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Breeding & selecting avocados for the future of the avocado industry

Z R Ernst & A A Ernst



Why do we breed?





Integrative farming approach

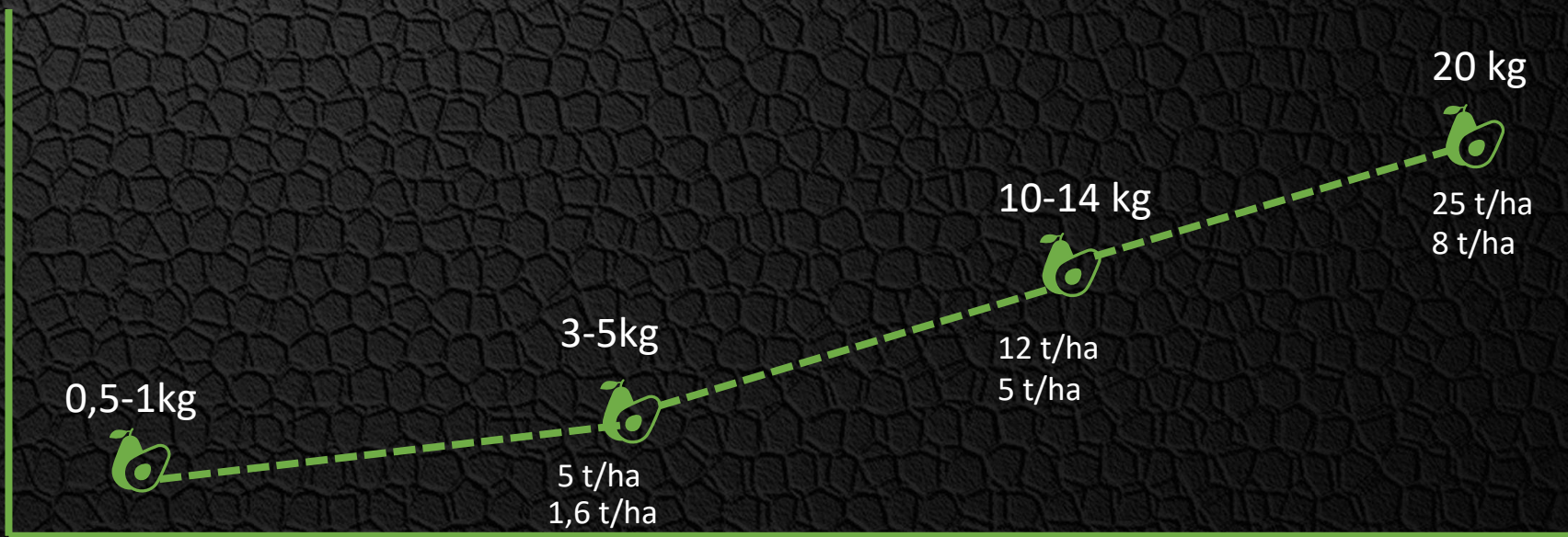
3 Soil types
1 cultivar
1 irrigation
system perfect uniformity



