

Harvesting Equipment Clean Down Guidelines – Canola

Insect infestations and grain intermingling starts in the paddock with the harvester. Combine harvester sanitation therefore takes on significance when grain infestation, contamination and cross-blending risks are considered.

The following procedure and checklist has been designed to act as a guide to assist in the cleaning of harvesters and associated equipment between canola crops where cross contamination or blending may cause non compliance to AOF Trade Standards. In the case of GM canola in particular these guidelines are strongly recommended.

Anytime during harvest, the machines will contain soil, seeds and plant material. These can be transported together with the harvester and may become dislodged when the machine is next used. In addition, retained seed can blend with the subsequent seed to be harvested and result in non-compliance to trade specifications, for example the adventitious presence of GM seed. In addition, working harvesters can also transfer diseases and weeds between farms. It is important that all plant material and soil is removed prior to relocating or transporting harvesters. Combine harvester sanitation can take several hours per machine but the effort is essential for the benefit of the canola industry.

Equipment:

The following equipment should be available:

- Tools to dismantle the machine
- Portable lighting
- Brooms and brushes
- Scraper
- Wire probe
- Vacuum cleaner
- Industrial grade air compressor
- Air lance
- High pressure water blaster.

Order of Cleaning:

Harvesters should be cleaned from the top down to avoid contaminating areas already cleaned. If possible cleaning should take place in a well-lit area and on a hard clean surface, such as concrete or bitumen.

1. Before cleaning, open all access doors or covers and run the harvester so as to remove or dislodge as much material as possible from the internal workings
2. Then shut the machine down and remove the starter key
3. Loosen all dirt, trash and plant material with scraper and probe
4. Remove as much as possible by brushing and blowing the surfaces. An air lance – a length of small-diameter pipe with nozzle to use with the air compressor - is ideal for harvester cleanout
5. Vacuum material lodged in pockets or other enclosed spaces
6. Leave all inspection covers open after cleaning so to facilitate inspection

7. Inspect all areas and, if required, re-clean
8. Only use high pressure water as last resort, to avoid damaging bearing seals, **or** clumping and sticking of plant material and soil

Cleaning is not limited to the following areas but should include:

For all harvesters, rotary or straw walker type:

- Start at the top with the grain bin and associated augers
- Engine compartment, radiator core and covers
- Driver's cabin (particularly floor area)
- The comb, cutterbar, platform and skid plates
- Skid plates, including below and underneath
- The throat, and threshing mechanism and associated areas
- All header knives and fingers
- The horizontal auger running across top of header (be sure to inspect inside auger pickup finger plates)
- All areas behind belt covers
- All areas inside belts and draper fronts (if fitted)
- Tailings auger and returns conveyor
- Cleaning shoe sieves and grain pan
- Grain elevator, including any cups or rubber flighting and the boot
- Straw spreaders
- Feeder housing and stone trap
- Cleaning fan, fan housing and shielding
- Chassis including axles, chassis rails and undercarriage areas
- Tyres and rims
- Any residues of seed left on the rig from overflows, stubble retention, etc.

Walker-type harvesters:

- Threshing or separating area, including drum, concaves and concave wiring
- Beater drum, including area between drum and walker
- Straw walkers, including the beater and chaff pans

Rotary harvesters:

- External top and sides along the full length of rotor cover
- External top and sides of the conical entry section of rotor cover
- Clean out threshing and separating concaves

If the harvester is to be stored for a lengthy period it is advisable to treat with Dryacide as per the label directions.

Other associated equipment should also be inspected and cleaned prior to relocation and transport.

Windrowers:

- Use air compressor to remove any residual seed

Bins: (Chaser bins, field bins, or any bin used to transfer or store seed)

- Open cleaning latches located at the base of the bin
- Use air compressor to remove residual seed

Enclosed Augers:

- Run without the hopper for around 15-20 seconds or until any visible seed expulsion ceases.
- Use the steepest setting to ensure any seed flows back down to the base of the auger once the auger stops rotating

- Tap along the length of the auger with a rubber mallet from top to bottom to remove any seed caught at the weld seams

Belt Augers:

- Use air compressor to remove residual seed
- Clean out the joints in the belt as seed may become lodged there
- Where possible, all augers should be run in reverse to facilitate cleaning

Transport Machinery:

- Empty grain bin, use air compressor to dislodge seed and soil
- Ensure adequate inspection of any ledges, joins and weld lines, cleats, around the top of the bin, under the tarp, and any other seed collection point