



Holistic Approach to Planning for Optimal Resource Use

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Planning to Optimise Resources

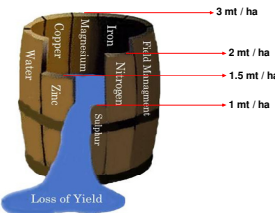
- When we come back to basics relative to the concepts and principles that we have based them on, we need to validate those original principles or see if they were correct which we will see are terribly flawed.
- One of the most valuable intangible assets is knowledge coupled with human intellectual capital [the source of innovation and renewal] we have foundational knowledge, applicational knowledge and experiential knowledge, however if our foundational knowledge is flawed we are in serious trouble.
- We need to build sustainable and profitable robust farming models to allow us to optimise resources and thrive in these difficult times.



Examining Some Foundational Principles

There are two philosophies, a century apart, that can help us to obtain our aspirational goals of doubling average crop yields


In 1862
A German chemist **Justus Von Leibic** outlined his "**Law of the Minimum**", stating that plant yield was affected by the most limiting factor across the agricultural value chain



Metric Tons per Hectare


- Field Manure → 3 mt / ha
- Iron → 2 mt / ha
- Magnesium → 1.5 mt / ha
- Nitrogen → 1 mt / ha

In the 1960's
An Israeli physicist **Elahu Goldratt** outlined the "**Theory of Constraint**", stating that in any production unit the throughput can never be greater than the greatest constraint [bottleneck] T.O.C



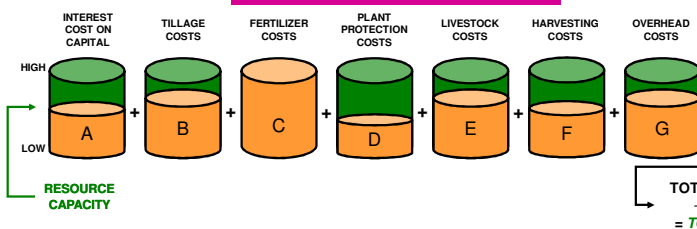
Goldratt's TOC Five Focusing Steps:

- 1.) **IDENTIFY** the system constraint.
- 2.) Decide how to **EXPLOIT** the constraint.
- 3.) **SUBORDINATE** everything else to the above decision.
- 4.) **ELEVATE** the system constraint.
- 5.) If the constraint has been broken, go back to **STEP 1**.



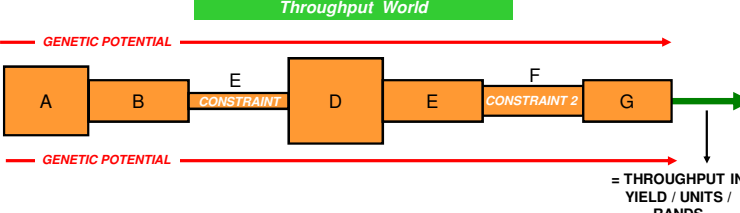
The Cost World vs The Throughput World

Cost World

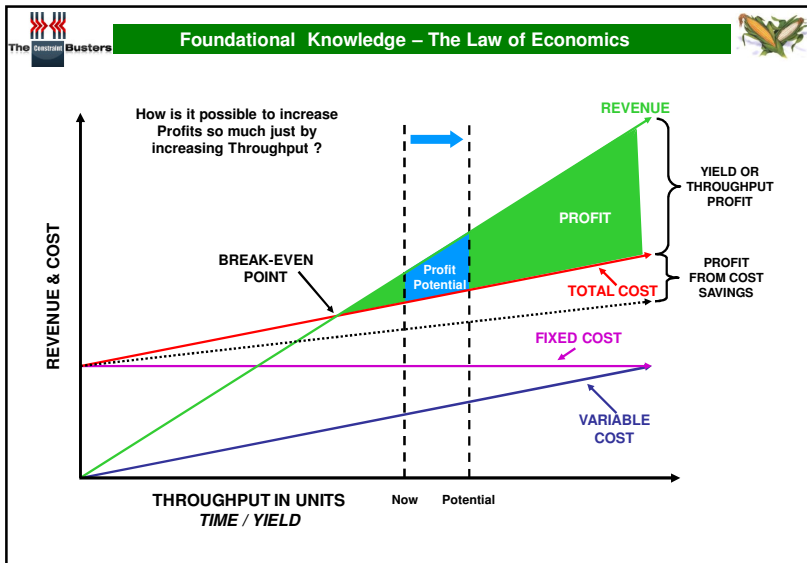


= TOTAL REVENUE - TOTAL COST = TOTAL PROFIT

Throughput World



= THROUGHPUT IN YIELD / UNITS / RANDS



Applicational Knowledge

Farming is a process and we need to identify where by breaking a *specific constraint* would impact on the whole farming model.

