Analysis of animal food chains, a tool for engineers education : procedure, interest, conditions

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Matter

- We often refer to livestock farming systems (LFS), or to animal food chains (market chains)

- Students need tools and methods to analyse them

- **Our experience of teaching animal food chains at AgroParisTech** :

  In the last year of the « Ingenieur Agronome » cursus

  mostly in the animal production and animal science mention called SIFA (« sciences and engeneering for animal food chains »)

Performed issues

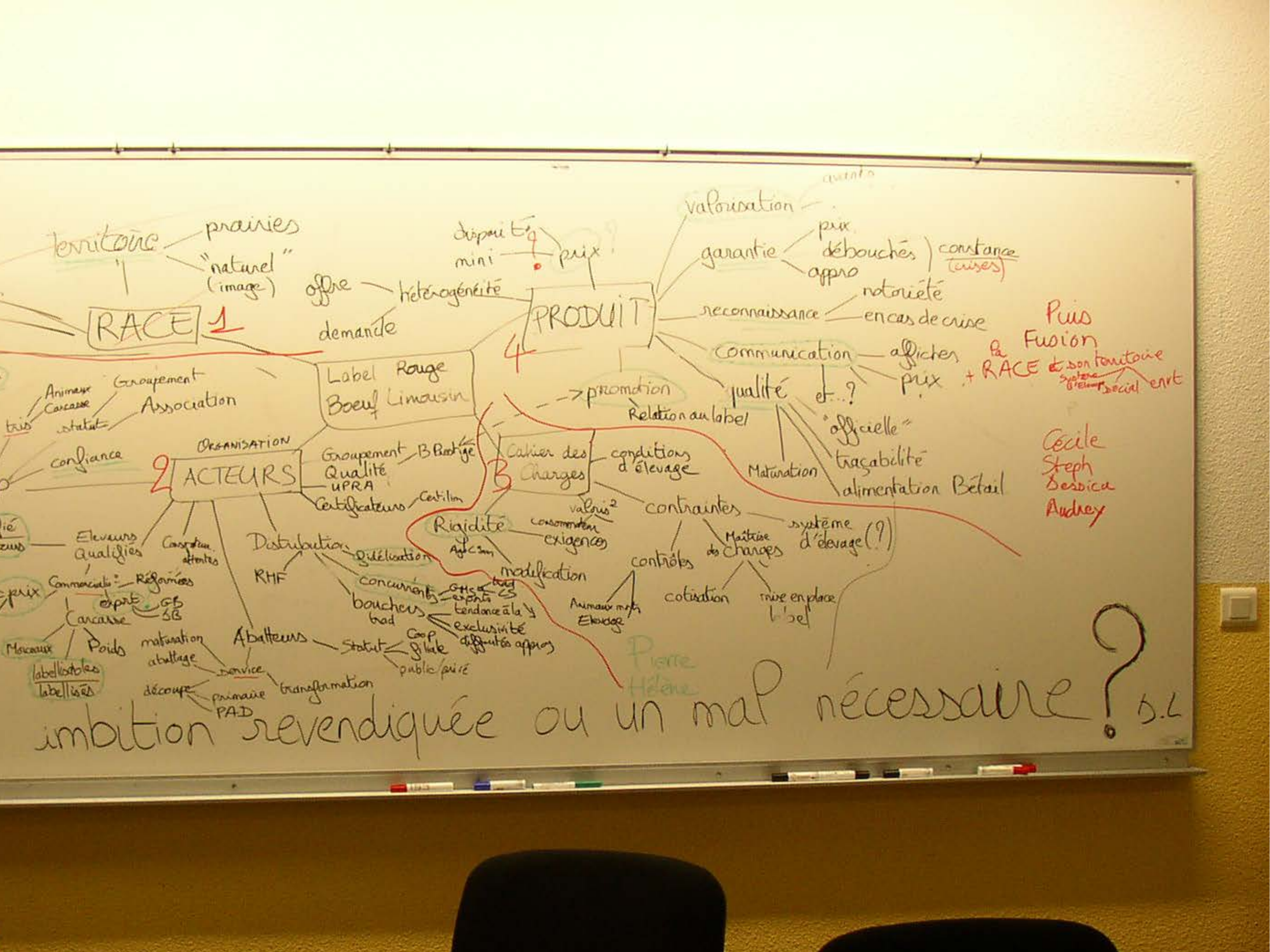
- **24 :** each year since 1990
- Between 10 to 21 students involved each year
- Applied to **broad spectrum of animal food chains** : eggs, milk, fishes (from fresh or saltwater), meats (poultry, rabbit, pork, mutton, veal, beef)
- From **very little ones** (e.g. the Basque pork chain) to **big ones** (e.g. the French pork chain)

