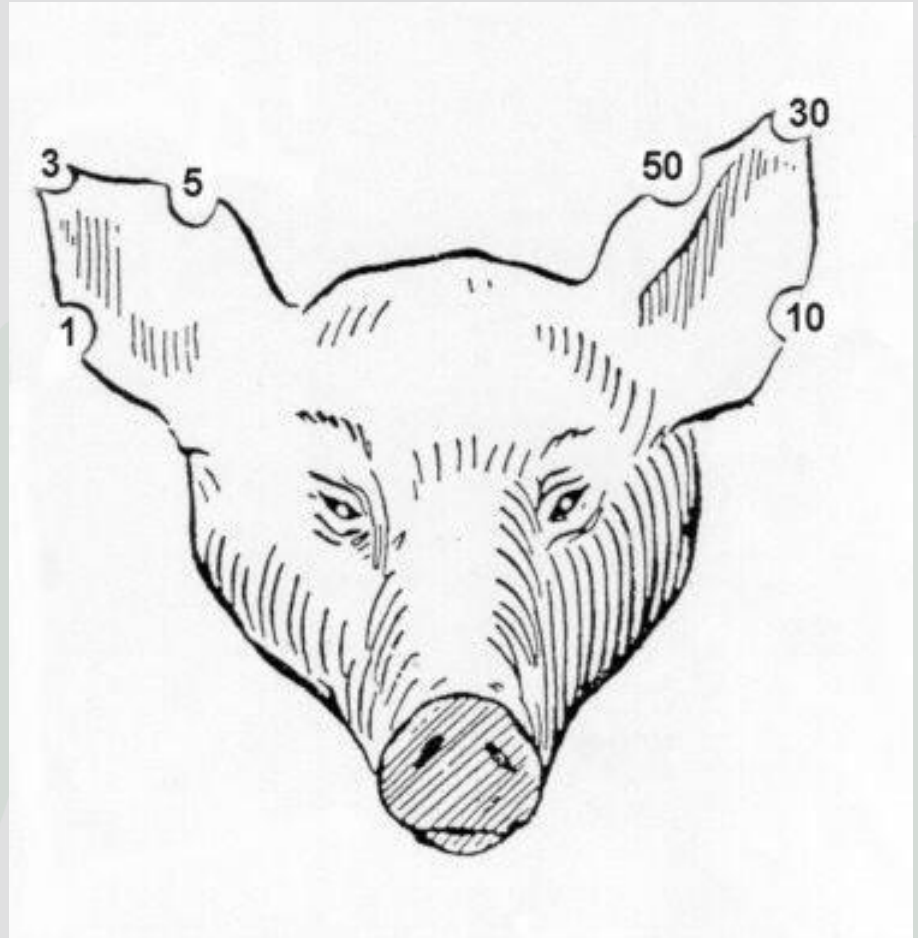
OIE Traceability Conference
Buenos Aires, March 2009

