



Growing Flax First: Building the Processing Plant

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What is Processing?



- ❧ It is one or more activities that change the appearance, size, shape, constituents or characteristics of one or more raw materials.

From a flax straw point of view, what is Flax Processing?

- ✿ Extracting fiber and shive from straw
- ✿ Carrying out additional procedures to enhance the value of fiber and shive (*e.g., re-cleaning, sieving, sizing, combing, chopping*)

Basic Steps

☞ Raw Materials and Other
Input

(brought to one location)



☞ Procedures and Processes



☞ Products

(Finished, Semi-Finished,
Residues/by-products)

In Flax Processing, there are many options; today we have only time to consider questions and answers that will have a big impact on the options we choose

- ☛ Where are the present markets?
- ☛ Where are likely future markets?
- ☛ What are the quality requirements?
- ☛ What are the volume requirements?



Flax Processing Options ...

- ☛ What are the c.i.f. prices?
- ☛ What are the end use locations?
- ☛ What are the f.o.b. prices?
- ☛ What processing steps need to be done to get products that would be acceptable in the selected markets?

... Flax Processing Options ...

☛ What are the properties of the straw we will use?

- Retted, under-retted or not retted?
- Long pieces, short pieces or a mixture?
- High, medium or low fiber content?
- Aligned or unaligned



... Flax Processing Options ...



☛ Will the processor or farmer manage straw in new ways in the field or will we simply use straw that drops out of a combine?

... Flax Processing Options ...



- ☛ What processing machinery is available?
- ☛ What capital and operating costs?
- ☛ What is their throughput and quality of straw needed and fiber and shive produced?

... Flax Processing Options

- ☛ What are the minimum volumes we need to process per hour to get a “reasonable” cost for the value of the end product? (*i.e., a high end use fiber commands a higher market price but also requires slower, more delicate and more expensive processing*)

How big a “catchment area” do I need to get the minimum volume needed?

- ☞ Depends on straw yields,
- ☞ straw harvest system,
- ☞ percentage of fields planted to flax,
- ☞ transport costs



Where should I locate my plant? ...

- ☛ Do I need longer, retted straw?
- ☛ Can I cope with large amounts of short, unretted straw?
- ☛ Can I get the type of straw I need with the weather and farming practices in a given area?
- ☛ Can I get the labor I need at the wages I can afford?

... Where should I locate my plant? ...

- ☛ Can I get the volume of straw I need without spending too much on straw transport?
- ☛ What is the average flax area, straw yield, fiber content and the average variation in these numbers?
- ☛ From a farmer's point of view, how do the net benefits (*both monetary and non-monetary*) of growing flax compare to other crops?

... Where should I locate my plant?

- ☛ Should I have a permanent or a mobile processing plant?
- ☛ How much can I afford to pay farmers to get the kind of straw I need?
- ☛ What R&D is going on that may dramatically change the answers to some of the above questions? (*e.g., alternative processing systems, better field retting, higher fiber content*)

In Summary, ...

✿ Different circumstances, opportunities and goals dictate that a variety of sizes and types of processing plants will be built in Canada in the next ten years

... In Summary,

- ☛ It is not a question of “IF” they will be built;
- ☛ It is a question of WHAT will be built,
- ☛ WHERE it will be built,
- ☛ WHEN it will be built,
- ☛ And WHO will build it!

Any Questions?

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