Schedule
(1)

- **Theoretical course** on food chain analysis : 6 hours
- **Mains concepts** used (From Morvan, 1982)
  - The chain as a managed system
  - Fluxes, agents, functions, final demand
  - Articulation of technical operations
  - Strategy

Schedule (2)

- **Field case study**, from Monday to Friday (5 full days), including :
- Interviews of partners and stakeholders
- Visits of farms, industrial plants, markets by small groups…
- Daily discussion and sharing of informations within the whole group
- Brain-storming on Thursday evening and night (workshop style)
- Pre-presentations with iterative changes on Friday morning
- Presentation and debate with stakeholders and partners, on Friday afternoon


territoire
prairies
"naturel" (image)
RACE 1
offre
demande
hétérogénéité
mini
prix
PRODUIT
4
valorisation
garantie
prix
débouchés
appro
constance (crises)
reconnaissance
notoriété
en cas de crise
communication
affiches
prix
qualité
et...?
"officielle"
traçabilité
alimentation Bétail
Maturation
Puis Fusion
la RACE et son territoire
Label Rouge Boeuf Limousin
promotion
Relation au label
Groupement
Association
Animaux
Carcasse
statut
confiance
ORGANISATION
2 ACTEURS
Groupement Qualité
UPRA
Certificateurs
Certilim
Cahier des Charges
3
conditions d'élevage
contraintes
système d'élevage (?)
Rigidité
exigences
modification
contrôles
cotisation
mise en place label
Cécile
Steph
Jessica
Audrey
Eleveurs qualifiés
Distribution
fidélisation
RHF
concurrents
bouchers
trad
tendance à la
exclusivité
difficultés appros
Commerciaux
Réformes
Carcasse
Morceaux
Poids
labellisables
labellisés
maturation
abattage
service
découpe
primaire
PAD
Abatteurs
Statut
Coop
public/privé
transformation
Pierre
Hélène
ambition revendiquée ou un mal nécessaire ? S.L

Schedule
(3)

- **Deliverables :**

- Powerpoint presentation
- A short text (20 p.) including the analysis and main proposals

- **Major contents :**

- A SWOT analysis of the whole chain and of its major steps
- Proposals for actions and improvements

Merits of the procedure (1)

a. For the students

- Learning by doing: concepts related to food chains used in a professional environment
- Using various knowledges and tools, crossing disciplines and methods
- Understanding the complexity from the inner side
- Strenghtening the apprenticeship of group working within a very short periode of time
- Strong stimulation of creativeness

Merits of the procedure (2)

- Increasing self-confidence, due to the exchanges with stakeholders

b. For teachers and university

- Knowledge of chains, strong relations with professional from these areas
- Positive image of the school or university in these professional sectors

c. For professionals

- An original point of view from the ouside, often acute

Conditions of Success, Risks (1)

a. Professionals partners :

. renewed each year

. expecting results from the work

. confident of the group, and opened to discussion with the students

b.Teachers with **:**

. current practice of systemic approaches

. real knowledge of stakeholders

. experience in food chain analysis

Conditions of Success, Risks (2)

- c. **« Practical issues »**
- Depending on the number of students: group division to increase the collected information **however** to be balanced by a minimal time together (at least 2 days)…
- « Professional » behaviour of the whole group (students and teachers)
- Strong students implication leading to a good group dynamics
- Climatic conditions: difficult to manage…


Thank you
for
your attention