

Getting the Agronomy & Harvesting right for the Stalk Processor

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Hemp Fibre Forum

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Copped my 2nd dose
of Covid last week.

Thanks to Colin for
presenting.

I have worked with Colin for 5 years

Same day

- Planting is critical
- Start right
- Good seed vigor
- Variety
- Clean seed bed
- Hemp is a bad competitor early



A biomass crop is grown for a Processor's Spec

- That Simple
- That impacts
 - Variety
 - Sowing date
 - Sowing rate
 - Plant establishment – plant density
 - Method of harvest
 - Storage
- Target Markets
 - Why are you growing a biomass crop?

Grain & Seed Crop stubble

- Primary target is grain or seed yield
- Secondary target is a fibre market. It can be a significant component of profit margin with current grain prices.

zero to 3t of hemp grain stubble

- Agronomy implications
 - Target grain harvest height
 - Variety selection
 - Time of sowing
 - Weed control
 - Frosts

Dual purpose
crops
harvested with
a Double Cut
machine for
grain and
biomass



Impact on quality of decorticated product from a crop grown for double cut



An example 2 Stalk Processor specs

Premium grade mulch product

- Mowing billet length 250mm
- Bale Type & Size 8 X 4x3
- Moisture Content 12 -15% moisture
- Licence compliance
- No hemp seed
- No weeds
- Pesticide Free

Premium Grade hurd for housing

- Mowing billet length 250mm
- Bale Type & Size 8 x 4 x 3
- Moisture Content 12% moisture
- Licence compliance
- No hemp seed
- No weeds
- Pesticide Free

Spec continued

Premium grade mulch product

- Must be harvested before female flowering
- Retting – not required
- Not a problem if retted
- Hurd density not important
- Bast Fibre quality not important

Premium Grade hurd for housing

- Must be harvested before female flowering
- Retting Required
- Hurd Density very important
- Bast Fibre quality is important

Premium Grade bast Fibre

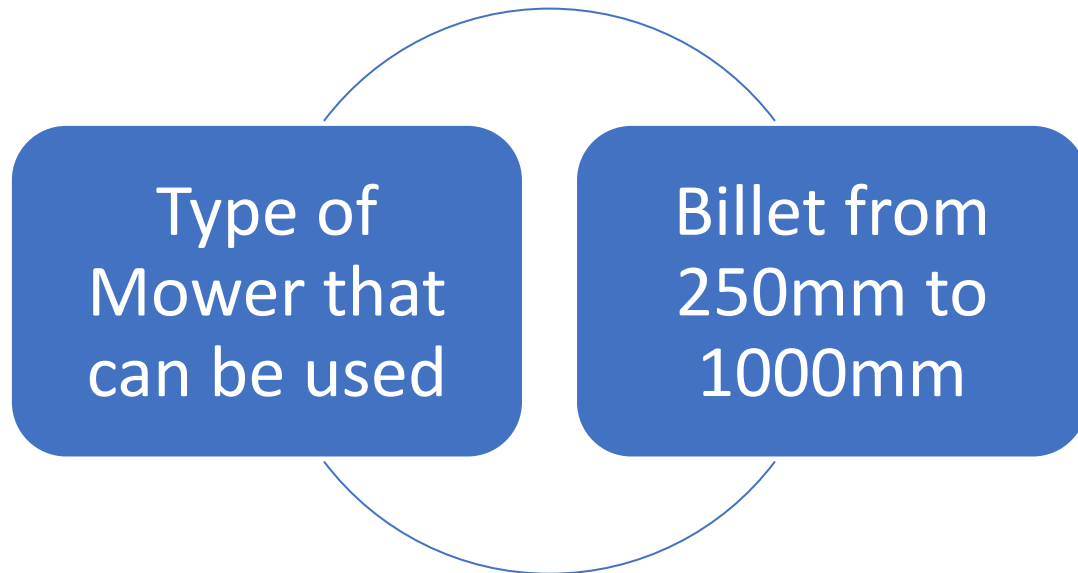
- Bast Fibre quality depends on bast market
- Bast : Hurd Ratio

- Bast length
- Bast bleaching
- Non woven specs
- Woven specs

Impact on Mower decisions

Premium grade mulch product

Premium Grade hurd for housing



- Hempcut Mower 250mm – 600mm
- 4 Sickle bar mower 750mm
- Single cut leaving stem full length
- Double crop mower
- Stalk Conditioning

- Dependent on decorticator Rqmts.

