Farmer’s Network Fodder Trees and Multifunctional Land Use

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Who we are?

- Cooperation
  - Louis Bok Institute: Research Institute on sustainable farming issues national and international
  - Platform “Duinboeren”: farmer’s group

- Project located in south of The Netherlands
Our goal

Promote and integrate the multifunctional use of trees and shrubs in modern farming systems

Trough

Knowledge development and knowledge sharing
Objectives

• Multifunctional use of trees
• Positive balance due to multifunctionality
  • Energy
  • Fodder and stable litter
  • Landscape and environment (closing nutriënt cycles)
  • Biodiversity
    – 1+1+1+1=4!
• Trees, third crop next to grass and maize
Our approach

• Bottom-up
• Participation of dairy cow and goat farmers
  – Design of planting schemes
  – Meetings
  – Excursion
  – Field trials
Results

• Started April 2011
• 3 Planting schemes
• (2 dairy goat farm, 1 dairy cow farm)
1st in April 2011: planting of 4 willow clones (Sven, Klara, Gudrun and Tora)
Selection based on production, disease resistance and palatability for animals
Results total yield

Dry matter yield willow clones

- **Sven**
- **Klara**
- **Gudrun**
- **Tora**

- after 1 summer (harvest Sept 2011)
- after 1 year (harvest Sept 2011 and Sept 2012)
- after 2 years (harvest Sept 2012)

kg/ha
Results leaves

Leaf/wood ratio

- after 1 summer (harvest Sept 2011)
- after 1 year (harvest Sept 2011 and Sept 2012)
- after 2 years (harvest Sept 2012)
Results harvesting
Separating leaves from wood
Results harvesting
Silage making

- This machine is chosen as it is mounted on a relatively light tractor and the machine leaves the shoots undamaged.

- The goal of this treatment is to maintain the sides as a hedgerow that is cut once or twice a year.

- The cuttings are collected and bundled with a small hay baler and wrapped in plastic foil.

Results feeding value leaves
Crude protein (g/kg DM)
Results feeding value leaves

In-Vitro Digestibility (%)
Results feeding value leaves
Minerals (mg/kg DM)

- Willow
- Alder
- Black locust
- Hazel

sand
clay
Results feeding value

- Crude protein in general good, black locust high
- In-vitro digestibility in general low, clay higher
- Effect of tannins? In vivo?
- Specific minerals of willow high
Feed experiment

**Before**

Whole branches

**After**

Shredded

All leaves are eaten
“Aanbiedingsvorm”

Attention for “aanbiedingsvorm”

- Shreddered branches and leaves
- Branches and leaves seperated
- Whole branches
First results

For more information see www.voederbomen.nl
Thank you for your attention

Questions??