

Public Abstract

First Name: Sabrina

Middle Name: Lynette

Last Name: Brown

Adviser's First Name: William

Adviser's Last Name: Wiebold

Co-Adviser's First Name:

Co-Adviser's Last Name:

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Department: Agronomy

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Title: The Effect of Environment on Seed Composition of Tofu and Natto Soybean Cultivars

Composition of soybean seeds is important to manufacturers of tofu and natto food products. The effect of environment on seed composition of tofu and natto soybean cultivars was measured in Missouri in 2004 and 2005. The environment was altered by varying the planting date and by planting at 7 to 10 locations in four soybean-producing regions in Missouri. The carbohydrates sucrose, raffinose, and stachyose were measured by high performance liquid chromatography (HPLC), and protein and oil were measured by near infrared (NIR). Planting date affected tofu and natto soybean composition. The effect on composition was minimal, so managing planting date for yield may still be the best strategy. Location in Missouri also affected seed composition. Weather conditions at each location may have influenced the composition of the soybean seed.