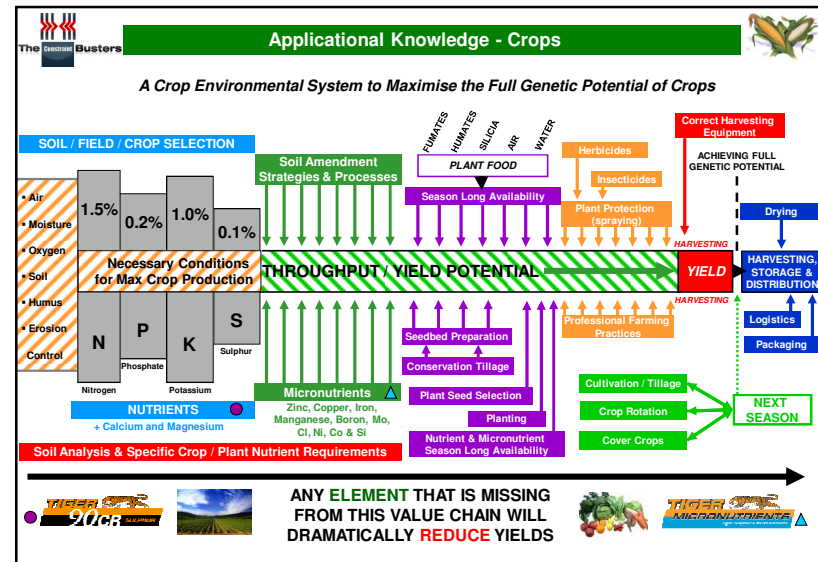
From experience we find that whatever improves throughput (yield & crop quality) automatically *releases capacity* or underutilized existing resources.

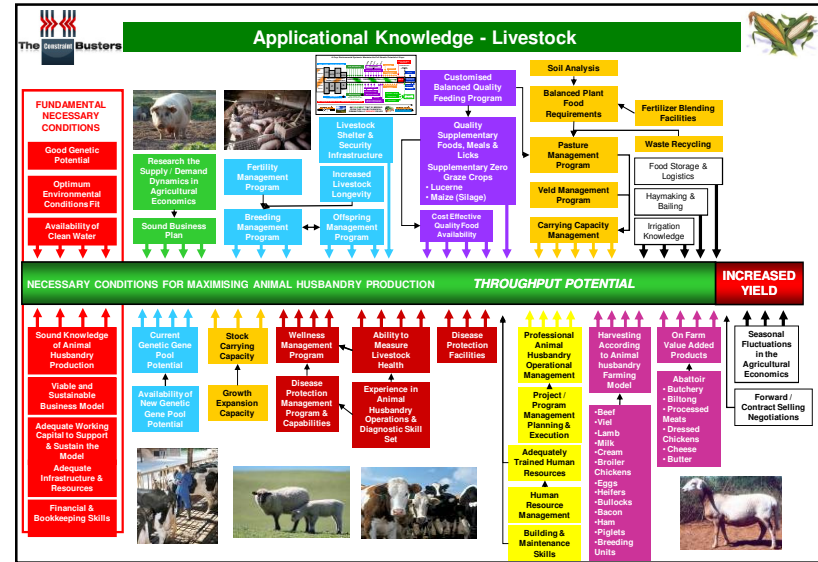
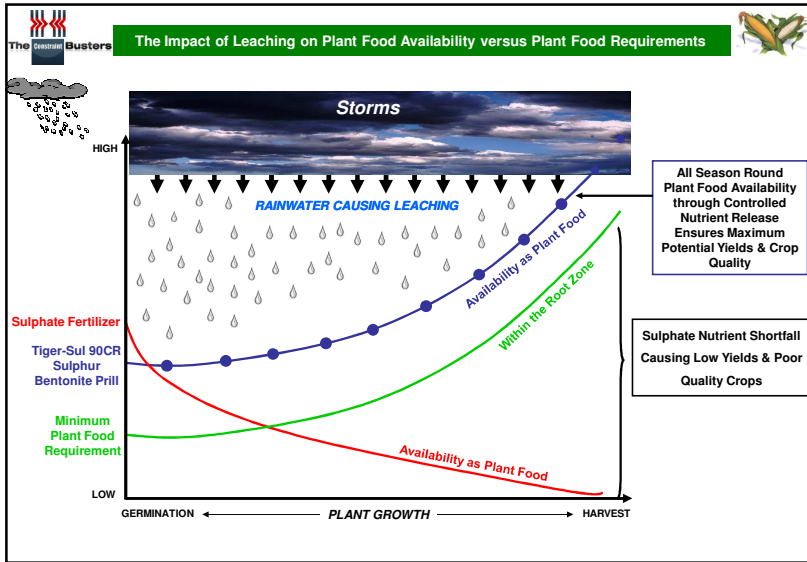
Remember when breaking constraints 90% of the throughput goes straight to the bottom line.

