

HARVEST

With maincrop harvest in full swing growers need to pay attention to reducing damage on the harvester or graders. It is estimated that growers in the UK are losing approx. £200/ha in damage at harvest time. A few simple checks can make all the difference;

1. Check the harvester for rough edges, rivets, sharp edges, etc. all of which can cause cuts.
2. Ensure the diablo rollers are aligned with the drills. Avoid having too much downward pressure as this will damage tubers near the surface.
3. Check the depth of the share, too shallow and tubers will be sliced. Too deep and extra soil will be brought onto the web and will need extra separation.
4. Check disc setting, if it is too wide you risk bringing extra soil and even stones onto the webs. Too deep and again tubers may be sliced.
5. Aim to have the sieving web at 85% filled with tubers (Pic 1). If the web is too slow then you risk tubers being forced to the side and damaged. Too fast, tubers will roll back down the web.

Pic 1.



6. Keep agitation of the tubers to a minimum. Bouncing the tubers will cause excessive bruising.
7. Check the speed of the rollers if they are turning too fast they can throw tubers up in the air, too slow and they can "grab" the tubers.
8. Watch out for wear on all padding material and side curtains, where gaps appear tubers can get trapped or banged.
9. When transferring to the trailer/box, make sure there is good communication between the drivers. Drop height from the harvester to the trailer can result in significant bruising. Dropping tubers from a height of more than 1m onto a hard floor will result in bruising. Also remember that dropping a tuber more than 1m onto another tuber will damage both!
10. Always check the operator's manual or consult with the manufacturer when changing settings for different conditions.
11. Carry out daily checks using a hot box for bruising. Set the temperature at 34 -36° C and leave the samples overnight. Inspect the tubers and assess the numbers bruised. Use these inspections to inform the drivers of any issues at harvest.

STORAGE

Potatoes will not improve in condition in store but they certainly can deteriorate. Store hygiene is critical when it comes to maintaining quality. Remove all dust and soil before the new crop comes into store. Dust will contain disease spores which will in turn act as a source of contamination for the new crop. Remember a single gram of dust could contain over **2000 silver scurf** spores. Vacuuming, washing and disinfection of the stores will help to reduce the level on inoculum for the new crop. Where rots are seen on the grading table for example disinfect the equipment daily to prevent contamination of the next day's crop. Products like Jet 5 (peroxyacetic acid) will help to reduce the transfer of infection.

Make sure that crops are properly cured before going into store is and remember temperature has an important effect on the rate of curing see Table 1.

Table 1:

Tuber Temperature (°C)	Initial Suberisation (Days)	Periderm Complete (Days)
<5	7 - 14	21 - 42
10	4	7 - 14
20	1 - 2	3 - 6

Filling the store and box stacking are also an important part of getting the fridge unit working correctly. Make sure that all boxes are filled no higher than water level and that the boxes are stacked in the correct manner to aid air flow. (See fig. 1)

Fig. 1

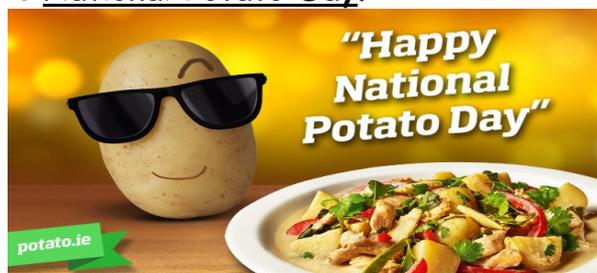


Remember air will always take the easiest route back to the fridge so make sure that there are no obstacles or alleys in the stack which will result in uneven air flow through the boxes. There should be at least 10-12 probes in the boxes to monitor temperature. Remember these are sending info back to the fridge telling it when to turn on and off. For box stores a ventilation rate of $0.02\text{m}^3/\text{s}/\text{t}$ is recommended. Over ventilation will result in excess moisture loss and decrease weight, as well as costing money. Under ventilation can result in CO_2 build up, condensation etc. which can cause the spread of disease.

A good guide to managing potato stores can be found on the AHDB website at: <https://potatoes.ahdb.org.uk/publications/store-managers-guide>

UP COMING EVENTS

Don't forget **Friday 6th October 2017** is **National Potato Day**.



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