

FACTS
DO NOT
CHANGE PEOPLES MINDS

A Case Study on the Relationship between Maize Yield and the exchangeable Soil Ca and Mg Status

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Motivation for Presenting The Case Study

- **Increase in Unfounded Lime Recommendations**

Motivation for the Case Study

- **Expose the Bandwagon Fallacies**
 - Target Cation Ratios
 - Building Ideal Soils that are Cation Balanced
- Name Throwing i.e. Albrecht ,Kinsey “Systems”
- Claims that soil analysis done by American labs is the answer

Motivation for the Case Study

- **Availability of Big Data Technologies**

Motivation

35 years Field Experience
no evidence of any merit in the
Bandwagon Fallacies

Case Study Background

- Area : 3100 Ha in Mpumalanga
- Crop: Maize Dryland & Irrigation
- Rotation : 10% with Potatoes
- Yield data : 13 Years Combine Data

Case Study Background

- Soil sampling: 1 Ha grids
- Soils : Oxidic & Plinthic
- Tillage: Conventional
- Ameliorations : Differential & Flat rate

Case Study Background

- Used grid soil samples from 2017
- Used Combine Yield data from 2017

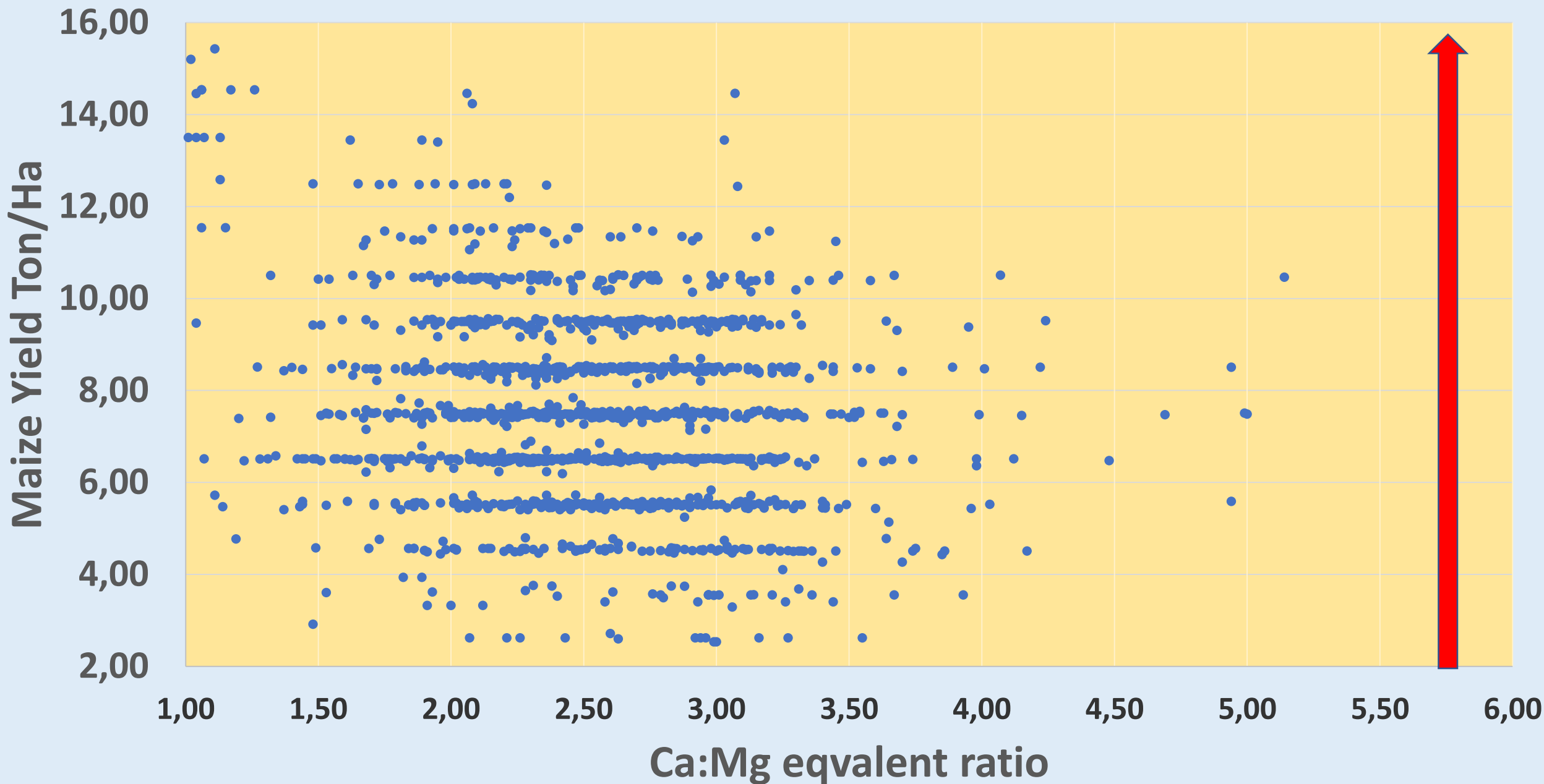
Case Study Background

- Create Normalized Yields into 5 Zones
- Using 5 seasons
- 2018, 2017, 2016, 2015, 2014