allesbeste
KWALITEIT WEENS PASSIE

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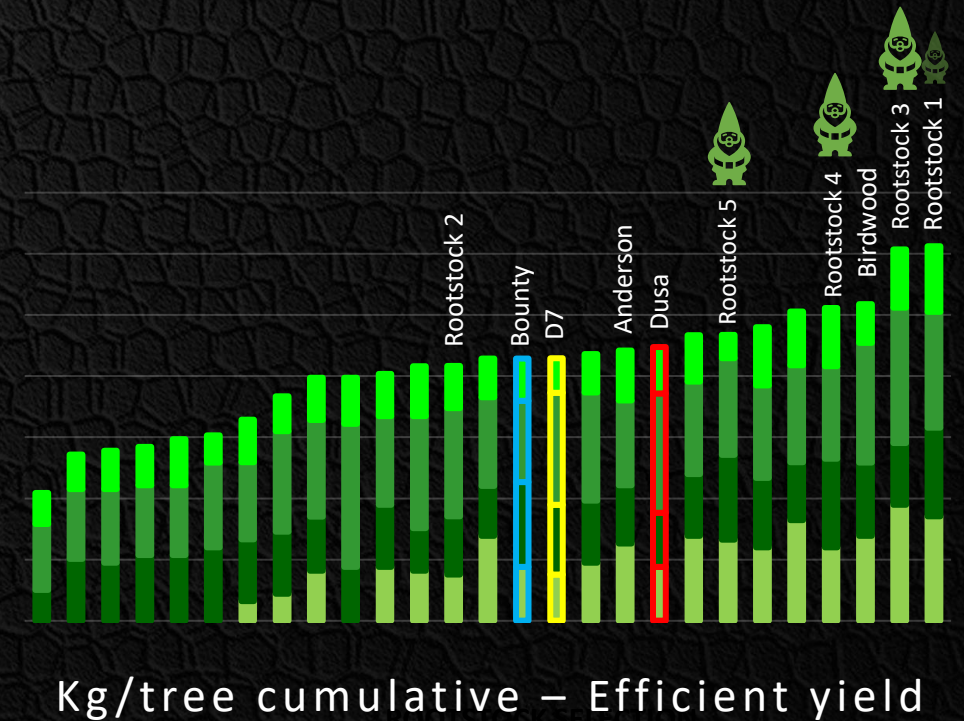
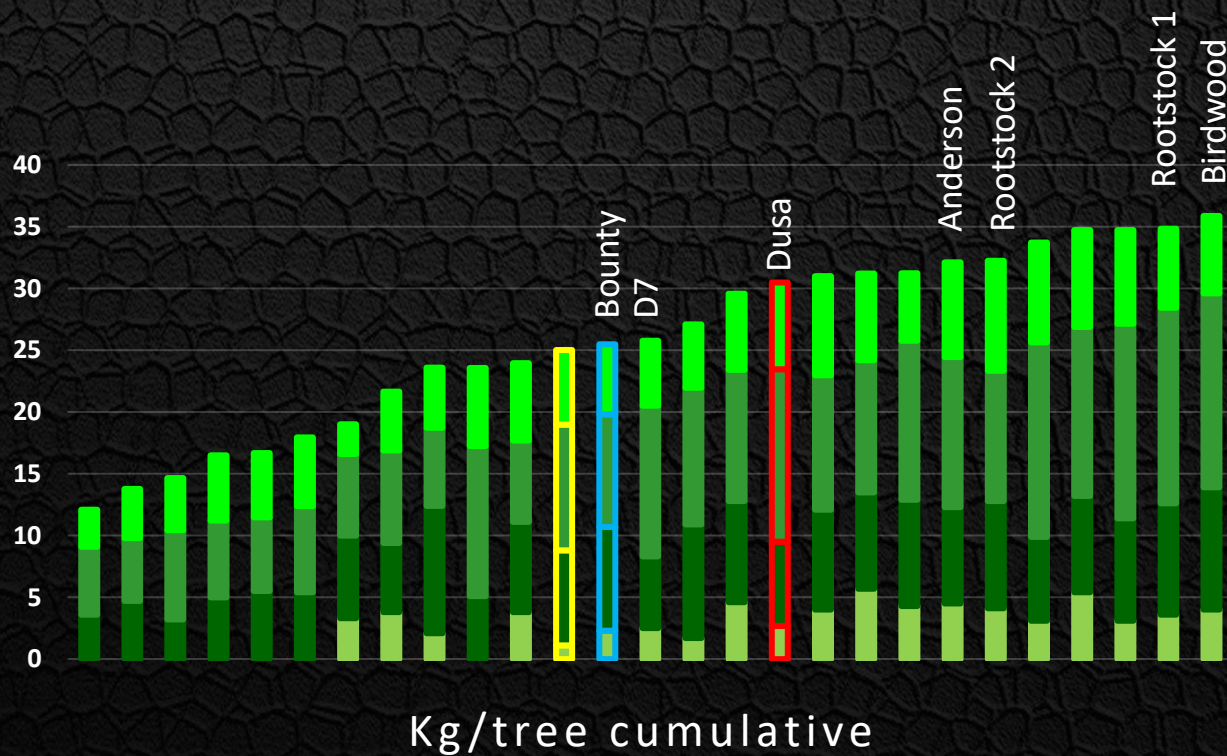




