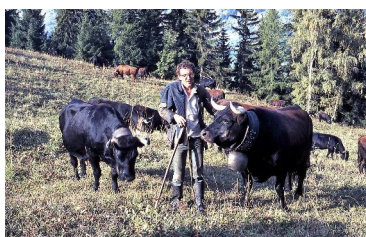




## In memoriam of Laurent Avon (1950-2022)



Coralie DANCHIN, IDELE

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### The implementation of in-situ programs in France

- During the 1960s

Effective tools are implemented to reduce the number of (cattle) breeds to increase productivity

Example: AI is *forbidden* in "unproductive" breeds

- During the 1970s

Policy is extremely efficient => massive loss of numbers in local breeds

⇒ Alarm call from the scientific community

⇒ Ministry of Agriculture is pushed to dedicate 0,5 % of its credits for Animal genetics to conservation



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## Two men, one vision

- Jean-Maurice Duplan, head of the Genetic Departement of the Cattle Livestock Institute
- Laurent Avon, just graduate with a law degree, keeps Herens cattle during summer time

Extensive knowledge of the cattle breeds based on old books, in field trips and farmers interview


=> Laurent is hired to implement cattle conservation program in 1975






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## Laurent's axiom



*Any breed with low numbers,  
as long as it still exists, is  
worth preserving*





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## The initial state of the breeds

- Almost **no** bulls left.  
No access to artificial insemination  
Breeders no longer maintained purebred bulls
- => in the Lourdaise breed, only **one** bull remained
- Many crossbred animals  
Systematic crossbreeding has sometimes taken place for more than 20 years
- On the other hand, the presence of old and unique lineage females, in remote farms






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## To characterize or not characterize ?

### No characterization or evaluation to assess if a breed is indeed original


- Urgency of the situation, **any delay is a threat**
- Rapid characterization needs to use assessment scaled on major breeds => no interest per se, these breeds are endangered because inferior for these parameters !
- Small numbers = **no statistical value**
- **Funding** necessary to characterize is important for breeds with limited economical interest
- Criteria for choosing a breed as "interesting" or not **are likely to be very subjective**



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## Time for action: in field survey and cryoconservation




"Female program":

- Annual survey of all the remaining animals with their pedigrees
- Annual report sent to all the farmers



"Male program":

- Cryoconservation of the remaining bulls
- Selective mating to create new bulls




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## A life dedicated to breed preservation




- Controversial issues when the breeds started collective actions (including valorization or the French National Cryobank)
- A tremendous success from a demographic and genetic variability point of view
  - Ferrandaise (3197 females) versus Montbéliard (> 800 k cows)
  - Effective number of ancestors: 22 versus 17
  - Effective population size: 64 versus 82
- His action also led to breed preservation in other ruminant species or local cattle breeds








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Thank you Laurent...









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