Baler Type

Premium Grade product for mulch

- Type of Baler
- Preferred 8 x 4 x3

Premium Grade hurd for housing

- Type of Baler
- Depends on decorticator
- Some decorticators very specific.
- Round
- or Big Squares 8x 4 x 3
- Stook

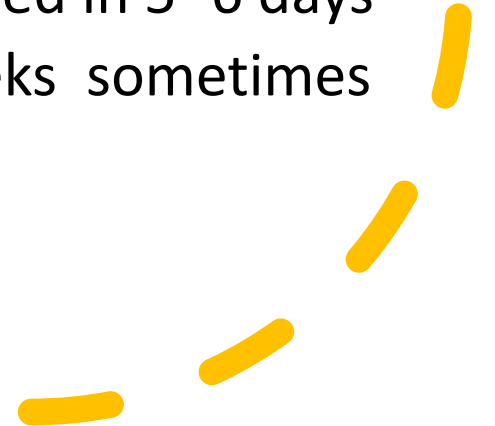
Drying and Retting aren't the same thing

- Why do hay chaff producers in the Hunter buy SA hay (We have 1000's ha of lucerne in the Hunter).
- In SA more likely to have to irrigate a mown biomass crop in order to achieve satisfactory retting for a processor who decorticates.



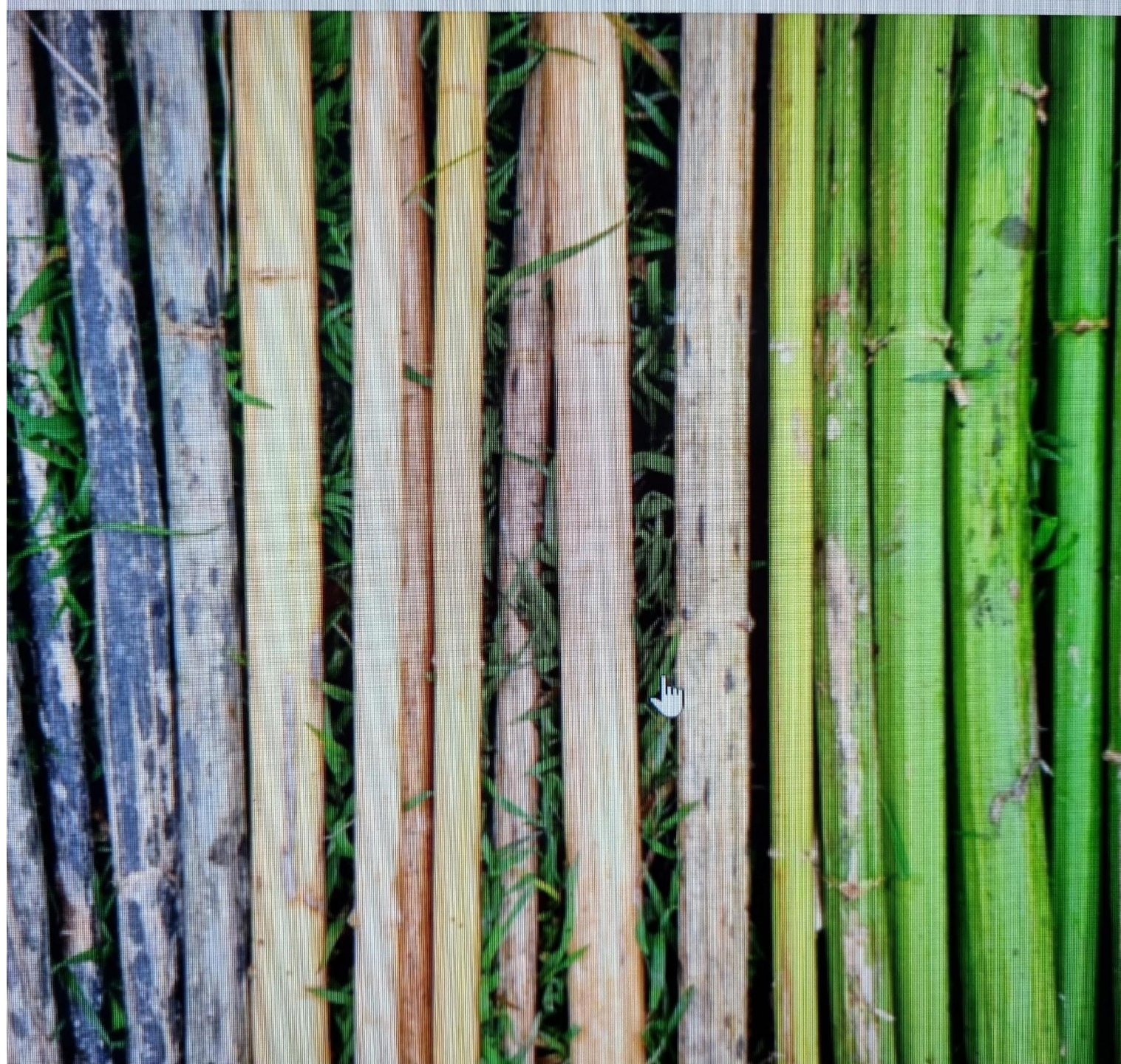
What is a farmer's preferred time between mowing and baling