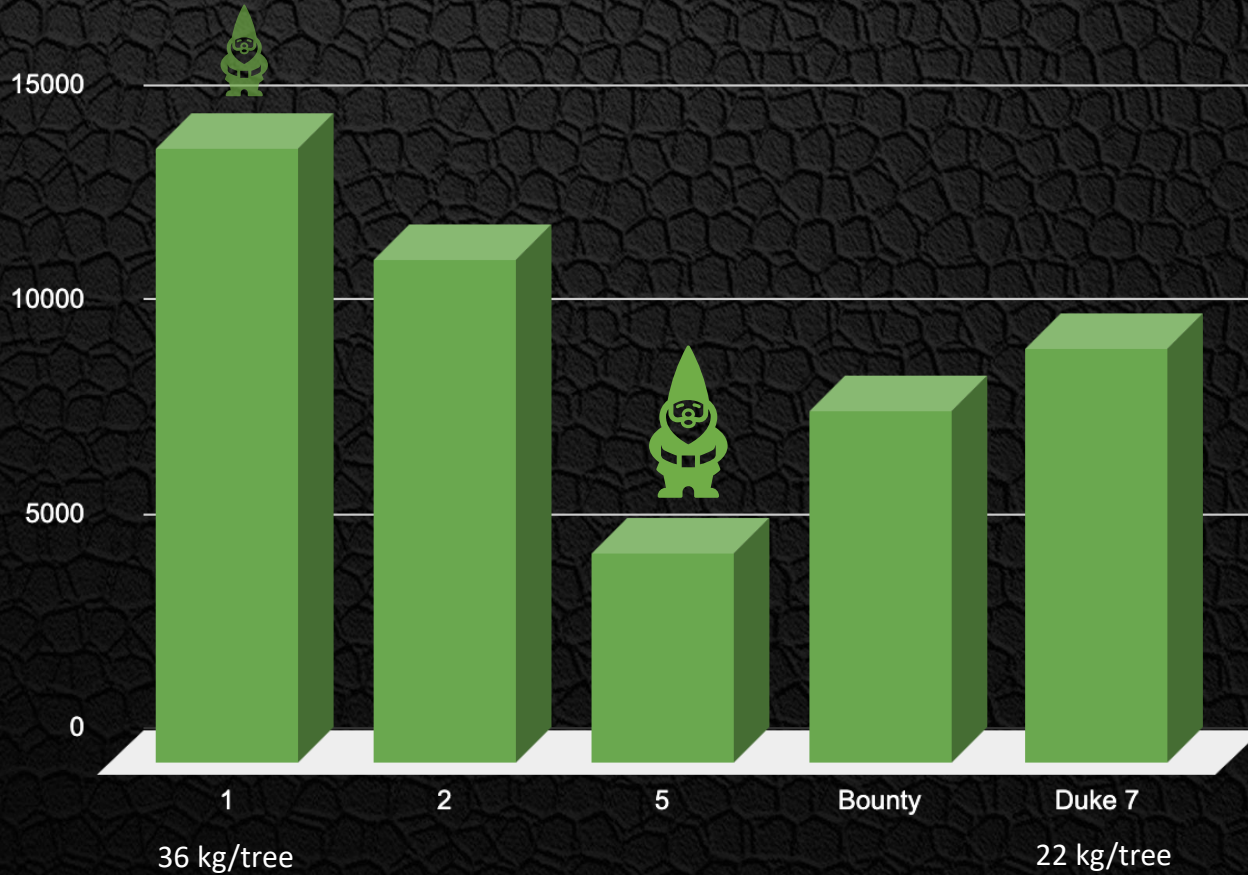
Benchmarks for Rootstocks

- Precocity
- Kg/ha per year compared to commercial Rootstocks
- Growth / energy balance for "terroir" and cultivar selections
- Phytophthora
- EC tolerance

