

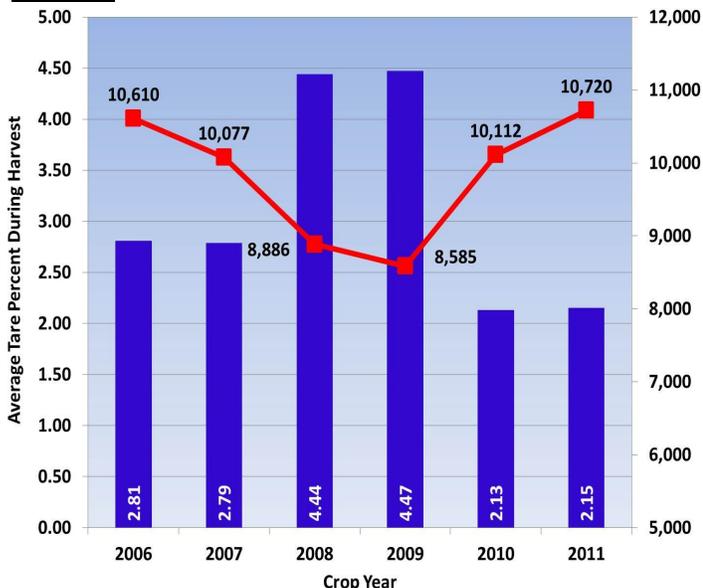


# Rise to the Challenge...

Until we figure out how to grow sugarbeets on trees, tare dirt will always be a problem when it comes to sugarbeet harvest. It is no secret that excessive mud delivered during beet harvest not only slows down the piling operation at the receiving stations, it also detracts from our long-term storage goals by inhibiting ventilation and increases losses due to respiration (this causing unnecessary beet deterioration). But unfortunately, these losses are only the tip of the iceberg – the real problems begin once the dirt enters the factory.



Since many people are not familiar with the factory process, it is a common misconception that all the mud is removed in the washhouse, where in reality some of it actually carries all the way into the filtration process causing trouble along each step of the way. As you can see from the graph below, there is a very direct and detrimental relationship between the amount of tare dirt delivered and factory slice and/or performance. The red line indicates the average factory slice during a 24-hour period across the entire campaign whereas the blue bars show the cooperative's average tare percentage during harvest of the same year. The middle of the graph (2008 & 2009) is where the take-home message lies. Take note how **daily slice drops over 1,500 tons** when the tare percentage increases by only 1.3 percentage points over the six year average. Applying this figure across a 280-day campaign (which is our current estimate) **equates to over 400,000 ton of slice capacity lost.**



Even though Mother Nature has a funny way of dictating the percentage tare delivered, the increasing number of scrub-elevator harvesters and carts can help offset some of her evil ways. In order for your cooperative to both store and process a crop of this size, adjustments to harvesters can and have to be made as soil conditions change from field to field – and it will take everyone's cooperation. The relationship between tare dirt and beet storage/processing is relatively simple; the lower the tare percentage the smoother the entire operation will run. This rule of thumb will hold true until we can get beets to grow on trees, and then we'll just complain about sticks...

## So How Do I Get the Mud Out???

If you find that your harvester is loading excess mud, consider the following adjustments:

### Wet Soil



- Slow down (ground speed)
- Dig shallower
- Narrow up pinch point on lifter wheels
  - ⇒ 1.75" starting point
- Remove lifter wheel close-ups
- Move paddle shaft out toward wheels
- Speed up the grabrolls
- Lower the front of the grabroll bed
- Raise the smooth grabrolls
- Open the grabrolls
  - ⇒ Starting point of 1.5" tube to tube
- Scrub Elevators
  - ⇒ Increase the scrub percentage
  - ⇒ Maximum of 15% scrub
- Wheel Elevators
  - ⇒ Remove rubber flaps from the wheel
  - ⇒ Use the wheel cleaner

### Normal Soil



- Slow down (ground speed)
- Dig shallower
- Narrow up pinch point on lifter wheels
  - ⇒ 1.75" starting point
- Remove lifter wheel close-ups
- Slow down the grabrolls
  - ⇒ A good test is to slow down the lifter's PTO by throttling back the tractor's RPM
- Lower the front of the grabroll bed
- Raise the smooth grabrolls
- Open the grabrolls
  - ⇒ Starting point of 1.5" tube to tube
- Scrub Elevators
  - ⇒ Increase the scrub percentage
  - ⇒ Maximum of 15% scrub
- Wheel Elevators
  - ⇒ Remove rubber flaps from the wheel
  - ⇒ Use the wheel cleaner

### Dry Soil



- Slow down (ground speed)
- Dig shallower
- Narrow up pinch point on lifter wheels
  - ⇒ 1.75" starting point
- Remove lifter wheel close-ups
- Slow down the grabrolls
  - ⇒ A good test is to slow down the lifter's PTO by throttling back the tractor's RPM
- Lower the front of the grabroll bed
- Raise the smooth grabrolls
- Open the grabrolls
  - ⇒ Starting point of 1.5" tube to tube
- Scrub Elevators
  - ⇒ Increase the scrub percentage
  - ⇒ Maximum of 15% scrub
- Wheel Elevators
  - ⇒ Remove rubber flaps from the wheel

## 2012 NDSU Sugarbeet Production Survey

Each year, a survey of production practices is completed by sugarbeet growers in the Red River Valley. This survey provides university researchers, the USDA and the sugar industry with valuable information on the performance of crop protection chemicals, identifies key weed, disease, and insect issues, determines production problems during the past year, as well as pointing out any new problems which may be developing. The information obtained also helps determine education and research programs for the coming year. Although the survey is completely voluntary, your input is extremely important in evaluating the problems encountered this growing season. This annual survey can be completed online on the "Research and Resource" section of the Minn-Dak Agriculture website. The results will be available in the 2012 Sugarbeet Research & Extension Reports via the Minn-Dak Ag Staff or online at [www.sbreb.org](http://www.sbreb.org).