Why a bar coding system on straws?

- To improve the traceability from the production to the insemination
- To improve the reliability of the bull identification and thus of the testing procedure
- To improve the sanitary safety of AI through the possibilty of tracing any defective ejaculate

Bar coding of semen straws

How does it work in France?

r coding system on straws?

- To improve and facilitate the recording and monitoring of breeding data
- To facilitate the calculation of Non Return Rates per bulls, per ejaculates or per batches of semen
- To test different semen processing methods on split ejaculates (batches)
- To facilitate the printing of invoices and breeding documents
- To facilitate and secure the storage of straws

echnical challenges

- barcode: 3cm/1mm
-a straw is cylindric and must also display « conventional" information
-both clear and dark zones are important and must be distinctly printed

-Reading must be: - quick
- reliable and repeatable
- must not interfere with non return rates
- Must be as universal as possible

What kind of information?

- The bull's identity: name? Number?
  - National? International?
- The ejaculate identification:date? Number?
  - Within the semen production center?
  - Universal through which data base?
- What about split ejaculates?

Solutions

- Code 128: easier,safer, universal and self controlled
- 10 digits: 12345 6789 0

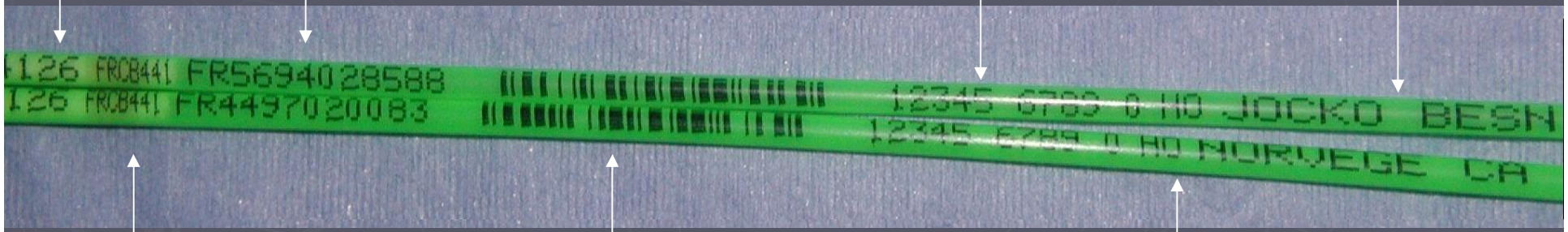
Bull number date Batch intra ejaculate

Bull number: 99999 possibilities for 1100 bulls tested every year in France

Date: number of days spent since January the 1rst 2002;
9999 days = 27,3 years
May, 18th, 2006= 1599

Batch number: 10 possibilities (from 0 to 9)

Solutions



IBR Neg: discarded because of no use

Today's French situation

- Printing:
  - two suppliers (IMV,Biovet):Lynx
  - 80% of the production labs are equipped
  - 100% by the end of year 2006
- Reading in the fields:
  - Two major AI unions :URCEO and OGER representing one million first AI
  - Two different but compatible readers

Results and potential evolution

-more than 80% of straws read prior to AI (others produced « outside »)

-more than 95% reliability and possibility to record manually

-NRR calculated on routine

-bar code allows to save time and to secure the data

-Adding two more digits is technically possible (printing and reading)and would permit to code for the country of production

Conclusions

- It took around 8 years to get an agreement of all semen production centers
- Today the system is simple, efficient and reliable
- It is transposable to other countries just by adding two more digits identifying the country of origine:(alpha numerical)
  - Ex: FR 12345 6789 0

Conclusions

- A European data base of all European bulls could be managed by Copa Cogeca
- Such a DB would
  - facilitate exchanges of semen between countries thanks to a better traceability
  - Allow the calculation of statistics and NRR according to the origine of semen
  - Permit international cooperation and experiments