Maluma yield

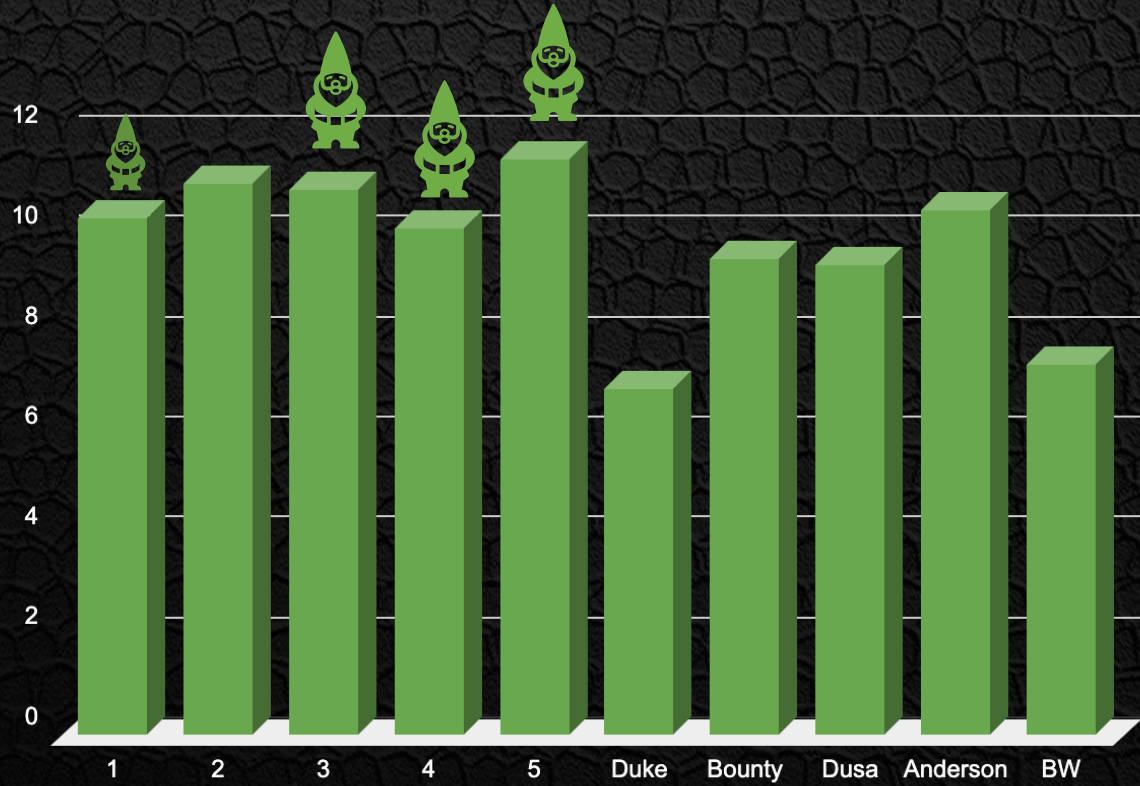


Hass Results



3 year average
All in one block
Affected by hail in 2021

Trellising Results



Planted end of summer '20
Harvested 24 months after planting

Benchmark 5kg /ha



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1



2



3



4



5



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VARIETY: 1



TREE SIZE



CLIMATE



FRUIT SET POTENTIAL



TREE SHAPE



HUMIDITY ADAPTABILITY



CROP POTENTIAL



INTERNODE LENGTH



PRECOCITY



HARVEST WINDOW



FLOWER TYPE



Variety 1 HASS



FRUIT SIZE



FLOWER POTENTIAL



SEED TO FLESH RATIO



TRELLIS SUITABILITY

Lessons?

- * Mostly the "F-Word"
- * Getting it wrong
- * Not getting it right
- * The "BIA"?

→ Move even faster → How?

Thanks
Seth Godin

To a man who dedicated his life to avocados. We acknowledge what he did as a private individual where multinationals and large institutions dared not to go. Challenging and often changing the status quo with passion for a better world for all of us!



Dr A.A. Ernst
1953 - 2021

"as jy net daar in die hoek gaan sit en kyk, gaan niks gebeur nie"
"if you only sit on the side and look on, nothing will ever change"