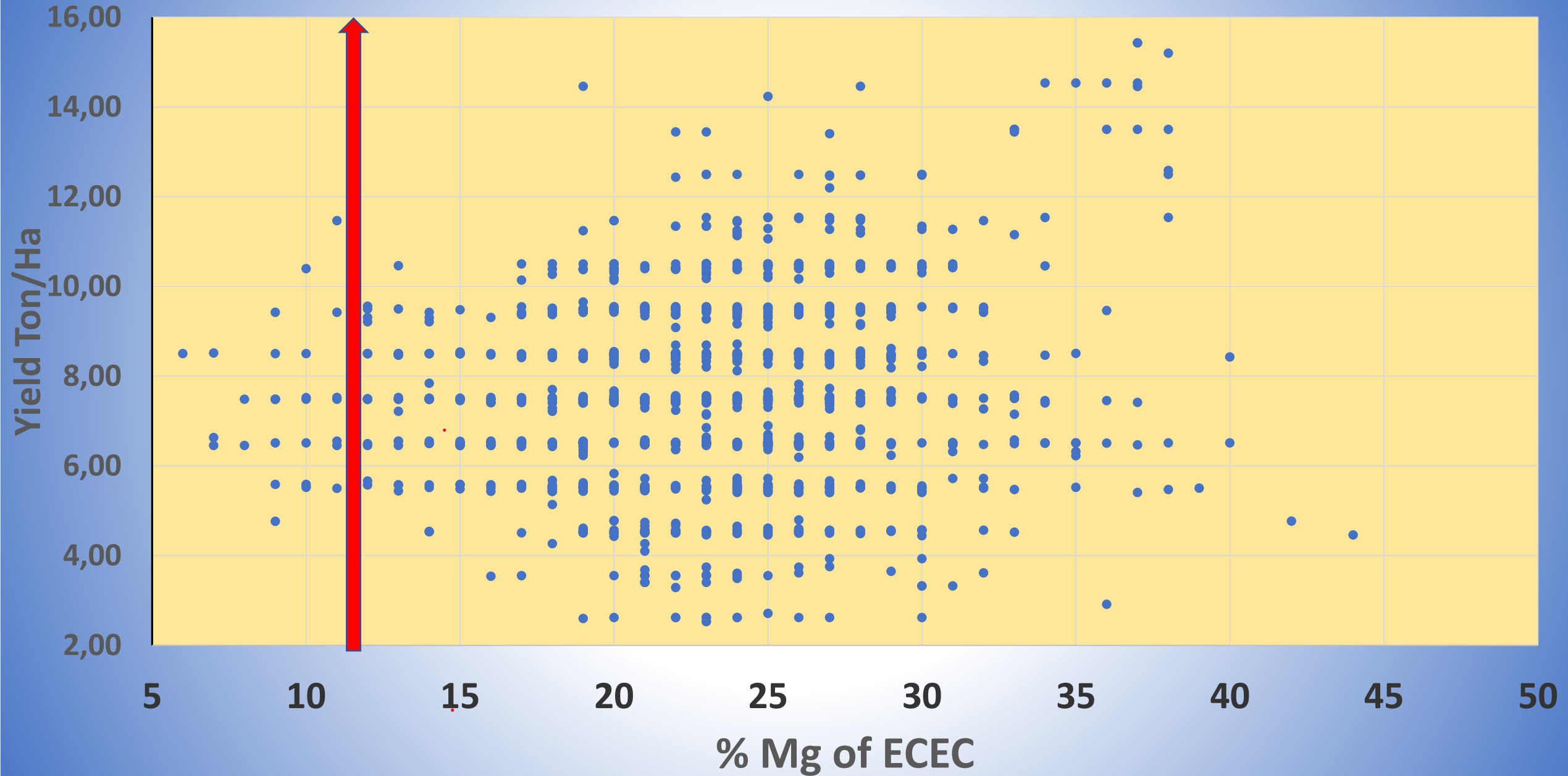
Case Study Results

- Relationship Scatter Diagrams

A scatter plot with a yellow background and a light blue border. The x-axis is labeled 'Ca:Mg equivalent ratio' and ranges from 1,00 to 6,00 with major ticks every 0,50. The y-axis is unlabeled but has a red arrow pointing upwards on the right side. The plot contains numerous blue data points. Most points are clustered between x-values of 1,50 and 3,50, with y-values ranging from approximately 0,20 to 0,80. There are a few outliers at higher x-values, such as around 4,00, 4,50, 5,00, and 5,50. The points are distributed across the entire range of the y-axis, with a higher density in the middle range (0,40 to 0,60).



