

Narrative for Windrower Operation Video

- a. The purpose of this video is to show how to operate a windrower in a way that reduces bruise damage.
- b. Windrowers are a great way to improve overall harvest operation efficiency and decrease bruise damage on the harvester – but only if they are operated properly.
- c. We have seen situations where up to 50% of the crop can be damaged if the windrower is not operated properly – leading to a loss in quality, increased disease in storage and reduced value.
- d. One of the most common causes of bruise damage on windrowers is not carrying enough soil on the primary conveyor. If the soil load on the primary is too light, tubers tumble and roll as they reach the top of this conveyor. Windrower operators should constantly monitor the soil load and adjust forward speed so that some soil is carried over onto the secondary conveyor. This layer of soil also provides cushioning to potatoes as they fall from the primary to the secondary.
- e. It is important to change forward speed by changing the tractor gears instead of using the throttle as this maintains the relationship between forward speed and conveyor speed.
- f. Another cause of bruise damage is too few potatoes on the rear cross, causing potatoes to fall onto bare chain. The rear cross speed should be adjusted so that there is a full layer of potatoes across the entire conveyor, which will cushion the fall from the secondary onto the rear cross.
- g. Windrower operators should also check to make sure there is a layer of cushioning material, such as belting, along the back wall of rear cross. This will keep potatoes from hitting bare metal as they fall off the secondary conveyor.
- h. Finally, the drop from the rear cross discharge into the furrow should be as small as possible. Drops of over 6 inches, especially when potato temperatures are below 50F, can lead to high levels of bruising.
- i. Final list of tips for operation –
 1. Change tractor gears to speed up when soil load on the primary chain is too light, and slowdown in wet spots. Do not adjust the throttle as the change in rpm changes the conveyor speed relative to ground speed.
 2. If too few potatoes are on the rear cross, slow it down by adjusting the hydraulic motor.
 3. Make sure belting and/or cushioning material is attached to the back wall of the rear cross, and check regularly that it is not caked with soil or damaged.
 4. Lower the discharge end of the rear cross as close to the furrow as possible to minimize the drop height.