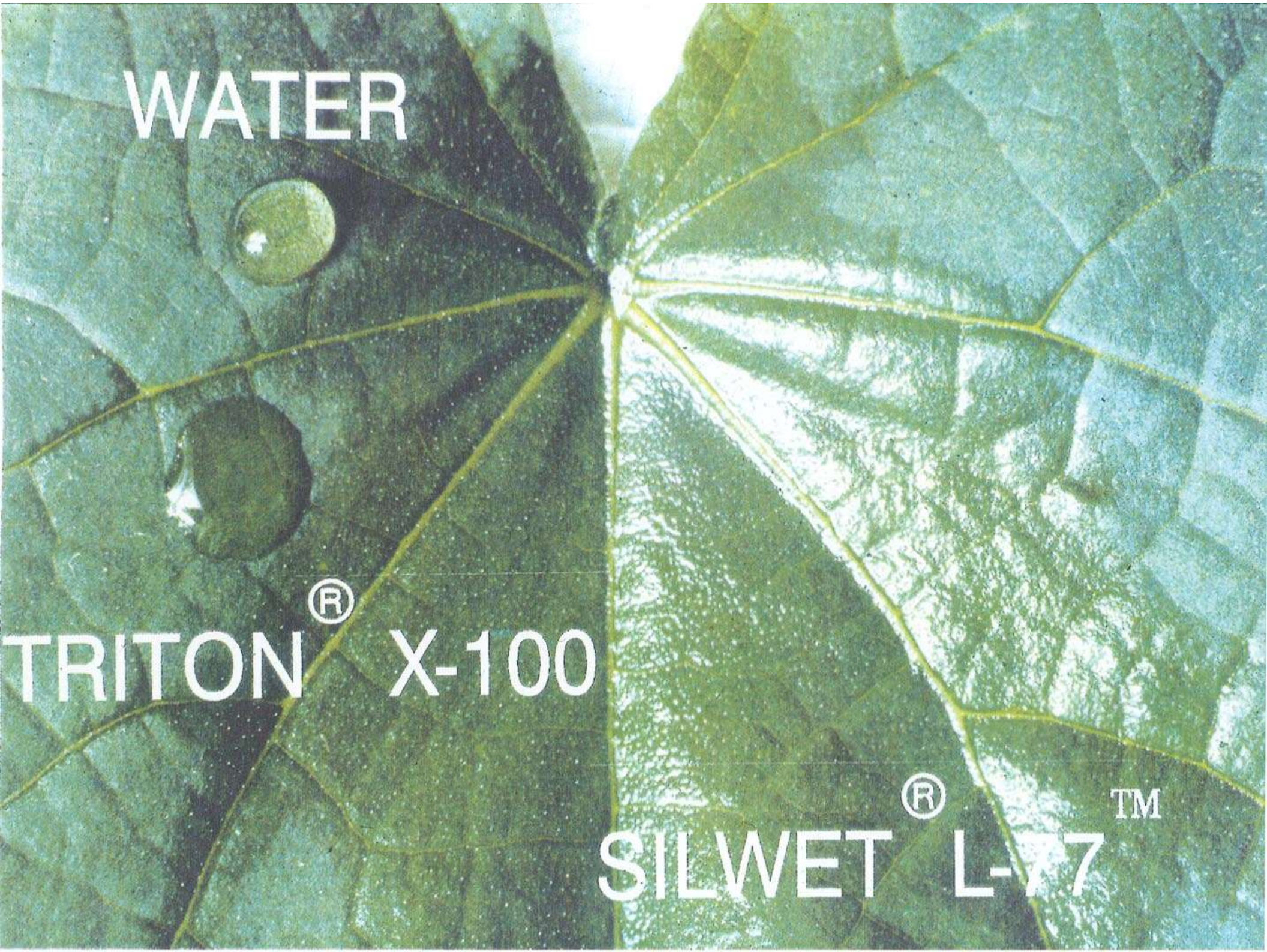
Organosilicones for Agricultural Applications


