

INFORMATION BULLETIN:

CGT Comments on Inflated Acreage in Hemp Processing Investments

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Canadian Greenfield Technologies Corp. (CGT) has been in the hemp industry for over a decade. To this date, to our best knowledge, we are the only full-time operating hemp decortication and processing facility in North America – manufacturing and selling hemp products to main chains and platforms.

With our real-life experience, when it comes to the physical reality and logistics of processing industrial hemp into sellable products, we consider ourselves experts. During our long and continuing tenure in the hemp space we have encountered dozens, if not hundreds, of proposed and envisaged industrial hemp processing business models, on which we are often asked to comment.

We have, especially recently, noted that to attract investment, incredibly large numbers are often multiplied together with little regard to the reality of processing industrial hemp. Some people have asked us to comment on their intent to process

biomass from as much as 50,000 to 100,000 acres of hemp all year round. Let's give those numbers some perspective.

It is for those interested parties that this Information Bulletin is written. However, we wish to stress that we do not wish to publicly comment on the validity of some project-specific cases.

Biomass Yield

According to Innotech Alberta, the average biomass produced per acre of hemp is 0.8-4.0 T/acre.¹ Another report by the Albertan Government has dryland numbers for taller varieties (Carmen, Alyssa, Delores, and Silesia) at between 2.4 and 4.8 T/acre.² It is our experience that a very conservative estimate of the amount of remaining biomass after seed removal is ~1.5-2 T/acre.

Bale Storage

When the biomass yield per acre is multiplied by the proposed acreage, these numbers become very, very large (i.e. 50,000 acres x 1.5T/acre = 75,000T of hemp straw). With the average bale of hemp being ~0.5T/bale, this becomes 150,000 bales of hemp straw, produced annually!

NOTE: To put these numbers into perspective, it would take ¼ square kilometer to store these bales two-high (62 acres)!

Processing Facility Logistics

There are a finite number of hours in each year (8760 h). A common shift arrangement that allows for downtime and maintenance is two 10-hour shifts, 300 days a year (working 6 day-weeks), and works out to 6000 hours of full throughput, no downtime operation each year.

When considered in conjunction with the number of bales that are required to process annually, 25 bales would need to be processed every hour. That is a rate of one bale per 2.4 minutes! This timing assumes absolutely no discontinuities in a linear continuous process. **To be even more clear, every 2.4 minutes a full bale of material would need to be delivered to the facility, opened (or sliced), dosed into processing, processed into sellable products, packaged, marketed, sold, and shipped out... all at the rate of a full bale ever 140 seconds of the entire year.**

Conclusions

We do not believe the above model of servicing 50,000 acres of hemp by a single hemp processing facility is logistically feasible. In fact we believe that, based on our vast experience, employing any state-of-the-art means, in a best-run, continuous operation as described, it would require a minimum of 20 minutes to process a full, dense square bale. Even with the total installed mechanical capacity of the machinery at 12.5T/h (as mathematically required), such capacity cannot be translated into the capacity of the entire operation without multiple fragmentations and duplications of process trains - equipment and operators - for multiple independent operations, creating a logistical nightmare. This means that the envisaged acreage of service for 50,000 acres by a single hemp processing facility is inflated by a factor of ~8x.

We believe that realistically, the maximum acreage to be served by one hemp processing train facility should be about 5000 acres. Even this suggested number of acres requires a well-run operation, employing reliable means in terms of equipment, technology, expertise, and technical support.

We wish to stress that the above conclusion is derived from realistic logistics and is NOT a comment on any one specific project case. We also, deliberately omitted any comments on the commercial aspects of a hemp processing operation, involving products value vs. competitive forces, imposed by both domestic and imported hemp mass-produced commodities from low-cost jurisdictions.

Acknowledgements

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References

1. Government of Alberta (2020). Growing Hemp in Alberta. Retrieved from <https://open.alberta.ca/publications/growing-hemp-in-alberta>
2. Government of Alberta (2017). Industrial Hemp Enterprise. Retrieved from <https://open.alberta.ca/publications/153-830-1>