

# Pasture plants in the Falklands

Where can soil maps help?

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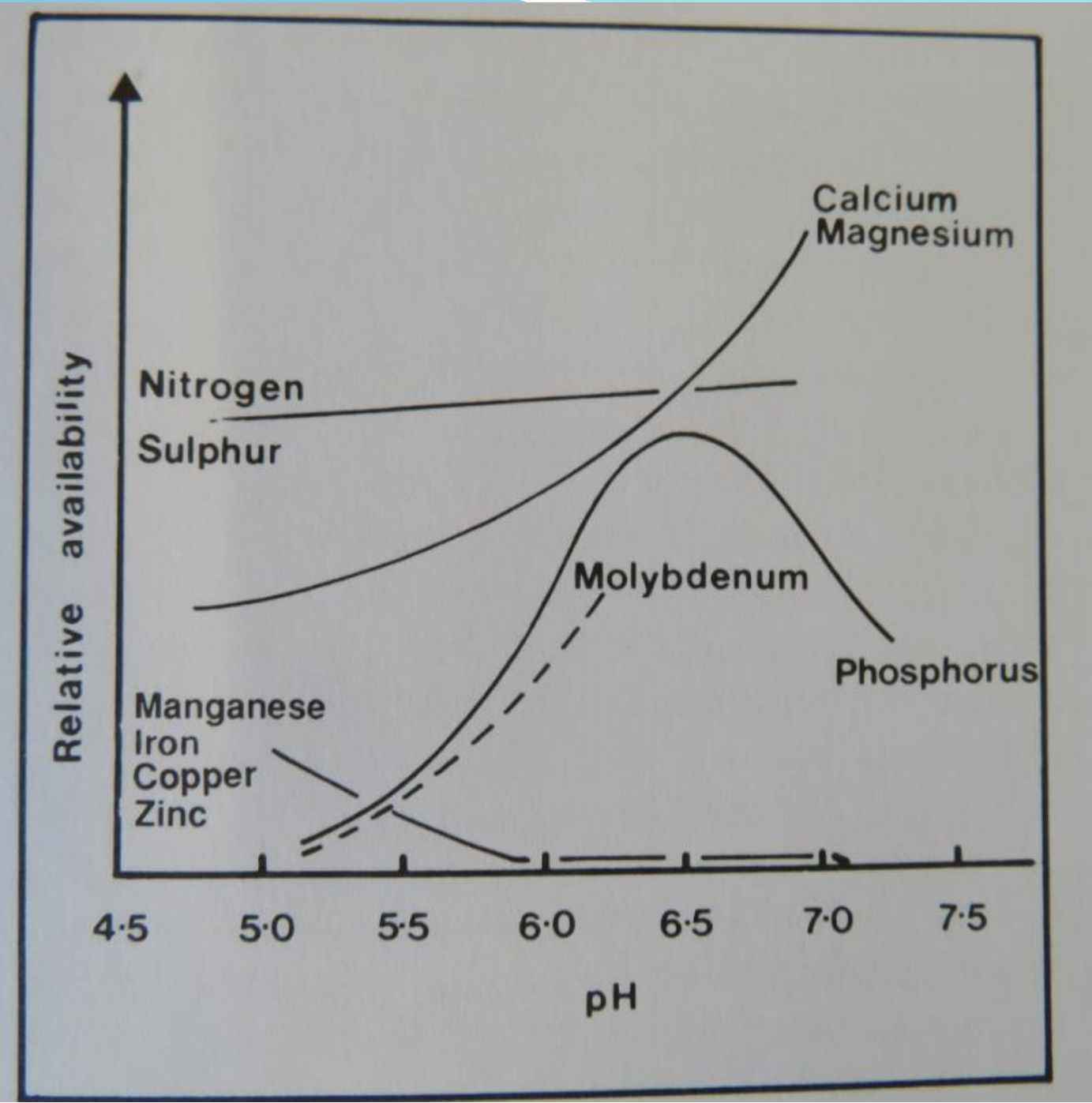
# FRANK T. SHUTT & L. E. WRIGHT (1933)

“Peat may be briefly defined as semi-decomposed vegetable matter formed by accumulation of plant remains”

“There are many instances in which areas have been put under cultivation at considerable expense which would have been better left untouched and used either as hay, or pasture land”



Newly broken peat land showing drainage ditch. Illustration Station, Caledonia Springs, Ont.