WATER
TRITON® X-100
SILWET® L-77™

Objectives

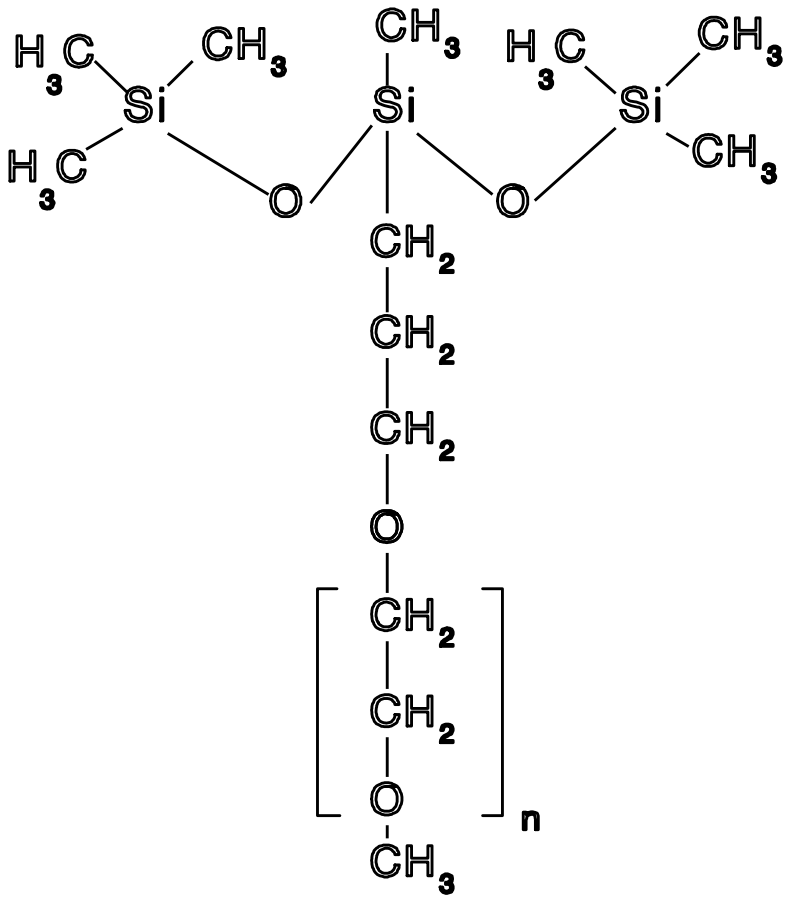
- **Trisiloxane Ethoxylates (TSE)**

- **Superspreading**
- **Stomatal Infiltration - Rainfastening**

Spreading

TriSiloxane Ethoxylate (TSE)

