

Short Rotation Coppice (SRC) in the Netherlands

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Flevo Energy Wood Project

In 1999 and 2000 45 hectares of poplar (*Populus* spp.) and willow (*Salix* spp.) SRC were established on former agricultural clay soils in the Province of Flevoland. The goal was to build up knowledge and experience with the establishment and exploitation of SRC on a semi-commercial scale. Timely and adequate site preparation (ploughing and harrowing) and weed control proved to be the key factors for the initial success of the SRC-plantations. In total 8 willow clones (Loden, Jorr, Tora, Van Aalsburg, Sven, Torhild, Belders & Het Goor) and 5 poplar clones (Hees, Ellert, Koster, Beaupré & Spijk) were planted. The willow SRC were planted according to the Swedish double-row system. One year after establishment all the willow clones performed well. The survival and growth of poplar was far less than willow.



Willow SRC one year after the harvest



Willow SRC after establishment in 2000



Planting with a stepplanter

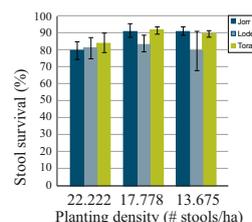
Harvest

History of SRC research by Stichting Probos:

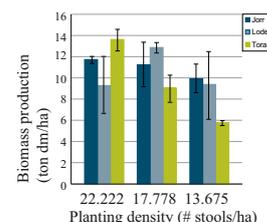
- 1970s: first experiments with poplar SRC
- 1990s: several experimental plots of poplar and willow SRC (20 ha)
- 1999 – now: Flevo Energy Wood project

Biomass production of willow SRC

- The average production of one year old shoots is approximately 10 ton dry matter/ha
- There are no significant effects of planting density or clone type on the stool survival
- In many cases Tora shows a significant smaller biomass production than Jorr and Loden
- Stool survival and biomass production are comparable to (and in some cases even slightly higher than) willow SRC plantations in the UK, Sweden and Germany



Stool survival after the 2007 growing season (8 years after establishment and after 3 harvest cycles) for willow SRC



Biomass production of one year old shoots after the 2007 growing season (8 years after establishment and 1 year after the last harvest) for willow SRC

Results biodiversity monitoring in willow SRC 2006-2008

Species	Number of species	
	2006 (all plantations)	2007-2008 (EC1)
Flora	101	/
Fungi	96	62
Breeding birds	22	18
Amphibians	4	/
Mice	6	/
Butterflies	13	/
Mosses and lichens	/	12
Beetles	/	54

Biodiversity monitoring in willow SRC

- Willow SRC plantations have a considerable (often surprisingly high) biodiversity, including several rare and threatened red list species
- A lot of the species are characteristic for shrubs and young forests



In two of the willow SRC plantations the Broad-leaved Helleborine (*Epipactis helleborine*) was found



Conocybe vestita is one of the Red List fungi that were found in the willow SRC plantations



The Willow Warbler (*Phylloscopus trochilus*) is one of the typical bird species that were found in willow SRC

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