Maize Yield vs.% Mg



Maize Yield vs. % Ca

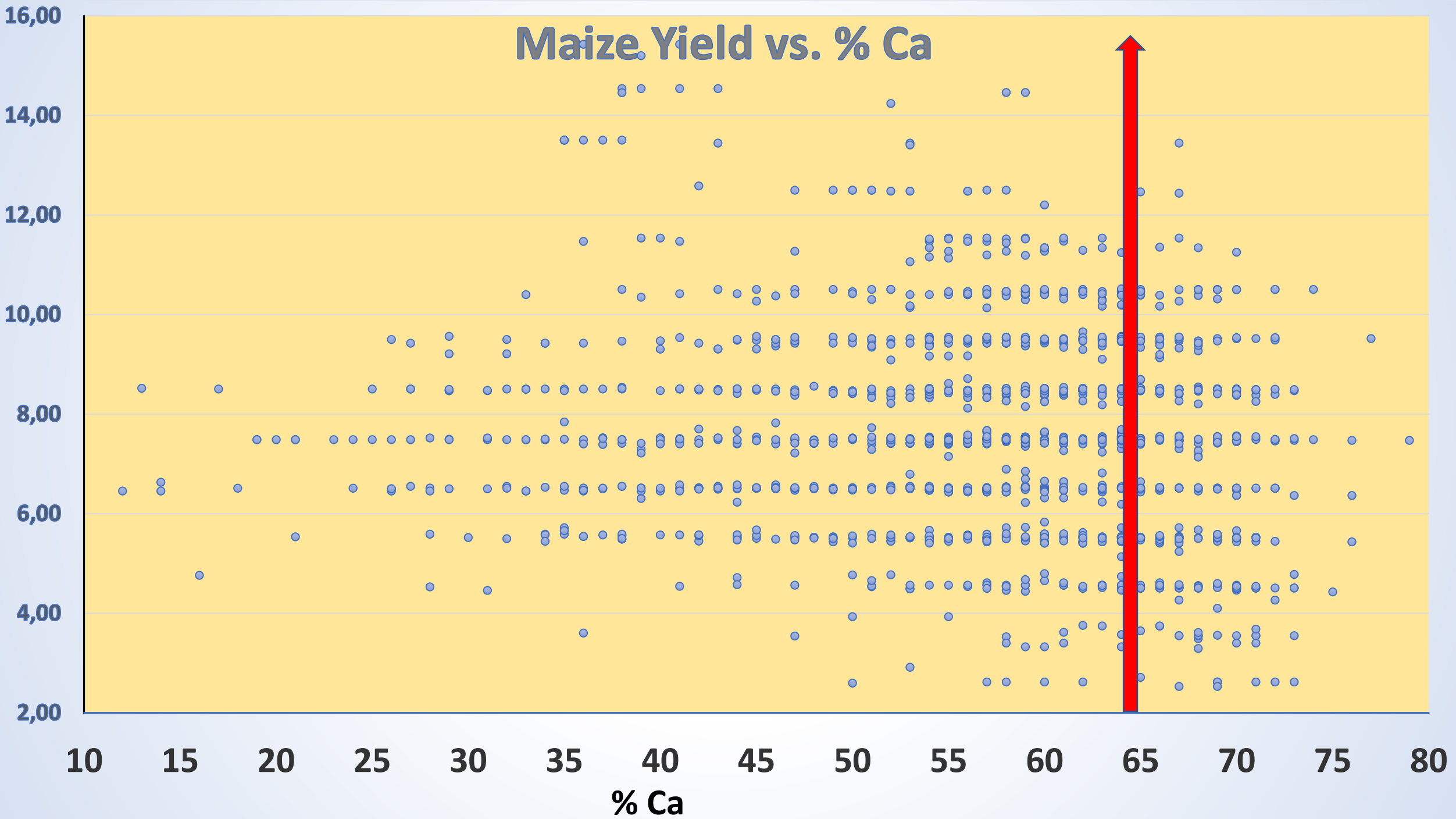


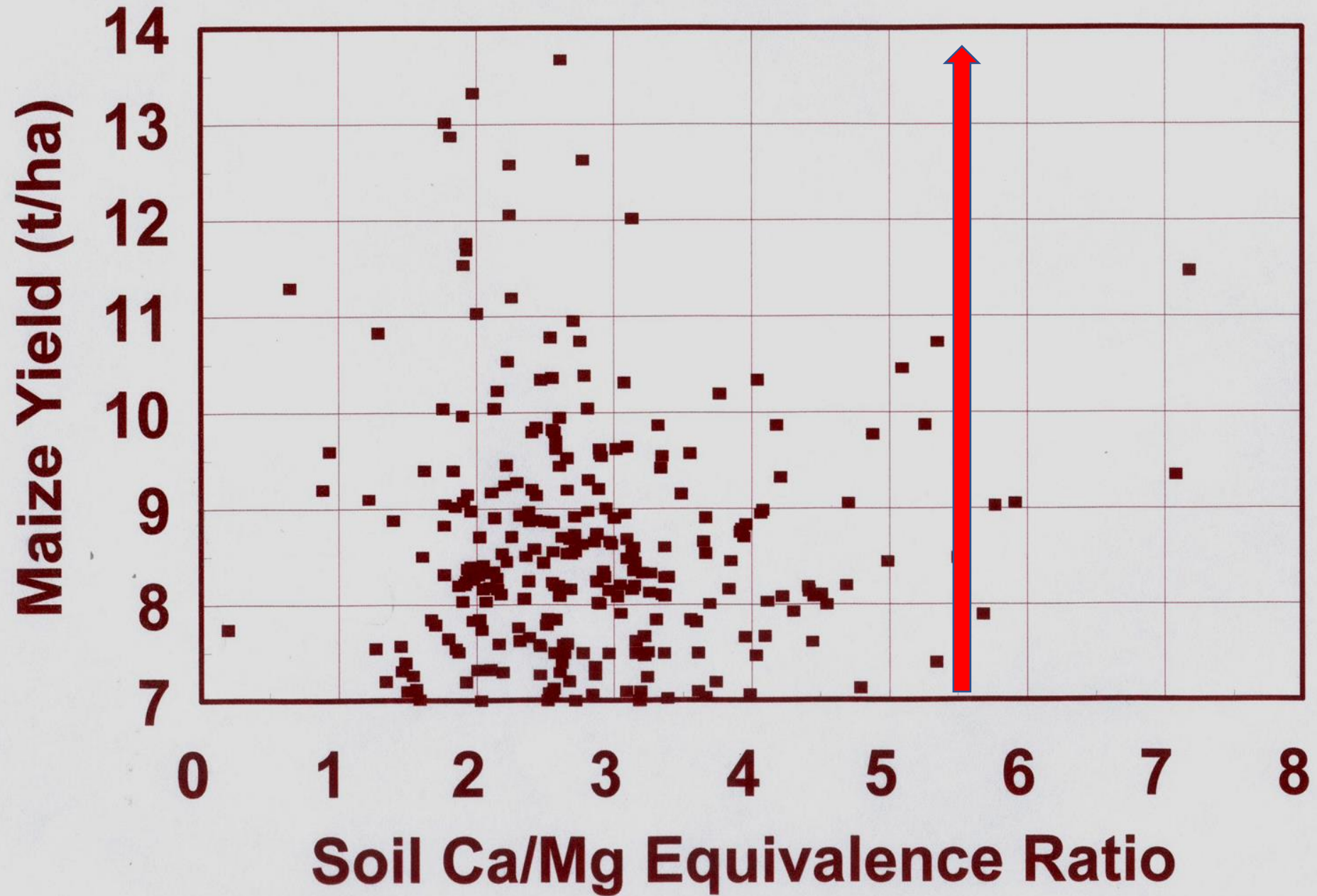
Table 1: Yield Zones vs % Ca , Mg & Ca:Mg

Yield Zone	Ca %	Mg %	Ca : Mg	Yield
Well Below Avg	60	24	2,6	4,19
Below Avg	57	23	2,6	5,89
Average	55	22	2,5	7,37
Above Avg	58	23	2,6	8,73
Well Above Avg	57	25	2,3	10,75