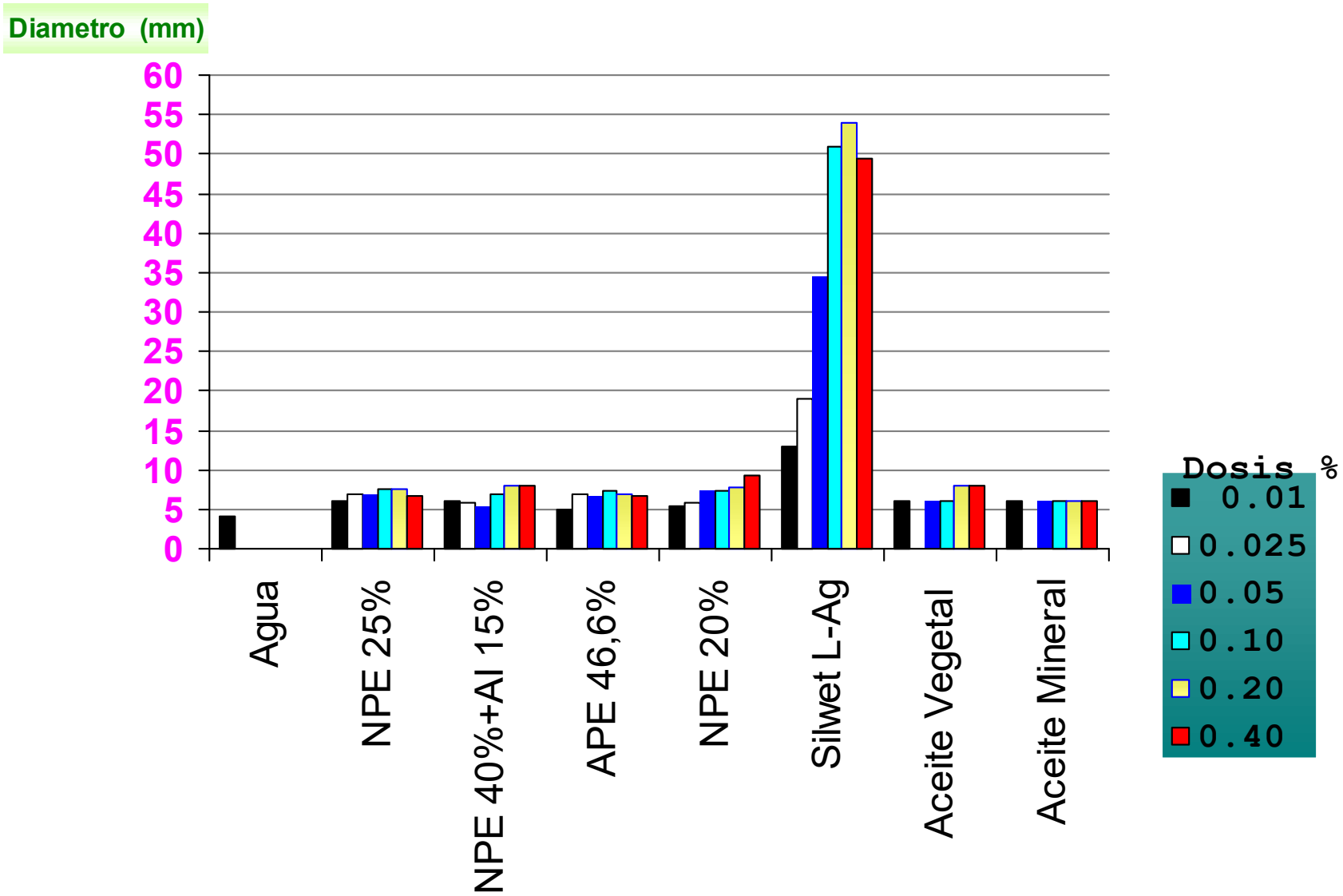
Silwet L-77 Surfactant



Surface Tension and Superspreading (0.1 wt%)

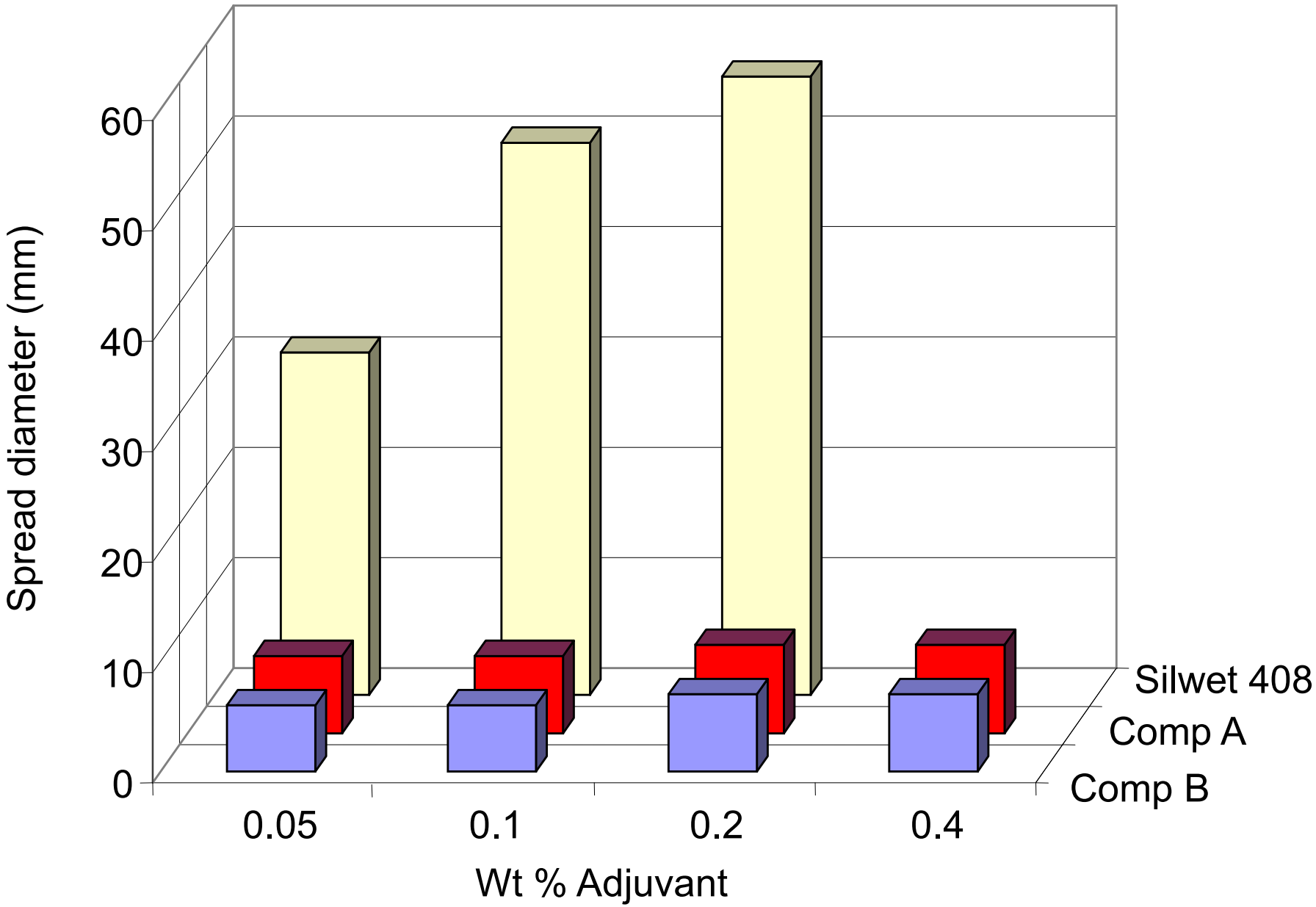
Surfactant	Surface Tension mN/m	Spread Area mm^2
TSE (L-77)	21.6	172
TETRA	24.2	12
Polysiloxane	23.6	2
OP10	31.8	4
FCS	16.5	3