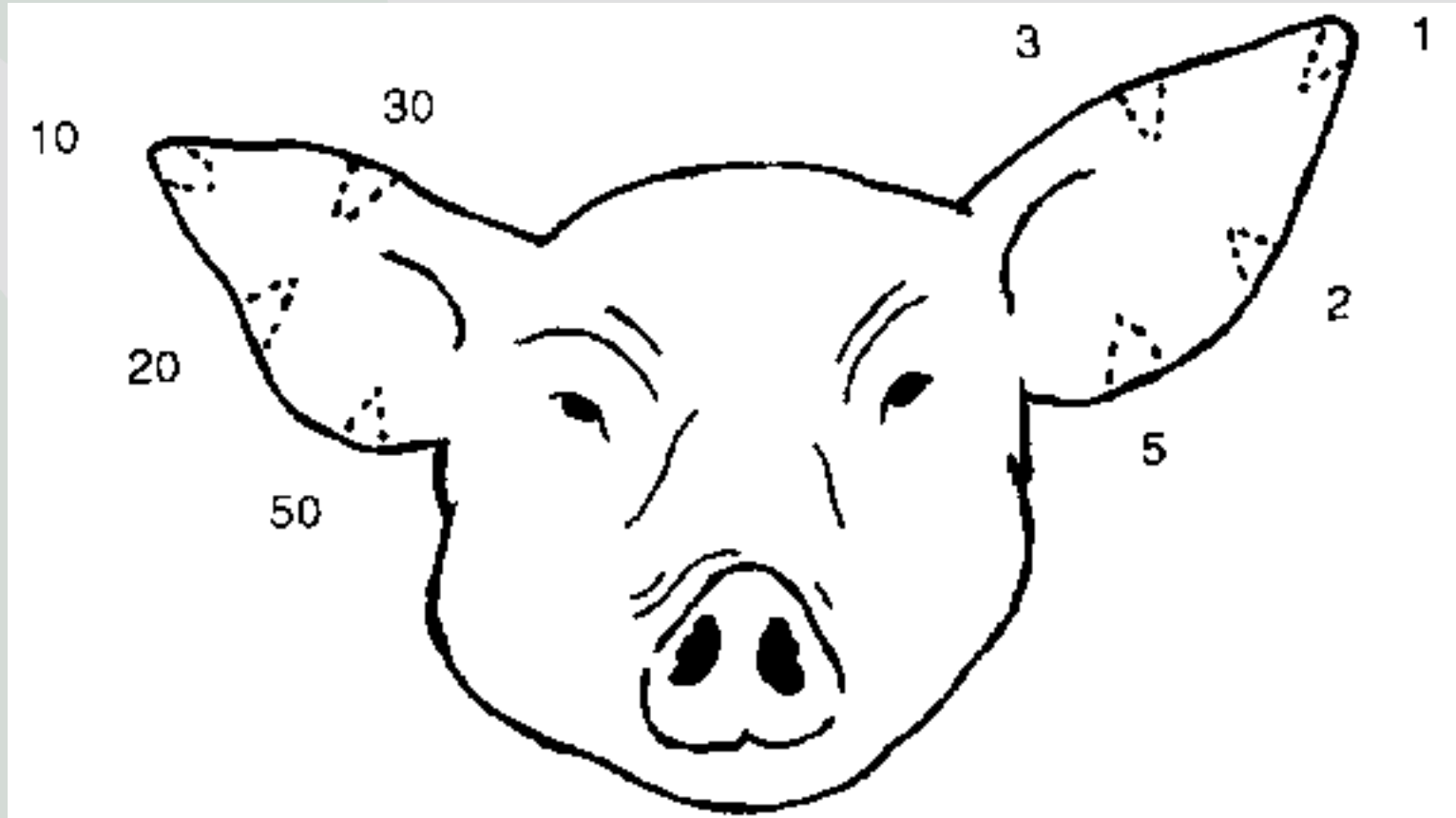## Ole Klejs Hansen

Senior Adviser, Danish Agricultural Advisory Service

Chairman, ICAR Subcommittee for Animal Identification
