

RenR 480/711

Review

Challenge

From experience over 30 seasons, a forest nursery manager knows that she sells approximately 100,000 lodgepole pine seedlings/year, but the amount varies from year to year (standard error of 10,000).

She is willing to accept a 2.5% chance to run out of stock.

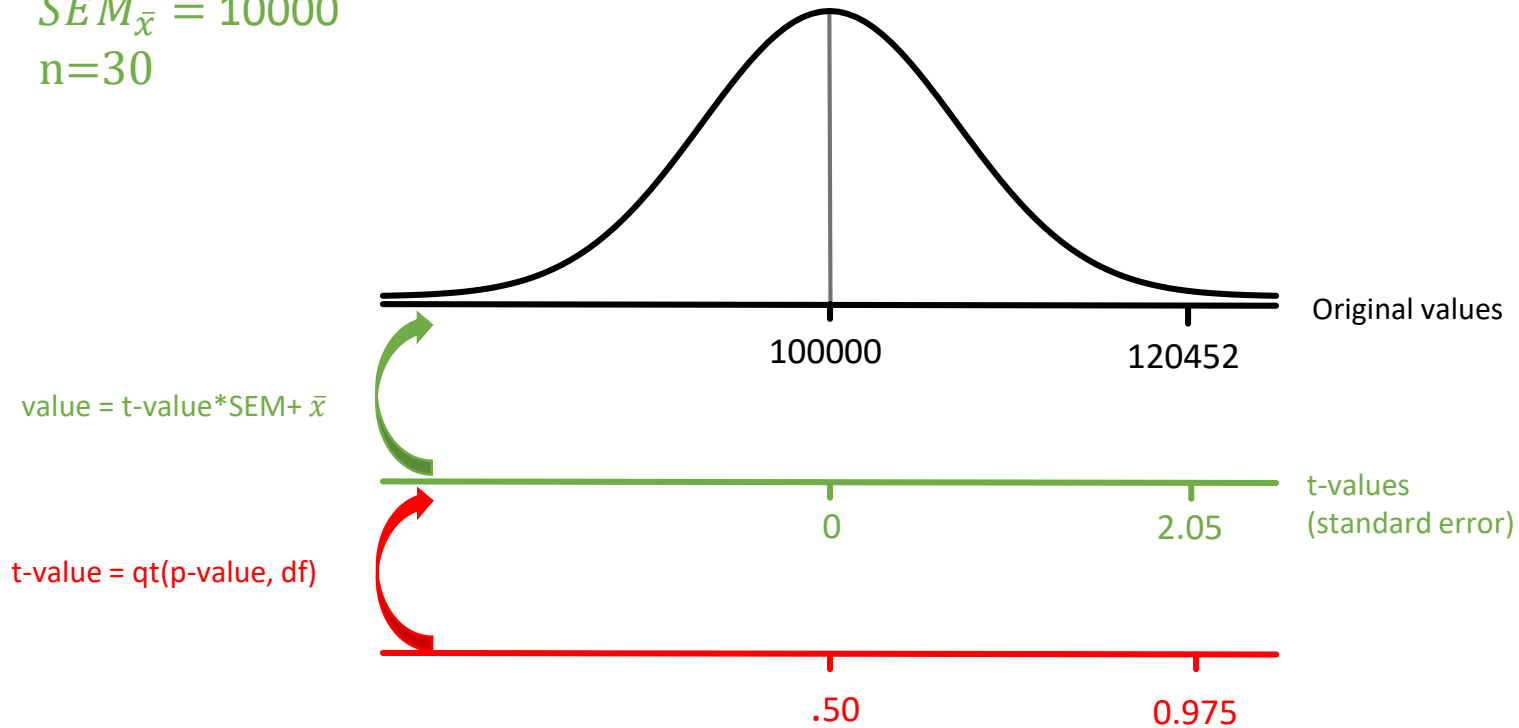
How many seedlings should she grow approximately?

Challenge

$$\bar{x} = 100000$$

$$SEM_{\bar{x}} = 10000$$

$$n=30$$



She should grow ~120,000 seedlings!

→ One-sample T-test (one tail)

Challenge

We can also approximate without doing calculations in R:

→ ±2 SE represent approximately the 95% confidence interval

→ Therefore: $2 * t\text{-value} * SE + \bar{x}$

→ $2 * 2 * 10,000 + 100,000 = 120,000$ seedlings