Factors Effecting the Concentration of a Nutraceutical Lignan in Flaxseed. (S04-westcott101231-Oral)

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Abstract:

There is considerable interest in the use of naturally occurring plant components to prevent or treat a variety of human diseases. One such phytochemical, secoisolariciresinol diglucoside (SDG), can be isolated and purified from flax (Linum usitatissimum). SDG has been shown to have potential therapeutic benefits in some hormone dependent cancers, heart disease, diabetes and even in some auto-immune diseases such as lupus nephritis. SDG is bio-synthesized from the amino acid phenylalanine and accumulates in the mature flaxseed as part of a larger chemical complex. As many as 12 varieties of flaxseed grown at locations in both Manitoba and Saskatchewan for up to 11 years have been analyzed for SDG content. Both variety and year had significant effect of SDG concentration in defatted flaxseed meal. Studies of shorter duration and with fewer varieties where soil nitrogen, phosphorus, sulfur and/or potassium levels have been supplemented have also been conducted. Nutrient supplementation had little effect on SDG concentration in the defatted flaxseed meal.

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