HARVESTING CHECKLIST FOR HEMP

The harvesting operations/procedures for hemp are similar to other cereal crops with exceptions, however it must be stressed that you must travel slower in hemp.
In particular, the fibre component of the stalk and resin content of leaf and seed make the process more tedious and has the potential to cause a higher number of problems.

The most suitable style of harvester to use is one with a drum threshing unit. A single rotary style harvester is not recommended and should be used with caution.

PRE-CHECK:

Before entering any crop make sure machine is "Harvest Ready", that is all parts in working order and lubricated where needed and have ensured that it is cleaned down thoroughly, this includes:

- Front
- Throat
- Drum
- Straw walkers
- Shaker screens
- Seed screen (under shaker screen)
- Returns area (underneath seed screen)
- Returns auger and elevator/fan (puts smaller processed green material that went through shaker screen back on)
  NB: The larger the "gap" setting on Shaker screen the more material will fall through for the seed screen and returns to process, this can cause issue. On the flip side the narrower the setting the more seed is likely to be sent out the back.
- Seed delivery augers and elevators
- Seed Bin
- Discharge auger

Throughout harvesting operator should maintain a vigil eye at regular intervals on all moving/rotating parts as the fibre component of hemp has a tendency to wrap, potentially causing machine failure or worse fire. Hemp is also high in resin and can build up (like a thick goo) restricting flows of material in augers and elevators.

ENTERING THE CROP/SETTINGS

Before entering the hemp crop set your harvester to similar settings as that of Sorghum. This will give you a good starting point. Each crop is different and there is no one setting that will give you optimum results. Take the time to reassess settings.

Reel speed and height: The operator wants a constant even flow of material entering the drum. The reel height (where achievable) should simply lay the head of the plant back towards cutting knifes without breaking off heads and dropping them on the ground. The speed of the reel should be slightly faster than the ground speed

DRUM SPEED AND CONCAVE SETTINGS: These setting work with each other. The front and back concave adjust how tightly the material in the drum is threshed and the speed assists with how aggressive the plant goes though the thresher drum.
If drum speed is too low blockages and wrapping in the drum can occur whilst at the same time not threshing (or breaking) the plant enough to allow it to separate from stem. Drum speed too high there will be too much broken stem and seed going through.
Concave too tight and you will have broken seed in sample
Concave too wide it will not separate from stalk.
As a general rule the front concave should be closed more than the back allowing it to be threshed hard at entrance and then allowing more room for exiting.

SHAKER SCREEN/TOP SEIVE: The opening of your Shaker Screen or Top Sieve should be of that to allow the seed and a small amount of threshed material drop through onto seed screen.
If they are closed to tightly the seed will be lost out the back,
If they are to open seed screen will overload and will not be able to separate seed from leaf material effectively "dirtying" your seed sample and overloading returns.

SEED SCREEN: The right seed screen is important. You need to ensure that screen perforation is adequately big enough to let seed through easily but not so large that lets too much leaf material and stalk though into seed sample.

AIR PRESSURE: This should be of a level to assist in the movement of leaf material across the shaker and the removal of light objects (husk, light empty seed dust etc) out the back. If Air pressure is too high this will cause seed loss.

FINISHING NOTES/COMMENTS:

- There are numerous ways each crop will differ including plant moisture, weather conditions, thickness of stalk, height etc. This will alter the settings.
- A smaller cut (narrower front) will reduce work load on the machine and help prevent blockages by less material being forced through the harvester
- A slow and steady approach to crop should be adhered.
- A cleaner sample will reduce cleaning costs, though an "acceptable level" will ensure you capture more seed in bin.
- A clean vessel for seed to be emptied into

Compiled by Ecofibre Industries & Hemp Australia.