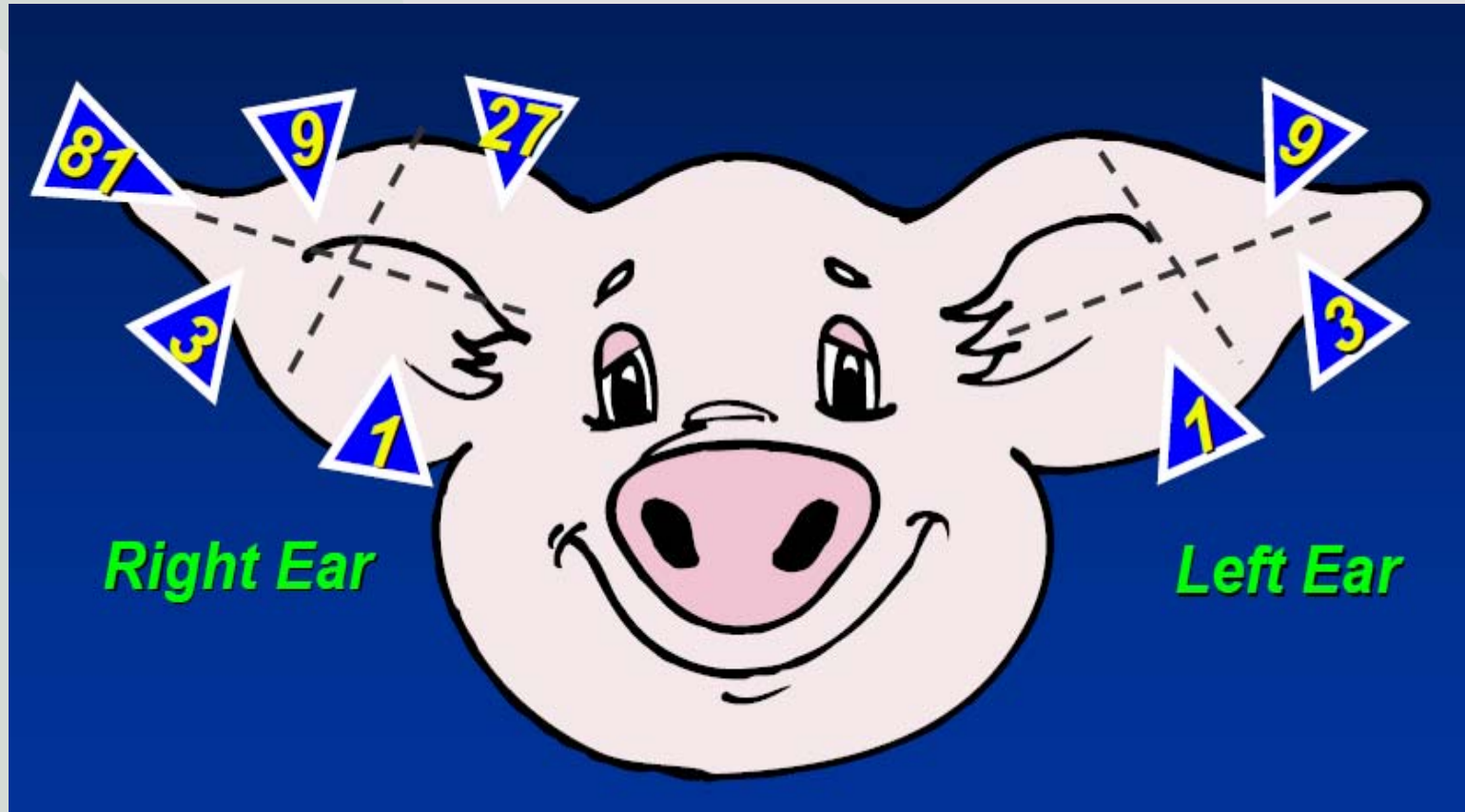
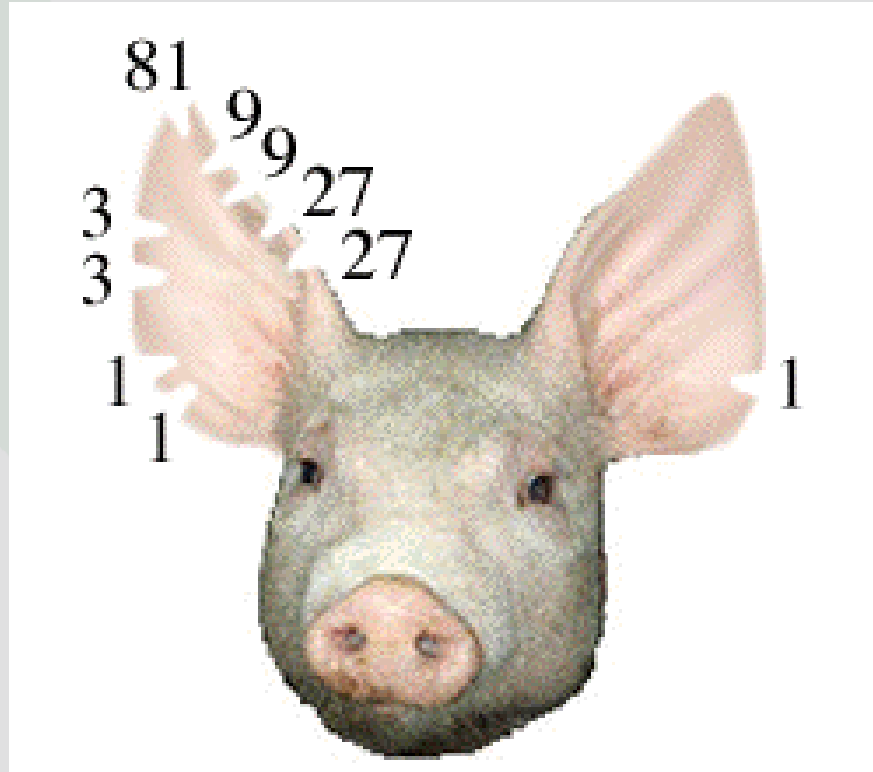**Danish Agricultural Advisory Service**
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Ear Notch Systems