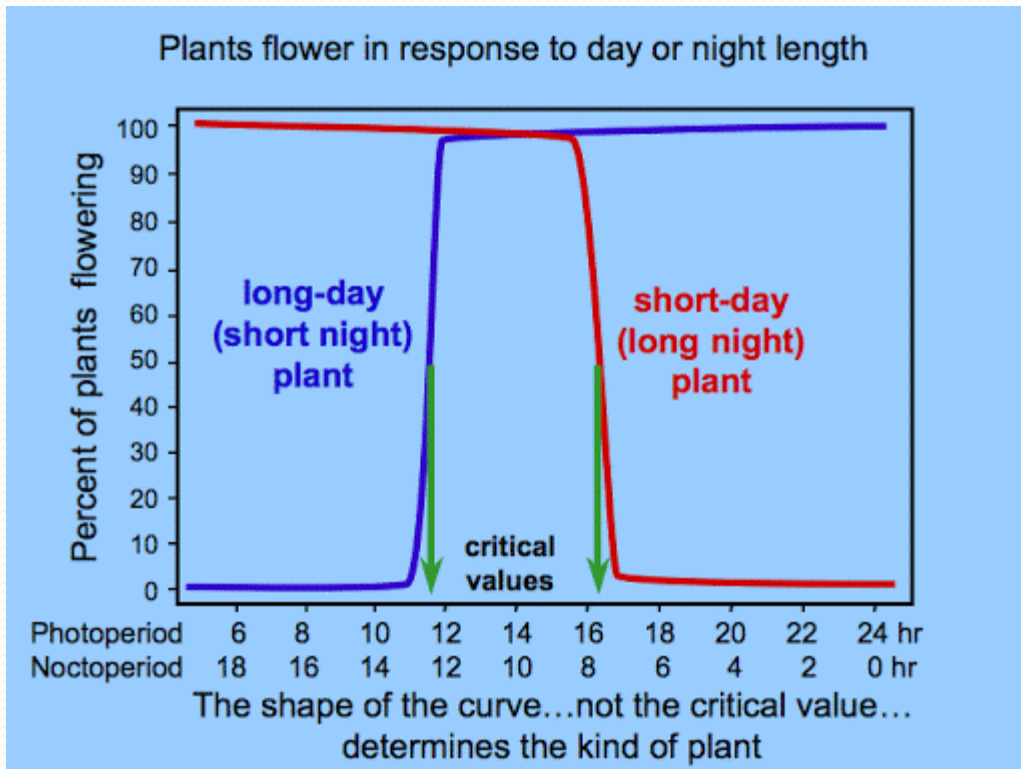


# Interpretation of soil nutrient values for grass growth in peaty soils

Element	Target range or optimum	Comments
pH	5.6	
Nitrogen	250-350	For crops on peaty soils
Phosphorus P	16-45	Most soils in Falklands ok
Potassium K -grazing	120-240	
Potassium K -hay, silage	240-400	
Magnesium	50-100	Most soils in Falklands ok
Aluminium	2 meq/100g	Conversion rates needed



# Triggers for pasture plant development morphology



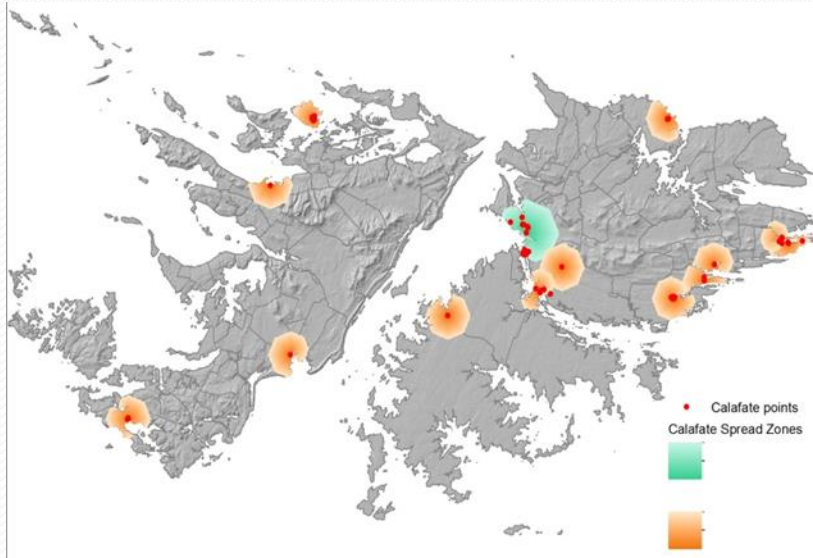
- Photo-period sensitivity (day-length)
- Vernalisation requirement (accumulation of cold days)
- Temperature sensitivity (growth rates)
- Soil conditions

# Morphology of the calafate plant?



# Morphology of the calafate plant?

- Different growth habits across the landscape?
- Time until reproduction?
- Capability to adapt its growth to the conditions?
- Spread predicted even without potentially synergistic effects of climate change
- Potential to map invasive species risk?



# Plant resistance and tolerance to stress in the soil landscape.

- Tolerates soil borne pathogens like Rhizoctonia and Thielaviopsis until.....???
- Soil conditions change e.g. free aluminium levels
- Other stresses are introduced e.g. Phasidium laterum, post harvest apple disease
- Ability to recovery from stress including grazing?



# A good use of soil maps

- A baseline for the location of pasture plants and the conditions and cues that they respond to (phenological development).
- Map invasive species risk e.g. calafate
- Map the stress tolerance of pasture plants