Efficient Forest Fuel Supply Systems

- Research, development and dissemination of knowledge in Sweden

Mia Iwarsson Wide
Biofuel in Sweden

Total use 371 TWh

- Bioenergy 130 TWh (35%)
- Primary biofuel - 18 TWh (4.8 %)
Increased utilization of primary forest fuel

- Utilize a larger proportion of the forest fuel potential
- More efficient and reliable procurement systems
- Cost reductions
- Increased value of the fuel

Create the necessary technical and financial conditions to meet the increasing demand for forest-based fuel
Efficient Forest Fuel Supply Systems

The ESS program

2007-2015

Budget 13,5 M €
Funded by Skogforsk & Industries (60 %)
support from the Energy Agency (40%)

Administered by Skogforsk
ESS – organization & control

Program Board (funders)
- Strategic management
- Activity decisions (projects)
- Follow up, control

Program Manager

The ESS team
7 staff
Basal activities, R&D projects

Skogforsk programs
R&D projects

Forest Fuel Technology Co-Op Group
- Drafting proposals
- Advice
- Support

Project
Support, control

- Strongly application- and problem-oriented
- Clearly defined projects, studies and activities
- Calls for applications for funding
The ESS team

Mia Iwarsson Wide
Program Manager

Lars Eliasson
Residue harvesting
Comminution

Johanna Enström
Transports & logistics

Lars Fridh
Measurement & assortment

Henrik von Hofsten
Stump harvesting

Örjan Grönlund
Small tree harvesting

Tomas Johannesson
Training & Extension
Program funders

Individual companies, organisations or groups of companies

• Annually contributions with a minimum amount of 20 000 Euro.

• Each funding body receives ONE seat in the programme board.

• Contributions in kind are accepted.
Focus areas ESS.2

Logging residues
Small trees
Stumps
Transports
Measurements
Chipping

Quality aspects

Procurement chain
Communication plan and dissemination of results

- Primary target group; administrative and line staff working in forestry, fuel production and bioenergy use
- Results were presented to easy access them in order to implement them to provide practical benefit and added value.
- Results were presented through courses and conferences, films, online, and via less formal meetings
- Two summarizing syntheses, showing what was achieved in the R&D work.
A composite report is available for free download at www.skogforsk.se
Skörd av stubbar – nuläge och utvecklingsbehov

Liknande artiklar
- Kvarlämnade stubbar efter stubbskörd
- Kalibrering av skördarens...

Skogforsk rekommenderar
- Högstubbar viktiga för solälskande...
Stubbval - nytt beslutsstöd för stubbskörd

Stubbval är ett nytt beslutsstöd för stubbskörd. Programmet är en prototyp som nu...

2016-09-08

Prestation och förbrukning för stora trumhuggar

Flishuggar med öppen trumma har sämre bränsleekonomi än slutna. Det är en av...

2016-09-07

Utformning av kontroll vid chaufförsmätning

För att följa rådande lagkrav och uppnå kostnadsffektivitet bör utformningen av kontrollen vid chaufförers travmätning...

2016-09-05
Communication plan and dissemination of results

• Extensive implementation work - rapid turnover of results, and enabled implementation

• The programme helped to assure the long-term supply of skills and expertise

• Nordic and international networks. R&D activities coordinated to avoid duplication of work, to create a broad base of expertise, and to learn from one another.

• Broad support was attained by involving stakeholders operatively in project planning and as project pilots in implementation.
Widespread Research Activities

ESS field trials
R&D partners, trials financed by ESS
Implementation and training
Technical results

• Logging residue - improving quality, efficiency in forwarding, and decision support to prevent ground damage during harvesting.

• Stump harvest - optimising the handling chain, and reducing ground impact and the amount of contaminants in the material.

• Small trees - extraction in new types of stand, efficient thinning methods, and multi-tree handling.
Technical results

• Comminution - identifying the best technology depending on material and the quality required.

• Transport technology and logistics - longer and heavier vehicles, rail-road transports and efficient terminals.

• Measurement - develop and evaluate the technologies and methods.
Criteria for success

• Increase knowledge, awareness and engagement regarding forest fuel
• Generating greater consensus on wood supply
• Promote the development of new technology, new applications, and new knowledge
• Increase the number of jobs and new enterprises
• Broaden the academic expertise base
• Produce and implement a good knowledge base