Different System,
Easily confused with previuos system

North American Ear Notch System

Range of numbers restricted anyway

My name is 161-1

Conclusion, Ear Notch Systems

- Ear notch systems are easy applicable

- Ear notch systems are relatively safe

- Capacity of ear notch systems alone is too small for traceability systems

- Combination with premises identification and movement records will provide traceability

Tattooing of pigs

Ear Tattoo plier

Ear Tattoo Procedure

- Clean the inside of the ear first

- Drive the tattoo needles deep into the ear

- Avoid where possible, dark skin, hair, cords or ribs in the ear

- Wipe off any blood

- Apply immediately plenty of ink on the ear surface

- Rub it in well with an old toothbrush.

- Get ink well into holes, so after healing the ink stain is visible.

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Ear Tattoo in theory
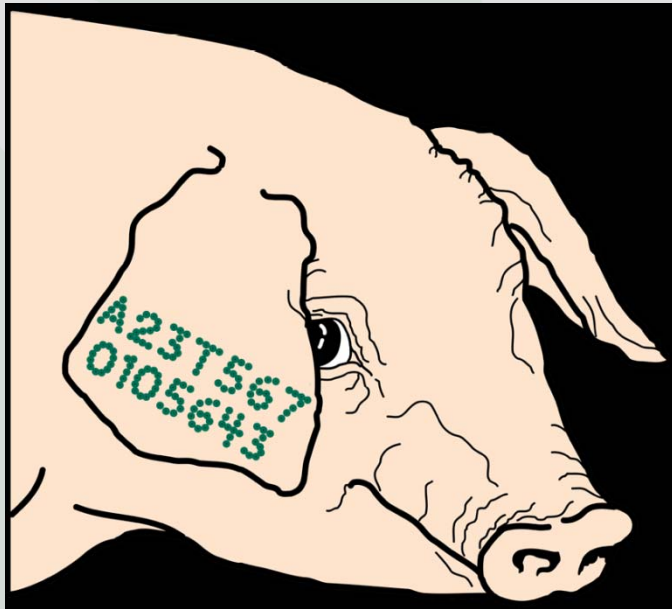
- Age at application
- Proportional growth ??
- Skin colour
- Fur, density and colour
- Avoid veins, cords and ribs
- Fading of ink

