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Grower Participation in On-farm Grain Drying Study

Project Title: Developing on-farm grain drying strategies for optimum quality and energy efficiency.

Project Summary: Lethbridge College is starting an AFC funded project to minimize postharvest losses of grains (wheat focused) through energy efficient and improved on-farm grain drying. In-bin natural air drying, in-bin drying with heater, high temperature drying, and combination drying (using high temperature drying followed by in-bin natural air drying) will be investigated to develop wheat storage and handling guidelines for Alberta climatic conditions for increased energy efficiency, timely and uniform drying and optimum milling and baking quality of dried wheat. On-farm grain drying trials will be conducted in South, Central, North East, North West, and Peace regions in Alberta to incorporate regional variability in postharvest climatic conditions and develop region based grain storage and handling guidelines.

Scope: Lethbridge College is looking for grower participation in this project with on-farm grain drying and storage capacity (20,000-50,000 bu bins are preferred) for in-bin natural air drying, in-bin drying with heater, and high temperature drying. Grain bins with temperature and moisture monitoring and fully automated fan and heater control are preferred, however, if growers are willing to automate their bins, project partner OPIsystems (Calgary) will discount monitoring cables and control system cost by 20% for participating growers. College will conduct the drying experiments, inspect bins, collect grain samples for quality testing, ensure grain quality and safety, and gather the bin data with due permission from participants.

Following is minimum the requirement of trials for 2021, 2022, and 2023 harvest:

Regions in Alberta	Drying Trails			
	In-Bin Natural Air Drying	In-Bin, Low Temp Heater	High Temp Drying	Combination Drying
South	3 drying bins	3 drying bins	3 dryers	3 trials
Central	"	"	"	"
North East	"	"	"	"
North West	"	"	"	"
Peace Region	"	"	"	"

Contact Person: Please contact Project Lead Dr. Chandra Singh for more details by phone (587-899-8405) or email (chandra.singh@lethbridgecollege.ca).