Applicational Knowledge

Maximising Soil Fertility;

- Is the most obvious way to improve throughput.
- Analysis and balancing nutrients and micronutrients is the surest way to increase throughput and reducing costs.
- Fertile soils produce healthy and robust crops and reduces the application rate for insecticides and herbicides.

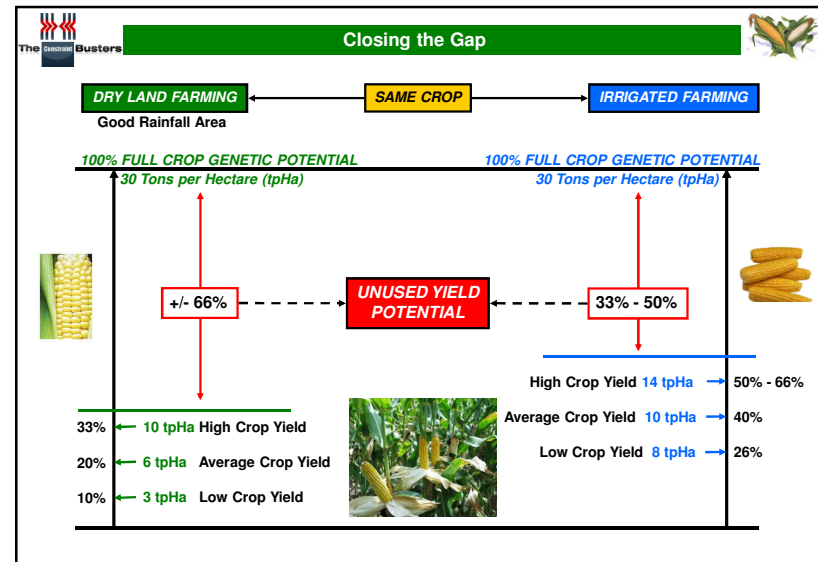





Experiential Knowledge

With the application of an Holistic Approach the following results have resulted in;

Wheat 25-30%	Strawberries 200-400%	Cabbage 100-200%	Sugar Cane 50-100%	Maize 25-100%
Citrus 100-500%	Cauliflower 100-200%	Potatoes 50-100%	Table Grapes 30-100%	







The Future Potential

- Goldratt has shown and proven in hundreds of industries world wide that there is a minimum of *25% inherent capacity* locked up by constraints.
- He has a *Viable Vision* offer – where he offers on selected clients that he will take their top line [revenue] and make it their bottom line [profit] over four years.

SOUNDS PREPOSTEROUS



The Future Potential

Our vision is to identify a multitude of constraint busting products (such as Tiger-Sul Nutrients & Micronutrients) and processes to promote the Holistic Farming Concept into the public domain in order to produce more affordable food, to solve the worlds food crisis and make farmers prosperous.

You cant say that we don't have an ambitious target.

THANK YOU