

Mungbean Harvest Settings

Ready Reckoner (prepared by Kevin Charlesworth)

There are three phases of harvesting – **gathering, separating and cleaning.**

Before commencing harvest check the points below:

- Crop readiness/maturity – Ensure desiccation is complete and ensure the chemical used gives a dry plant material e.g. little green matter including stems.
- Seed moisture content – Near receival standard of 13%.
- Evenness of stand – An uneven stand makes it difficult to get even flow of material into the harvester.
- Plant population – Higher plant populations tend to give higher seed set, which makes harvesting easier.
- Guidance systems – Auto steer reduces the number of operations required, which helps the operator to concentrate on the main tasks.



Mungbean crop ready to harvest

Gathering Process

- Harvester front attachments – Narrow sorghum or light crop fingers will help gather an erect crop. Crop lifters may help if in beds and crop has fallen into bed.
- Reel adjustment – Reel should only just touch crop if erect. If crop is lodged, a pickup reel set to lift the crop will be required.
- Check ground over width of front, paying attention to the centre looking for losses. Adjusting the tilt of the front may stop pods from falling out.

Separating Process

- Read your crop before you start. If the crop is too green or too dry difficulties will occur.
- Drum/rotor speed as slow as possible e.g. 300 rpm. If seed is cracking, reduce rotor/drum speed or check for excessive grain in repeats.
- Drum/rotor clearance should be as wide as possible to give complete threshing.
- Use large wire concave and slotted grates.
- Use blanking sheets if threshing is too aggressive and all beans are threshed in the first half of the rotor.
- Remove some concave wires if needed.

Cleaning Process

Chaffer setting – Set the chaffer at about 12–14 mm, with the rear chaffer, if fitted, set at 16–20 mm. There are five reasons for grain to be carried over the chaffer:

1. chaffer closed too much
2. fan speed too high (unlikely)
3. fan speed too low (the material on the chaffer should be floating above the sieve)
4. shoe sieve closed too much, stifling air flow to the chaffer and causing high repeat loads
5. too much green matter on the sieve.

Shoe sieve setting – Set the shoe sieve to 8–9 mm. For headers fitted with fixed perforated sieves, sieves of 10–12 mm are suitable.

- You MUST check the contents and quantity of the repeats. There should be very little whole grain in the repeats.

Fan speed settings – Set at about 800 rpm.

- Set too high and grain will blow over the back, set too low and the trash will not be floating over the sieves and grain will carry over the back in the trash.

Stall stop – Check your user manual to find how to do this as there are differing ways for different machines.

- If the seed is evenly contained in the trash, fan speed is too low and the material is not floating above the sieve to allow the grain to separate.
- Too much green matter – If the seed is at the bottom of the trash, open the chaffer to allow more through.

- If there is no seed in the trash but there is seed on the ground, fan speed is too high. In this case, seed is physically blown out of the separation area and is floating high above the sieve. *This is uncommon for beans.*
- Seed loss here can be caused by the machine not being loaded. In this case, increase ground speed.

Helpful hints

- To help obtain a clean sample and reduce penalties for admixture, use perforated doors on the clean grain and repeats elevators and, if fitted, remove the cover on the perforated section of the unloading auger.
- Some people use a drag chain to reduce static electricity.
- If having trouble with a normally high capacity harvester, increase ground speed. You will need to travel above 8 km/hr to get a decent sample, no matter what the yield potential is. Remember, these machines are made to harvest 50–100 tonne per hour, well over what is required to harvest mungbeans.



A reasonable harvest sample however, there is too much split seed and this should have been checked.