Food and Agriculture; Findings from Northeast Institute of Geography and Agroecology Provides New Data on Food and Agriculture (Seed Nutritional Quality Comparison of Vegetable Soybean Genotypes At Fresh Pod and Mature Stage)

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2019 OCT 17 (VerticalNews) -- By a News Reporter-Staff News Editor at Food Weekly News -- Investigators discuss new findings in Food and Agriculture. According to news reporting out of Heilongjiang, People's Republic of China, by VerticalNews editors, research stated, "Vegetable soybean is famous for its better eating quality and taste, which is usually harvested at fresh pod stage. However, no report is available on nutritional values between vegetable soybean seed at fresh pod stage and mature stage."

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Our news journalists obtained a quote from the research from the Northeast Institute of Geography and Agroecology, "To better understand the seed nutritional quality differences between fresh pod stage and mature stage in vegetable soybean, five vegetable soybean genotypes were examined. The results found that seeds from fresh edible stage had higher total free amino acid, and higher K, Na, Mn and Zn concentrations. The concentrations of soluble sugar, crude oil as well as unsaturated fatty acid were also higher at fresh pod stage. While total isoflavone, Mg and Fe concentrations were generally higher at full maturity stage. No differences in protein concentration were found between the two stages. Significant genotypic differences were found among nutritional parameters. The genotype Line 61 had the highest total soy isoflavone of 4593 mu g g(-1), whereas the genotype 'Heidou' had the lowest total soy isoflavone of 1700 mu g g(-1) at mature stage. Correlation analysis indicated that total free amino acid was significantly positively correlated with soluble sugar, crude oil and total isoflavone. Therefore, the nutritional values at fresh pod stage and mature stage differed from the perspective of nutritional compositions."

According to the news editors, the research concluded: "The findings reported here add new knowledge to vegetable soybean function and is a useful starting point for future breeding program and cultivation towards improving the nutritional compositions of soybean species."

For more information on this research see: Seed Nutritional Quality Comparison of Vegetable Soybean Genotypes At Fresh Pod and Mature Stage. *Emirates Journal of Food and Agriculture*, 2019;31(6):405-414. *Emirates Journal of Food and Agriculture* can be contacted at: United Arab Emirates Univ, P. O. Box 17551, Al Ain, U Arab Emirates.

Our news journalists report that additional information may be obtained by contacting Q.Y. Zhang, Chinese Academy of Sciences, Northeast Institute of Geography and Agroecology, Key Lab Soybean Mol Breeding, Harbin 150081, Heilongjiang, People's Republic of China. Additional authors for this research include C.K. Liu, Y.S. Li, B.J. Tu, X. Wang, B.W. Tian and X.B. Liu. and can be your direct source for a journal article and its citation.

Keywords for this news article include: Heilongjiang, People's Republic of China, Asia, Food and Agriculture, Genetics, Northeast Institute of Geography and Agroecology.

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