AutoSpar publishable summary

Fig.: 1 The AutoSpar prototype during field testing

Major achievements of the project

After two years of developments, testing and optimisations the AutoSpar prototype reached precompetitive status. During project activities the following objectives have been achieved:

1. A robust and powerful driven vehicle carrying all subsystems of the AutoSpar harvesting machine.
2. The motion mechanism (cross transfer table) for moving the detection system along the dam during scanning and for moving the two mechanical harvesting tools to the positions for asparagus harvesting.
3. Two mechanical harvesting tools: the cutting device and the lifting device have been developed to be used fully automatically in the harvesting machine. The harvesting sequence is determined by the control program.
4. The asparagus detection system, which consists of an illumination system, a light shield, cameras for image production and a program for image processing.
5. Finally the control program which is a link between the image processing and the mechanics of the AutoSpar prototype. All functions, movements etc are controlled by this program.

Fig.: 2 Asparagus harvesting in progress

Technical data of the AutoSpar prototype:

Parameter	Value
Overall machine dimensions	Length: 4.6 meter Width: 1.8 meter Height: 2.0 meter
Total weight (empty)	850 kg
Power driving motor	1.1 kW
Power supply	24 V batteries
Harversting speed	Up to 6 asparagus stalks per minute
Required stuff	1 operator for 2-3 machines
Estimated harvesting costs	1–2 €/kg

During the project some dissemination material has been produced in the format of flyers, posters and Videos. Most of the material is available in English, German, Dutch, Spanish and Romanian language. The AutoSpar partners are happy to send out information and to organise demonstrations on interest. For this the coordinator of the project Biozoon GmbH should be contacted.

www.biozoon.de

The research within the AutoSpar project received funding from the European Community's Seventh Framework Programme, FP7-SME-2007-1 Research for the benefit of SMEs