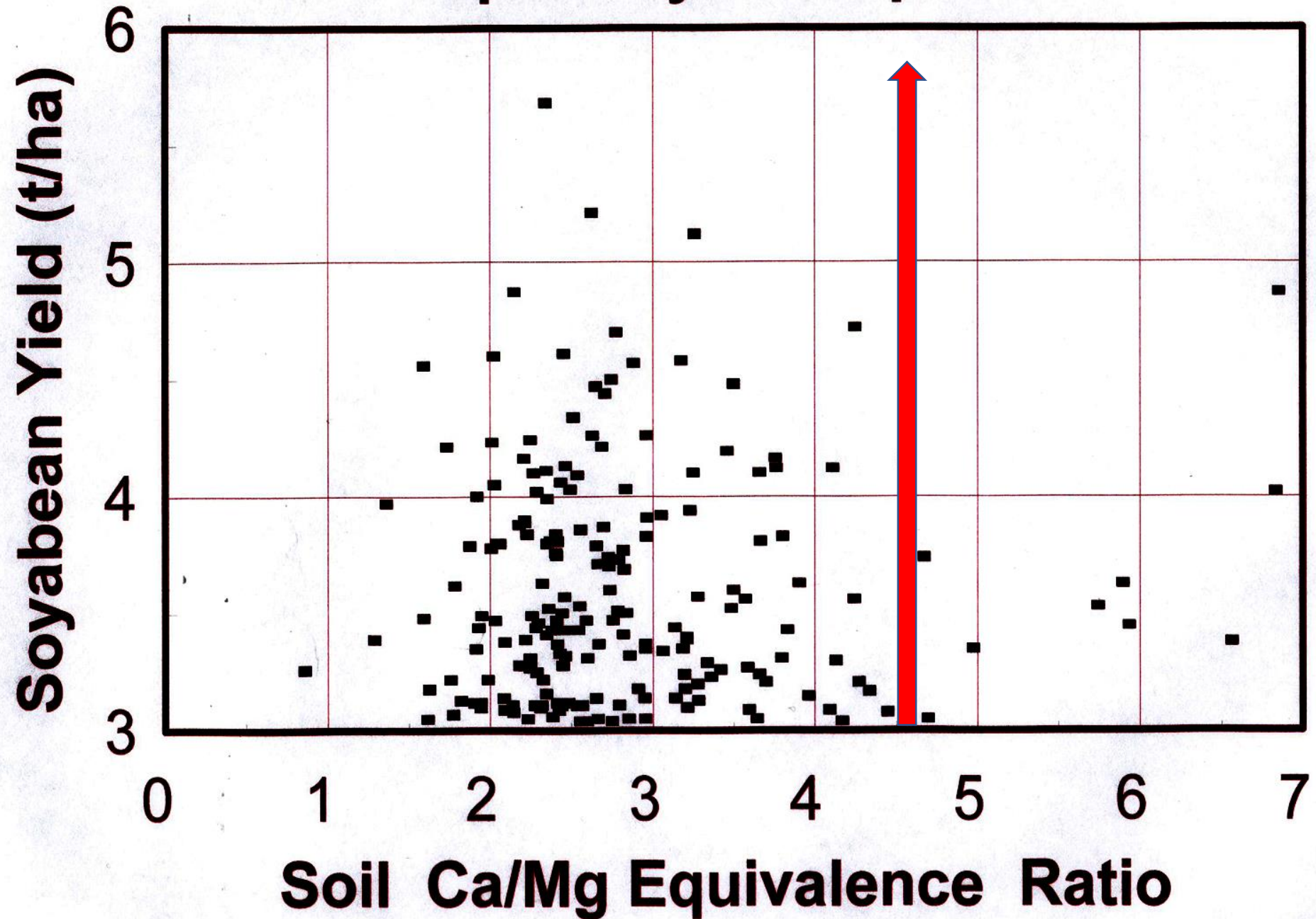
OTHER SUPPORTIVE DATA

- TEN TON MAIZE CLUB
- SUPER SOYA COMPETITION

Ten Ton Maize Club



Super Soya Competition



THE BANDWAGON FALLACIES

WASTE RESOURCES

MISLEAD PRODUCERS



CONCLUSION

WHY FACTS
DO NOT CHANGE OUR MINDS

MANY PSYCHOLOGY BASED REASONS

FOR THE UNFOUNDED LIMING RECOMMENDATIONS

SCIENCE HAS BEEN CAPTURED BY COMMERCE

THANK YOU