Spreading

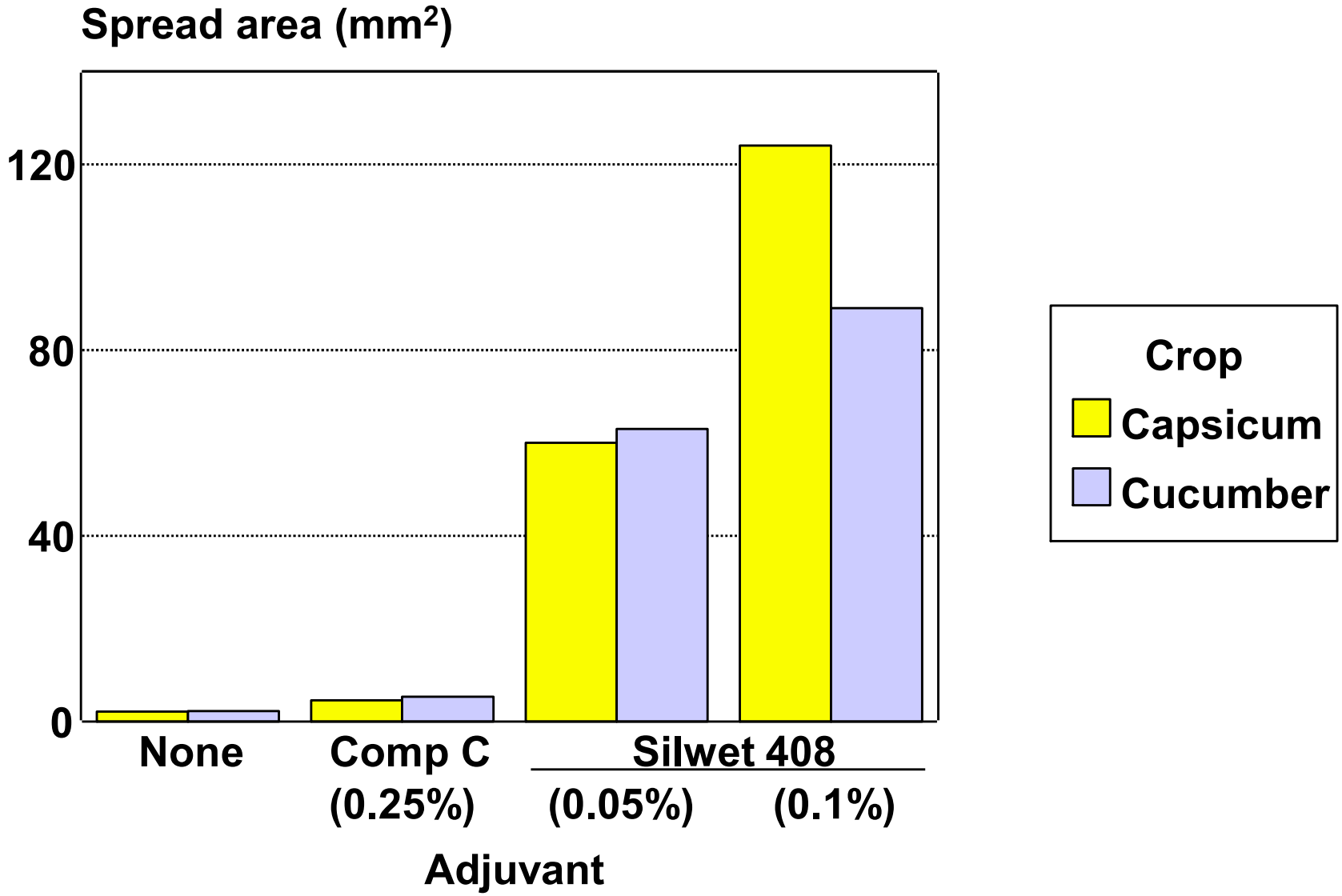


GP9705

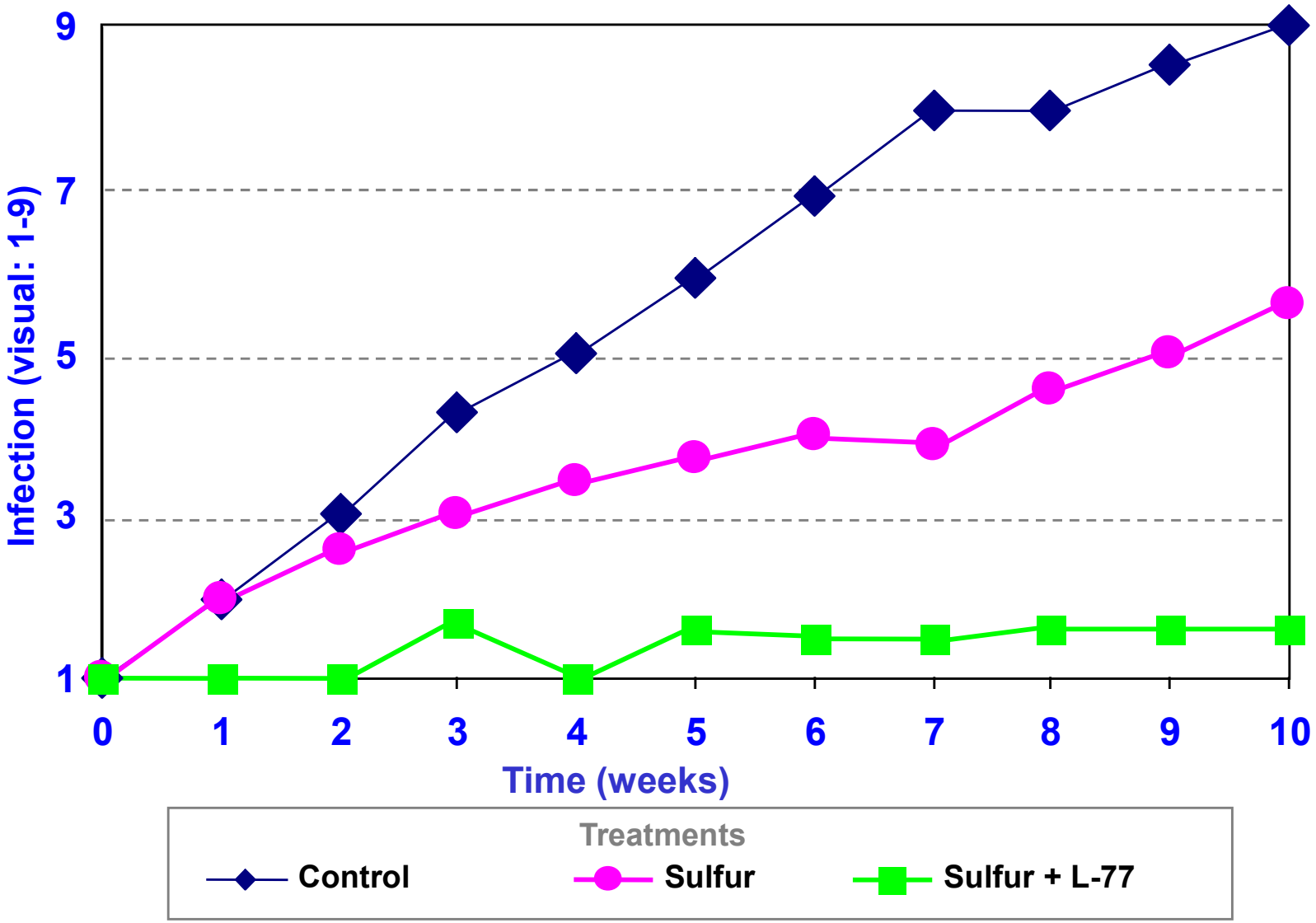
Effect of Adjuvant Concentration on Spreading



