

SKÖRDE OCH LAGRING AV SOCKERBETOR MODEL

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1 I FÄLTET

1.1 SEN TILLVÄXT - POL

$$ST_P = \begin{cases} 0.010 & \text{if date} < 15 \text{ Nov} \\ 0.005 & \text{if date} \geq 15 \text{ Nov and } \leq 30 \text{ Nov} \\ 0.000 & \text{if date} > 30 \text{ Nov} \end{cases} \quad (1)$$

Where:

ST = sen tillväxt (%-enheter per dygnt)

p = Pol (%-enheter)

1.1.1 Källa

An educated guess

1.1.2 Planerade förbättringar

Build out a proper, weather depended growth model, that uses live data from the current year. This will probably follow the work done by the BBRO.

1.2 SEN TILLVÄXT - REN BETOR

$$ST_{RB} = 1.5735e^{-06} \times D_{10S}^2 - 2.8177e^{-04} \times D_{10S} + 0.01244 \quad (2)$$

$$\times STV \quad (3)$$

Where:

ST = sen tillväxt (% per dygnt)

RB = ren betor

D_{10S} = days after 10 September

STV = Sen tillväxt potential, relativt till median (0.5, 1.25)

1.2.1 Planerade förbättringar

Build out a proper, weather depended growth model, that uses live data from the current year. This will probably follow the work done by the BBRO.

2 UPPTAGNING

2.1 SPILL

$$\text{Spill} = 3.804e^{-4} \times RSB^2 + 4.508e^{-2} \times RSB + 0.25 \quad (4)$$

Where:

RSB = rotspetsbrot (% > 2cm)

2.1.1 Källa

BBRO med multiplication faktor (x2) enligt erfarenhet inom industri.

3 LEVERANS

3.1 KOSTNADER

Kostand per ton orenheter (approxiamte)*

$$\frac{dSEK_{orenheter}}{dkm} = \begin{cases} 0,841 & \text{km} < 145 \\ 0,482 & \text{km} \geq 145 \end{cases} \quad (5)$$

Where:

Orenheter är ton

km = kilometer

Baskostnad (1km) = 23,74SEK/tn

3.1.1 Källa

*Data is taken from the 2020 price model. The above equations are only approximations. Actual data is taken from the Nordic Sugar "Transportkostand för orenheter" table.

4 PRODUCTION OCH BETALNING

4.1 RENHET

$$\frac{dRenhet}{dD} = \begin{cases} 0 & D < 20 \\ -0,0022 * D + 0,0438 & D \geq 20 \end{cases} \quad (6)$$

Where:

Renhet är procent enheter

D = day after harvest

$R^2 = 0,9188$

4.1.1 Källa

Agrilog, Sweden, 2020. All varieties.

4.1.2 Planerade förbättringar

Link to variety. The model is currently biased towards varieties that probably lose a lot of cleanness late in a long-term storage campaign.