

CLEAN RESOURCES

AGRI-FOOD INNOVATION

DATA AND DIGITAL SOLUTIONS

FUNDING DETAILS

RcFarmArm

The RcFarmArm is a smart technology overlay system designed to facilitate wireless tractor control for use with augers, grain baggers, extractors and other stationary Power Take Off (PTO). PTOs are one of the most dangerous parts on a tractor. They need to be controlled manually and require proximity to the PTO shaft, which may lead to entanglements causing on-farm injuries and even death. Their use also requires a farmer to be in and out of a tractor cab or an additional person to assist. The RcFarmArm creates a safe way to handle grain and reduces the time and number of people required to perform a task. During peak seasons, grain handling is a time sensitive and intensive operation. Thus, the RcFarmArm makes grain handling safer, creates on farm efficiencies and streamlines the process.



RECIPIENT:
Pawlutions Ltd.
**PI: Vincent
Pawluski**



PARTNERS:
**Community Futures
Grande Prairie &
Region**
GPRIN



TOTAL BUDGET:
\$720,805



AI FUNDING:
\$223,125



PROJECT DATES:
**Jan 2022 –
OCT 2023**



PROJECT TRL:
**Start: 6
End: 7**



APPLICATION

The RcFarmArm replicates the movements of a human hand so the engagement and disengagement of the PTO, engine RPMs, hydraulics and steering (if applicable) can be controlled from outside of the cab and at a safe operating distance from the PTO shaft. This creates visibility of the entire process, greatly reducing the potential for entanglement and removes the risks associated with running up and down the stairs of the tractor.

ALBERTA INNOVATES CLEAN RESOURCES

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PROJECT GOALS

- Be the first full package solution for producers looking to facilitate wireless tractor control for use with augers, grain baggers, extractors and any other stationary PTO-run implements.
- Facilitate the RcFarmArm moving from non-commercial prototype stage to commercialization and full production of commercial units.
- Reduce the risk of PTO shaft entanglement and injuries.
- Reduce farm-related injuries from trips and falls resulting from the repetitive task of climbing in and out of a tractor cab.
- Create on-farm efficiencies and streamline processes.

BENEFITS TO ALBERTA

- Creates a safe, time-sensitive way to handle grain while reducing the number of people required to perform a task.
- The design can be easily and quickly adjusted, and the product is manufactured quickly using 3D printers, allowing for aggressive market penetration.
- Remotely operated by anyone unloading grain, removing barriers presented by mobility, age or tractor operation knowledge.
- Will increase Alberta and Canadian exports globally and bring recognition to Alberta for its innovation in agriculture technology and safety.



**1 New
Product/Service**



**2 Students
Trained**



1 Patent



2-3 Project Jobs



5 Future Jobs

CURRENT STATUS

MAY 2022

Two new, commercial-grade 3D printers are being purchased and put into production, the first being the HP 4200 MJF. The printers will be used in 2022 to create prototype and production units to work on tractors from manufacturers like John Deere, CaseIH, Fendt, CLAAS and New Holland. Work will also begin this year to market the commercial units and start growing distribution across Canada, the U.S. and Australia.