BEEF+ Healthy Meat through Circular Economy

Kizkitza Insausti Barrenetxea
kizkitza.insausti@unavarra.es
The meat sector has been recently affected by a considerable drop in consumption being one of the main reasons the growing concern of people on the impact of animal production in the environment and animal welfare. This was perceived locally in Spain within the Protected Geographical Indication (PGI) meat label: the PGI Ternera de Navarra.

In addition, under the current economic situation, the farmers are facing a high cost of production, being the feed the highest percentage of that cost in the animal production activity.
In order to improve the feeding options produced locally, it was proposed to include the vegetable by-products generated in the agri-food industry in the rations of fattening calves as a raw material. Besides, these are materials that are generated in large quantities, around 120,000 - 150,000 tons/year, by the Ebro Valley agri-food industry, meaning a real management problem due to the volume it represents and the few recovery options available.
BEEF+ Project

AGRI-FOOD INDUSTRY

VEGETABLE BY-PRODUCTS
Characterization of \textit{in vitro} ruminal fermentation and digestibility.

CANNED AND FROZEN VEGETABLE PRODUCTS

SUSTAINABILITY

FEED RATION DESIGN FOR FATTENING CATTLE
Nutritional and economic optimisation.

PRODUCTION TRIAL ON COMMERCIAL FARM

MEAT QUALITY
Nutritional characterization. Sensory analysis.

CONSUMER

\textbf{BEEF+ Healthy Meat through Circular Economy}
BEEF+ Project

WP1: Raw material Valorization

WP2: Circular Economy and Sustainability

WP3: Carcass and meat quality evaluation

WP4: Environmental Impact

Inoculation for *in vitro* ruminal fermentation kinetics trial

Gas production monitoring and study of kinetics

BEEF+ Healthy Meat through Circular Economy
BEEF+ Project

WP1: Raw material Valorization

WP2: Circular Economy and Sustainability

WP3: Carcass and meat quality evaluation

WP4: Environmental Impact

BEEF+ Healthy Meat through Circular Economy
BEEF+ Project

WP1: Raw material Valorization

WP2: Circular Economy and Sustainability

WP3: Carcass and meat quality evaluation

WP4: Environmental Impact

BEEF+ Healthy Meat through Circular Economy
**BEEF+ Project**

**WP1:** Raw material Valorization

**WP2:** Circular Economy and Sustainability

**WP3:** Carcass and meat quality evaluation

**WP4:** Environmental Impact

---

**BEEF+ Healthy Meat through Circular Economy**
BEEF+ Project

The project foresees different benefits, “from feed to food”:

**FEEDING**
- Use of local by-products
- Source of antioxidants of natural origin
- Characterization of fermentation, digestibility and nutritional value of the raw materials
- Formulation and validation of a complete ration

**ANIMAL**
- Lower health issues, such as digestive disorders
- Less stress

**FARMER**
- Higher productivity
- Economically viable

**QUALITY**
- Better image of the production system
- Consumers demands on local products
- Circular economy
- High quality beef

Company: [https://trasa.es/](https://trasa.es/)

[https://www.youtube.com/watch?v=J0qQ4tqzPKI](https://www.youtube.com/watch?v=J0qQ4tqzPKI)
BEEF+ Project

THANK YOU FOR YOUR ATTENTION

BEEF+ Healthy Meat through Circular Economy