- Varies
 - Pesticide status of crops
 - Time of sowing of the next crop
 - Weed Control methods
- In general – as short as possible
 - That mulch crop spec can be baled in 5 -6 days
 - The hurd for housing 3 – 6 weeks sometimes 8 weeks



What is a **processors** ideal time retting in the field?

- Zero
- 4 -6 weeks generally ideal
- Can be 8 weeks if no rain.



Retting – how much?

- Depends on
 - Cleanliness of the hurd and bast fibre for the end product
 - How harsh the decorticator is on hurd size
 - How harsh the decorticator is on bast quality
- Need to irrigate after mowing
- Application rate – impact on germinating weed seed bank
- Does the crop need to be tilled
- Yield of the crop a 2t stubble vs a 12t biomass crop





A grower needs a premium
for a well retted crop!

Double cut Dun-Agro Bull

Preparing the crop to bale

- Do the opposite to making good lucerne hay.
- What about rocks in the Field?
- Paddock Selection
- 21 tonnes of hemp



Hurd Density

Objective measure

Solid vs hollow stalk

Quality of hempcrete

Builders prefer to buy a volume

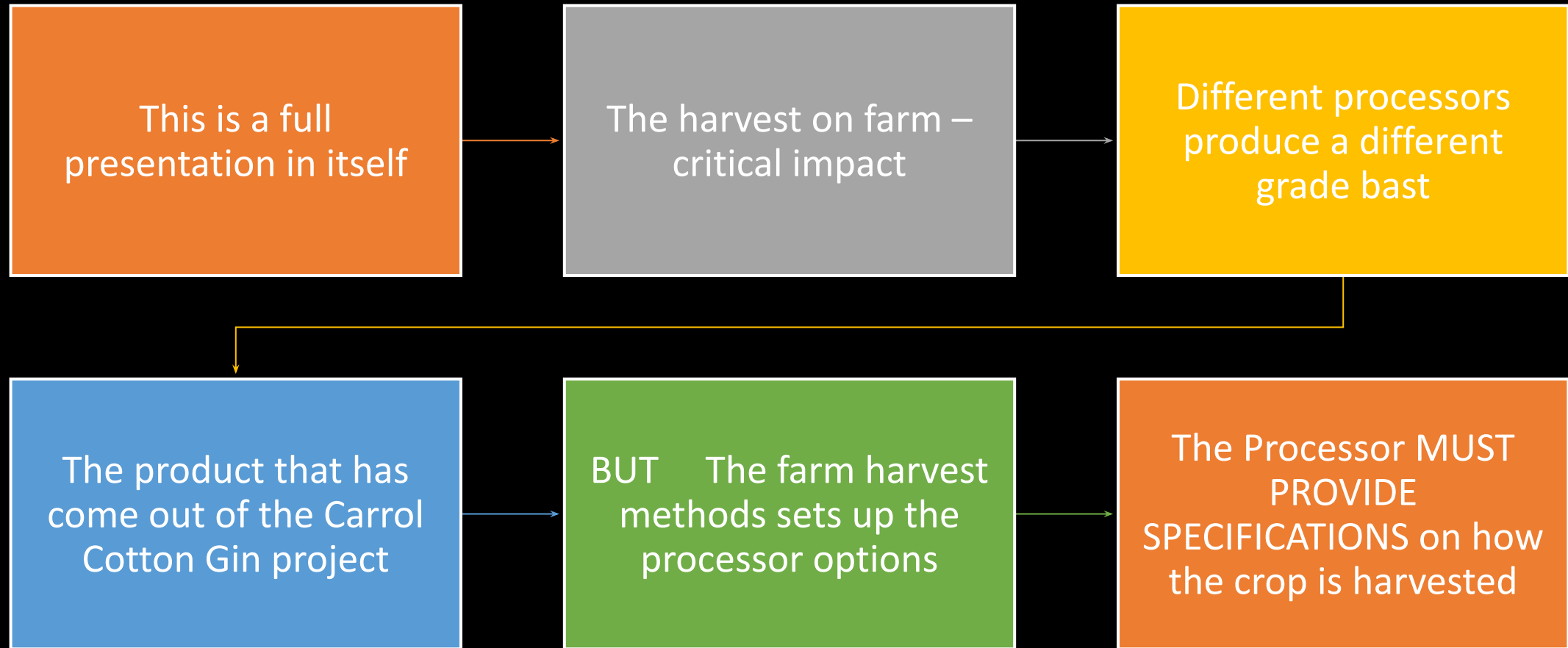
Grading hurd on size

Is there a choice

Farmers want to get paid in weight



Bast length and quality



For farmer to achieve a reasonable Gross margin from a biomass crop

- The processor has no concern about yield /ha it isn't in the processor specification
- Need to achieve a 12t @ 12% crop moisture with an irrigated crop
- Need a minimum of \$450 /t ex farm
- Some are saying need \$500 /t ex farm for premium grade
- Dryland crops - can meet a satisfactory farm GM and processor spec



For a farmer growing a grain crop the stubble is available

- A choice around using as a green manure crop
- Or additional income
 - Prices range from \$250 to \$350 per tonne – no seed, no leaf and minimal grass.
 - Most grain crops aren't grown pesticide free





What are the Processor Specifications for a crop grown for its stalk value?

- Do we need to workshop this question?
- It impacts the whole chain from variety selection to growing a crop to processing and packaging a product for Sale.

Conclusion

- First thanks to Colin for presenting and fine tuning this presentation.
- Thankyou also to David Brian, Mick Andersen, Maddy Hardy and Anthony Coffey for your input into the presentation.
- Thanks to the efforts of all in the organising committee. I have been looking forward to the whole forum.
- A final comments. While the AHC under Tim has made great progress there is still too much playing the man and not the ball.
- We all need to keep our focus on achieving the vision and growing the Pie and not be worried about the share of the pie.

There is a huge amount of knowledge in the room.

Please make sure the grower knows what you require as a processor before you plant a seed.

