# **Genotype by Environmental Interactions for Isoflavones and Sapponins in Soybean. (C01-sleper143054-Poster)**

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### Abstract:

Isoflavones and saponins are phytochemicals found in soybean (Glycine max (L.) Merr.) that appear to have potential health benefits. Studies indicate that isoflavones may posses anticarcinogenic properties and that saponins may inhibit infectivity. Both phytochemicals, have however been demonstrated to be responsible for undesirable bitter taste in soybean. Isoflavone contents are known to be influenced by cultivar and growth conditions. Breeding for higher contents of the beneficial isoflavones and saponins and for reduced or elimination of undesirable phytochemicals will improve the quality of soybean. Objective was to compare levels of isoflavones and saponins in elite and introduced lines grown under different growth conditions. Ten elite and eleven introduced lines were grown in five different locations and replicated three times at each location. Concentrations of daidzein, genestein, and glycitein were determined using a high-performance liquid chromatography (HPLC) method. The results indicate that genotype x environmental interactions for the isoflavones are significant. This interaction indicates that lines rank differently depending on location.

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### **Presentation Information:**

Presentation Date: Tuesday, November 12, 2002 Presentation Time: 4:00-6:00 pm Poster Board Number: 1216

## **Keywords:**

Soybean, Glycine max, Isoflavones, Sapponins