Effect of Orthene 75 (1g/L) on Spreading

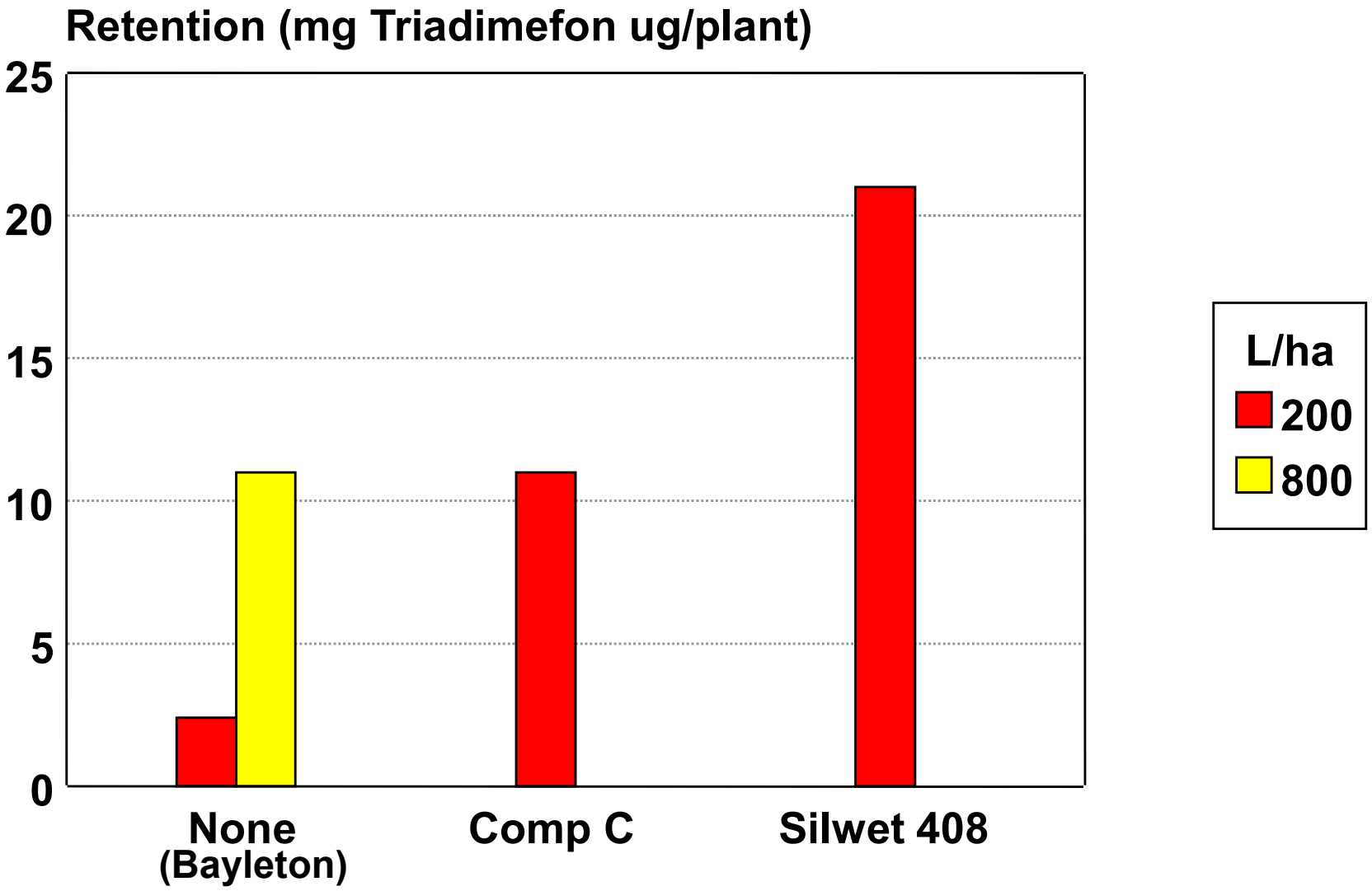


Mildew Control on Wheat with Sulfur ± Organosilicone Surfactant



