

**Production of Northern Ontario Short Season Grain Corn Under Biodegradable Plastic Mulch Using a SAMCO Planter
(NESCIA and NWSCIA Paired Partner Grant)**

Purpose:

The (made in Ireland) SAMCO “3 in 1” corn planter was tested in Temiskaming in 2012 for the production of SILAGE corn, and was successful. This new project was developed to determine those Districts across the entirety of northern Ontario where the equipment could potentially be ECONOMICALLY successful in the production of GRAIN corn.

Background:

It is generally agreed that the growing seasons in the north are becoming longer and warmer (on average). SAMCO produces novel equipment to maximize the potential of farmers in historically cool season areas. The northern farmer now has the choice to innovate to produce nontraditional crops in the region. The NEOSCIA and NWOSCIA took the opportunity of using a “Paired Partner” grant to purchase a SAMCO 2 row demonstration unit and run a set of field observation trials in all Districts of the North.

Methods:

The “Paired Partner” grant was proposed be used to attract additional financial aid for agricultural field research from FedNor, in order to purchase a 2 row Demonstration unit (and trailer) from SAMCO in 2013. The tests would be undertaken in 2014.

Site Selection: Each district of both regions would select a series of 5 acre test sites on the soils that would normally be the first to be planted in the spring. The fields would be prepared in the fall for early season no-till planting.

Treatments: It was proposed that each site would be split into 2 parts. One would be planted as bare ground and sprayed for weeds, and the other would be planted, covered with mulch, and sprayed for weeds (under the plastic). The SAMCO would do both tests as modern corn planters are rare in many districts of the north.

Assessments: The proposed project FAILED when SAMCO was unable to provide a 2 row demonstration unit. However, Phillips Seeds of Temiskaming was already running a 20 acre SAMCO grain corn trial in 2013, (using a neighbors field scale unit), and they were willing to allow SCIA to participate in the evaluation of their trial.

Results:

The Phillips trial determined that DKC 27-54 corn yielded 111 bu/ac of grade 3 corn @ 26.55 % moisture when planted under plastic. The same variety yielded 69 bu/ac of grade 4 corn @ 40% moisture when planted to bare soil. (CHU = 2386 in 2013)

Figure 1. Picture of the SAMECO Planter in Operation



Summary:

In the cool weather conditions of 2013, plastic film as applied by the SAMCO field scale unit was a reasonable investment because the breakeven cost under plastic was \$207.05/mt, (slightly higher than the average cost of purchasing grain corn in Temiskaming at that time). This is to be compared to a cost of \$263.67/mt for the grain corn produced on bare soil, a price that is about the same as what grain corn transported to Temiskaming in recent years has been worth.

Next Steps:

Temiskaming will continue with field scale trials for growing GRAIN corn in 2014. A group of farmers in Thunder Bay district will purchase their own SAMCO field scale unit and plant Grain corn trials in 2014. Other districts will be unable to participate as the equipment is too large to be moved very far. Both groups with access to machinery will share information across all Districts of the north, via the regional SCIA farm newsletters.

Acknowledgements:

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Location of Project Final Report:

Will be available in the OSCIA newsletter files on the internet. Those who wish a full report on the 2013 Phillips project should go to the OSCIA link for the NEOSCIA Winter 13/14 edition of the Breaking Ground Farm Newsletter (pages 3 and 24).