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Conclusion, Ear Tattoo

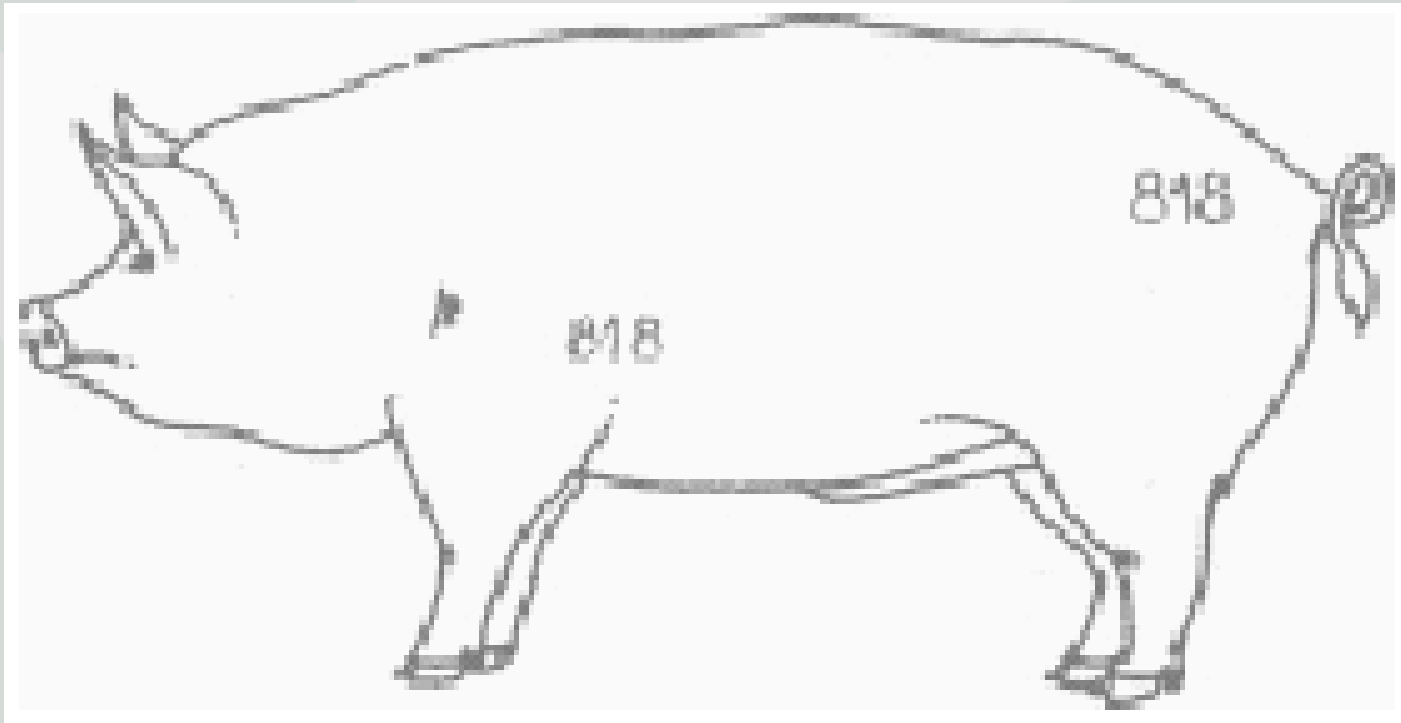- Ear tattoos with six positions (as shown) may identify individually millions of pigs

- In Australian test readability was

  - < 56 % eight weeks after application

  - < 40% at slaughter

- Readability problems may disqualify ear tattoos is identification tool

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Tattoo Slaps on Pigs Body

Tattoo Slap Marks

Tattoo Slap, Right Shoulder

Conclusion, Slap Tattoo

- Slap mark tattoos may be difficult to read

- Australian evaluation: 72 – 85 % readable

- Reading difficult

  - improper application

  - ink faded

  - dark skin

  - dark or dense fur

  - pig dirty

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Tattoo Slap Marking

- Tattoo slap marks often used to identify holding of origin

- 6 position codes provide millions of codes if some positions are alphanumeric

- Identification of farm of origin and movement records proved sufficient for controlling swine fever in EU

- Combination of tattoo slap and ear notches can provide low cost individual unique identification if tattoos are readable

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Ear Tags

- Use high quality tags for permanent identification

- Lost eartag -> lost identity

- Tamperproof

- Locking mechanism

- Print quality

- Proper size

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Conclusion, Visual Plastic Ear Tags

- Loss rate is the big issue with ear tags

- Loss rates for conventional quality ear tags recorded at 2–4 % during pigs lifetime

- Loss rate depends on housing systems

- Loss rate increases if animals are moved or regrouped

- Loss rate during slaughtering 3–4 %

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Conclusion, Visual Plastic Ear Tags

- Easy application

- Premises code - Internationally unique animal ID-code)

