

Growing Corn Under Film

2013

Objectives

- Evaluate the agronomic and economic effect of the Samco System on grain corn production in the <2500 CHU zone.
- The Samco System utilizes a specialized planter which plants, applies pre-emerge herbicide and lays down a transparent and degradable film in one pass.
- The system was designed to create a greenhouse effect within the soil zone from planting through mid-vegetative stages, reducing time to emergence, tassel and maturity.

Study Description

Plot Layout: 4 rows, 500+ ft long

Locations: 6 corn grain trials in southern Ontario
14 grain and silage trials in Quebec

Entries: Adapted hybrid, no film
Adapted hybrid with film
+150 CHU hybrid with film
+300 CHU hybrid with film

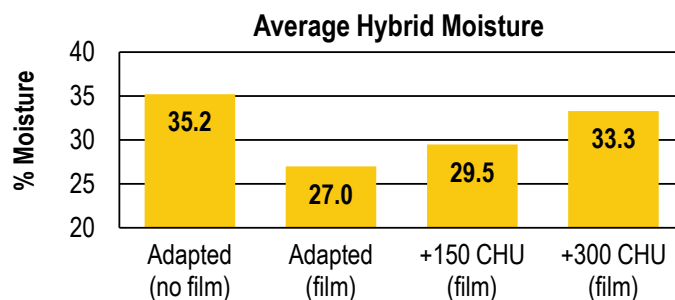
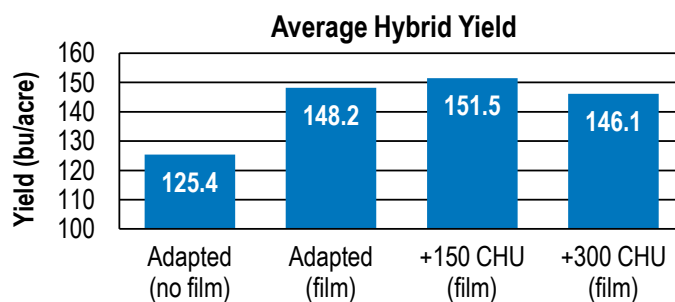
- Grain sites utilized an adapted hybrid as well as hybrids with maturity ratings approximately 150 CHU and 300 CHU greater than the adapted hybrid to evaluate whether an economic yield gain could be realized with fuller season hybrids in the <2500 CHU zone.
- Results reported here are averages of three southern Ontario locations with yield data available at time of publication.



Trial location near Dundalk, Ontario (June 7, 2013).

Preliminary Results

- Use of the Samco system reduced the time to emergence and tasseling with adapted hybrids relative to the same hybrids grown without film.
 - Average 5.7 days faster to reach VE (emergence).
 - Average 12 days faster to reach VT (tassel).
- Average corn yield was substantially greater and moisture at harvest reduced with adapted hybrids grown under film.
- Fuller season hybrids grown under film had greater average yields and similar or lower moisture at harvest compared to adapted hybrids grown without film.



Discussion

- Results of this study show that Samco system may allow growers to plant fuller season hybrids and obtain similar moisture at harvest with higher genetic potential hybrids.
- Yield of corn grown under film was likely limited in this study due to variable emergence. Better results may be produced with newer models of planters and experienced operators.
- Utilization of this system would be best positioned to:
 - Fill early market corn contracts
 - Grow corn (especially high value silage) in areas with frost risk and short growing seasons

2013 data are based on average of all comparisons made in 20 locations through November 21, 2013. Multi-year and multi-location is a better predictor of future performance. Do not use these or any other data from a limited number of trials as a significant factor in product selection. Product responses are variable and subject to a variety of environmental, disease, and pest pressures. Individual results may vary. All products are trademarks of their manufacturers.

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