

INFORMATION BULLETIN 2:

REQUESTED ADDITION to CGT Comments on Inflated Acreage in Hemp Processing Investments

2021-03-02

Canadian Greenfield Technologies Corp. Stephen Christensen, PhD, PChem



From the surprisingly large positive response to our Information Bulletin of February 25, 2021, many requested the addition related to "hemp BALE processing" in hemp processing. This is a great question, and the response should start by stating that "Hemp Processing IS hemp BALE processing."

Bale Processing

In many envisaged hemp processing models, it is often implicitly assumed that hemp, harvested in the field, will somehow miraculously flow into the hemp processing machinery at a flow rate that matches the installed machine throughput capacity. This is far from the reality.

To transport hemp from the field in a cost-effective way, the hemp must first be baled into dense round or square bales. These bales then become the feedstock for further



processing. This is how a hemp processing business in the developed world must be viewed, and is the only viable way of handling large acreage.

The baled hemp, prior to processing, must be converted into a continuous flow of untangled straw ready for decortication and separation.

Considering that hemp straw is long, has incredible tensile strength, and was tightly baled (had to be!), this process requires specialized technology and is speed-limited. If the hemp processing is expected to produce commercially viable bast fiber, the conversion of hemp bale into feedstock hemp straw becomes even more technologically demanding, requiring bale processing without significant damage to the fiber.

It is a technological impossibility to process a typical, dense hemp straw bale into commercially viable products much faster than one bale (approximately 0.5T) every \sim 20 minutes, even using the most advanced state-of-the-art technologies. This, assuming yield of 3 x 1000 lb bales per acre and 6000 hours per year operation (2x10 h shifts, 6 days per week) essentially translates into servicing about 5000-6000 acres. This processing would need to be operated flawlessly and continuously throughout the entire year.

Any notion that baled hemp straw can be processed into commercially sellable products with **10x that rate** is completely unrealistic (i.e. processing a full bale in 1-2 minutes servicing 50,000 acres)!



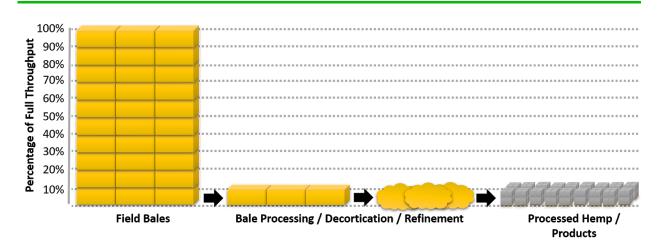


Figure 1 - Attempt to service excessive acreage by a single facility

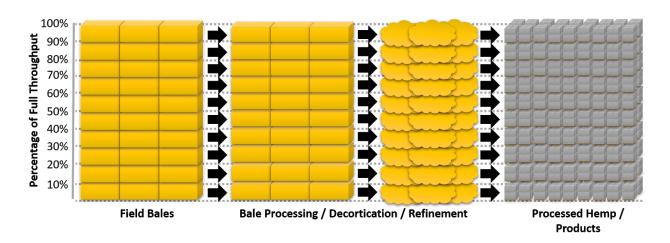


Figure 2 - Realistic servicing of extra large acreage by multiple facilities

It has been our experience and our strong opinion that it is the processing capacity of bales per hour that dictates the facility's throughput – not some installed capacity of tonnage per hour for some machine downstream, which is often the made assumption grossly exaggerating the facility's production capacity.

The realistic industry model involves many hemp processing hubs, stations, businesses, or entities, each capable of servicing up to ~5000 acres.