Background
Cereal production contributes substantially to food and feed production in Europe. There is a great interest to reduce the input of pesticides and synthetic fertilisers and to increase the area of organic farming.
In a large part of Europe, cereals have been bred mainly for improved yield and quality with high input of pesticides and fertilisers. Hence, it is very likely that many of the crop varieties currently available are not appropriate for low-input conditions. The present COST network addresses this problem by coordinating various national projects and by providing a platform for exchange of knowledge, plant material, methods, and results from national laboratory and field trials.

Cornerstones of SUSVAR
SUSVAR, “Sustainable, low-input cereal production: required varietal characteristics and crop diversity”, was initiated in March 2004 and is chaired by Hanne Østergård (DK). The SUSVAR activities in Switzerland are coordinated by Fabio Mascher and Susanne Vogelgsang.

Objectives
SUSVAR wants to provide:
Varieties and cropping strategies leading to stable yields of good quality for low-input, especially organic cereal production in Europe.
In order to achieve these goals, SUSVAR attempts to:
• Establish methods for selecting varieties, lines, and populations,
• Develop ways to increase and make use of crop diversity and genotype-environment interactions,
• Provide guidelines for certification of varieties and mixtures.

Countries involved
Twenty-five countries have signed a Memorandum of Understanding, the official document defining the network, with researchers from approximately 100 institutions.

Organisation of activities and mutual benefits
The network is organised in 6 Working Groups (WG). The core WGs elaborate breeding and statistical procedures and develop certification guidelines. The flanking WGs generate and provide knowledge on various interactions between plants, soil, and pathogens. The common framework is cereal production in low-input systems with emphasis on crop diversity.

For more information on SUSVAR: www.cost860.dk

Expected outcome
The knowledge obtained from this network will be transferred by its participants to the plant breeding community. This will result in:
• Adapted and improved methods for variety breeding and testing
• Variety mixtures, crop populations, or intercropping systems suitable for low-input and organic cereal production.