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Losses in peanut yield during digging as a function of shaker rotation

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Objective

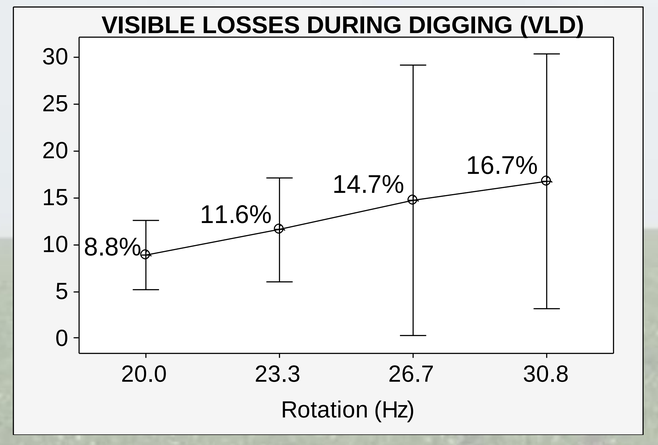
Determine optimum digger rotation to avoid peanut losses during harvest

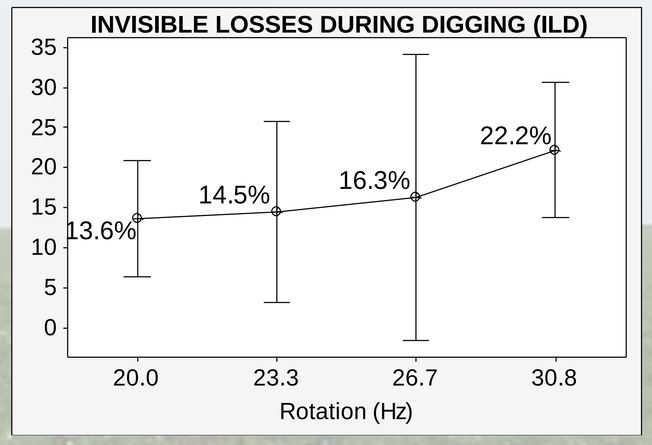
Methodology

Experiment site: UNESP/FCAV – Jaboticabal – SP – Brazil

- Tractor-digger set: BM 110-Valtra; C-200-MIAC/Colombo
- Soil: Eutroferric Red Latosol
- 4 rotations in the motor: 20, 20.3; 26.7 and 30.8 Hz
- PTO: 5.8; 6.9; 7.8 and 9.0 Hz
- Shaker rotation: 1.7; 1.8; 2.1 and 2.4 Hz
- Soil moisture during digging: 13.6%
- Water content of the pods: 50.2%
- Peanut yield: 1,745.4 kg ha^{-1}.

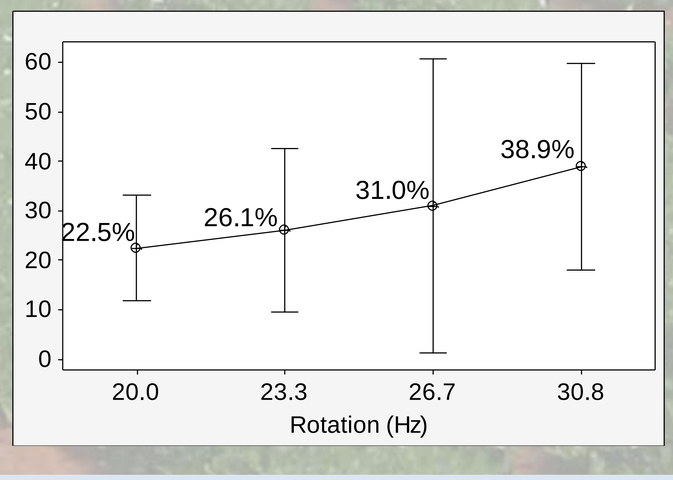
VLD + ILD = TLD





Variable	Mean (%)	Median (%)	σ (%)	R	CV (%)	Ck	Cs	AD	D
VLD	13.0	12.0	8.35	32.14	28.0	1.86	1.33	0.041	N
ILD	16.7	18.2	9.4	35.27	34.2	-0.31	0.13	0.861	N

σ: standard deviation; R: range; CV: coefficient of variation; Ck: coefficient of kurtosis; Cs: coefficient of skewness; AD: Anderson-Darling test; D: Distribution (A: asymmetric or N: normal)



Variable	Mean (%)	Median (%)	σ (%)	R	CV (%)	Ck	Cs	AD	D
TLD	29.6	31.7	16.5	60.92	31.4	-0.28	0.36	0.668	N

σ: standard deviation; R: range; CV: coefficient of variation; Ck: coefficient of kurtosis; Cs: coefficient of skewness; AD: Anderson-Darling test; D: Distribution (A: asymmetric or N: normal)

Conclusions

Making a calculation of economy between the highest and lowest rotation can be obtained 16.4% more production if work with lowest rotation. Calculating in bags (25 kg), can be earn 11.45 bags ha^{-1} over in the peanut yield.