Breeding Feed Peas for Saskatchewan

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Field pea production in Canada has increased steadily over the past fifteen years. To sustain this growth, expanded use of peas in animal feed rations in Canada is required. Research in Europe and Canada has confirmed that peas are a good source of energy and protein, and can replace soybean meal in swine and poultry diets that have been re-formulated correctly. Historically, Canadian pulse crop breeding programs have focussed on human consumption markets. To address the expanding use of peas in feeds, a research project was initiated to develop methods to rapidly predict key chemical characteristics of pea varieties and breeding lines. Wet chemistry data will be correlated with near infrared spectroscopy (NIRS) data to develop NIRS calibrations for protein, starch, and fibre fractions in peas. These calibrations will be tested for measured differences in nutritional value with animal feeding studies. Reliable NIRS techniques will allow pea breeders to actively select varieties with improved nutritional profiles for the feed industry. Initial wet chemistry analysis of 25 field pea lines and cultivars revealed significant variation in levels of crude protein, starch, ADF and NDF.