Impact of harvesting on storage losses during a long campaign

Toon Huijbregts

Sugar losses during storage:

- respiration (whole period)
- wound healing (first week)
- moulds and rot (after a few weeks)
- regrowth (warm conditions)
Important factors affecting sugar losses:

- storage temperature
- injuries

Storage temperature

- avoid insufficient ventilation:
  - maximum clamp height: 2.5 m
  - minimise soil, leaves, weeds
Avoid injuries by:

- over topping
- tip losses
- bruise
- surface damage
- crushing at piling

Effect of injuries and temperature on sugar losses (IRS, 1987)
Respiration losses related to damage by a turbine at 10°C (IRS, 2000)

Relation between sugar losses and temperature and injuries
Respiration losses at 10°C
Effect of topping system (IRS, 1999)

Sugar losses (g/t/day)

Day

Effect of topping on sugar losses
(IRS, 2008)

Respiration losses (g sugar/t/day)

Date

with crown over-topped irregular topped
Successful storage starts at harvest

Restricts injuries and dirt tare:

- harvest under good conditions
- uproot carefully
- don’t over top but remove all leaves
- clean gently but minimise soil, loose leaves, weeds
- minimise damage during piling
Beet samples from each harvester are stored in a climate room at 10°C for 8 weeks.

Beet quality will be measured after storage and sugar losses will be calculated.

Storage test at Beet Europe 2010