- Two identical ear tags or combination with other identification method

- Temporary tag or permanent tag

- High permance tags as a key factor

- Look for independent international quality tests of ear tags

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Electronic Ear Tag

Common issues, injected transponders

- No visual identification except in combination

- Visual indication of injected transponder

- Trained people to do injection

- Test before and after injection

- All transponder must be removed after slaughter

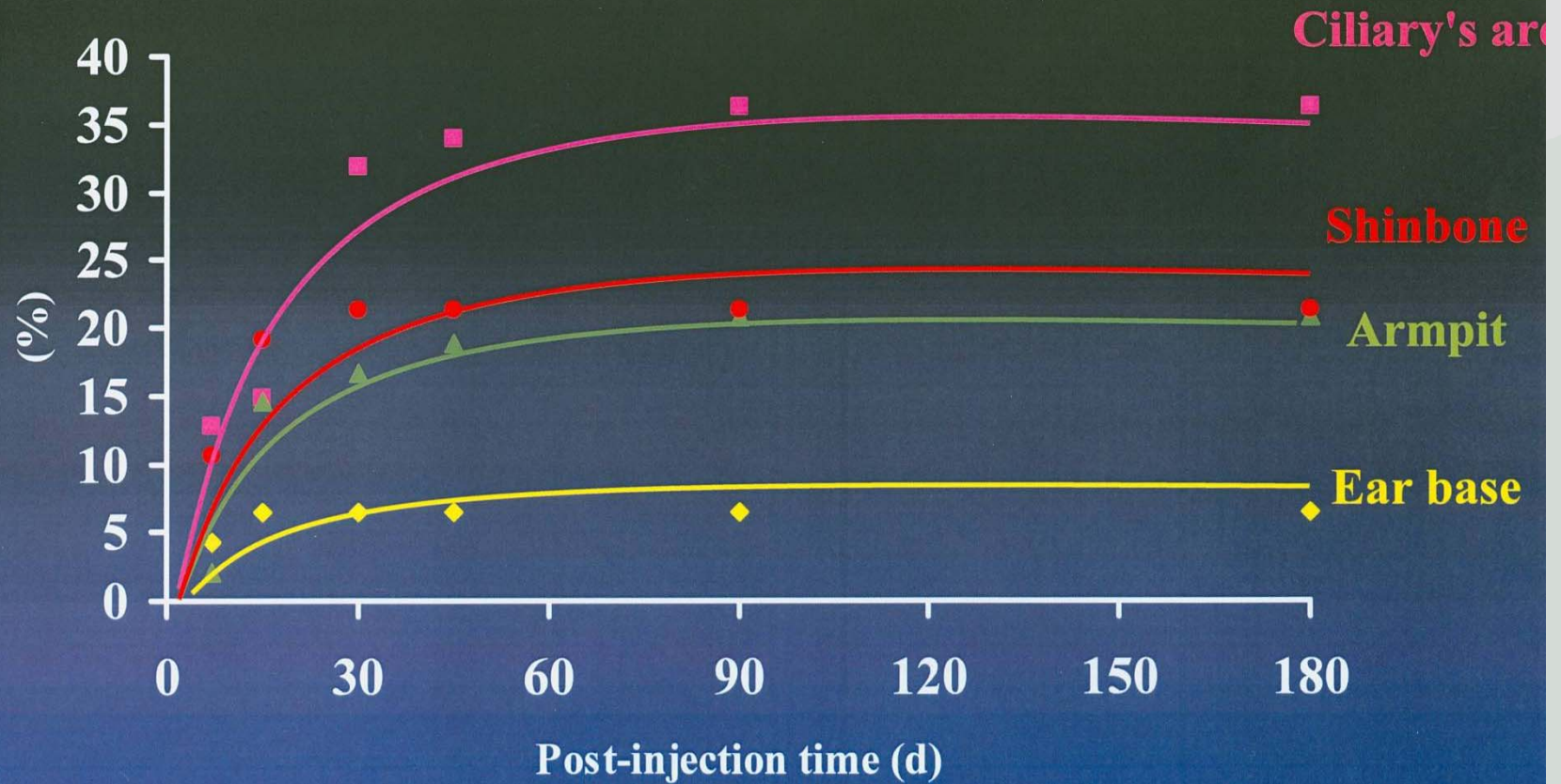- At the speed of the slaughter line

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Injection Sites on Pigs Body
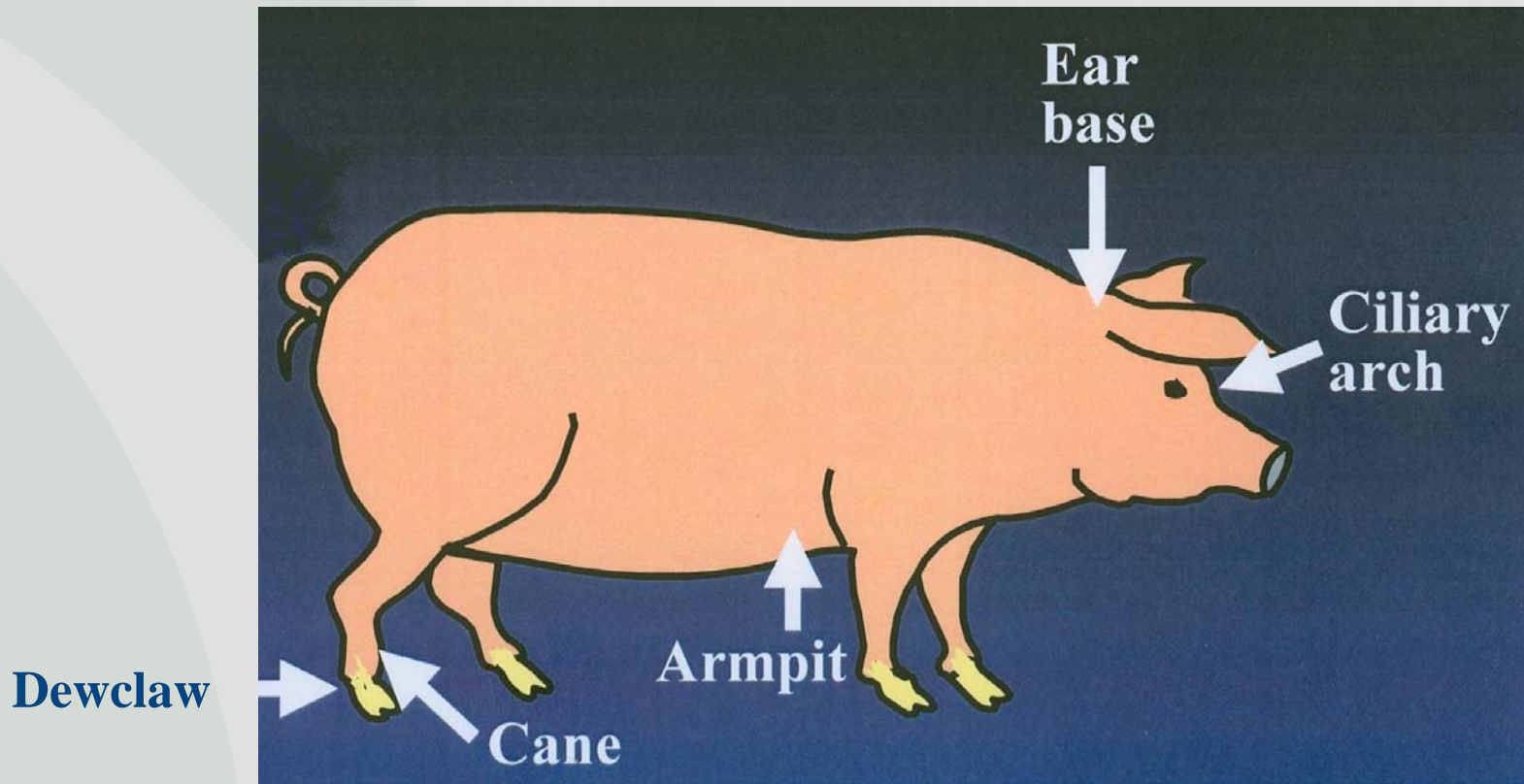
Injection of Transponder at Ear Base

Injection af transponder into abdominal captivity (Intraperitoneal Transponder)

Intraperitoneal Transponder found after Slaughter

Conclusion Transponders

- Subcutaneous injected transponders not recommended because of loss rates

- Intraperitoneally injected transponders provide very high traceability even after slaughter

- Identification quicker with electronic devices

- Less reading errors ("read" or "not read")

- EID enables automatic recording and reporting to traceability database and automated management.

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Recommendations, Transponders

- ISO 11784 and 11785 are the international standards on transponders for animal identification

- Low frequency type (134.2 Khz)

- Signals penetrates water and body tissue

- Relatively short reading distances

- Individual handling of animals

- ICAR is Registration Authority of ISO

- All approved transponders can be seen on ICAR website.

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Thank you

for your attention

Please visit the ICAR poster presentation

in the exhibition area.

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