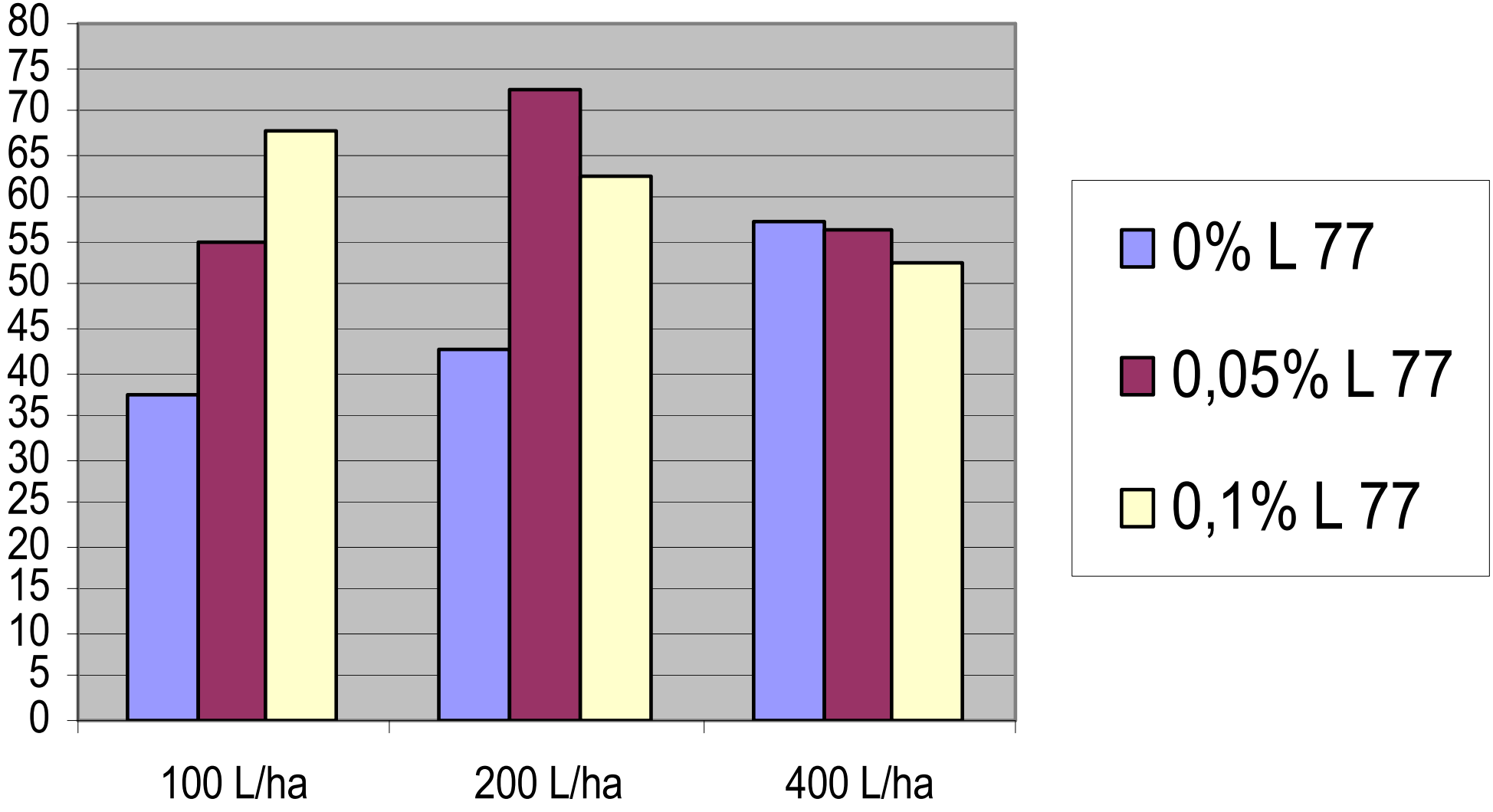
Water Reduction

Effect of Adjuvant on Spray Retention of Bayleton on Pea



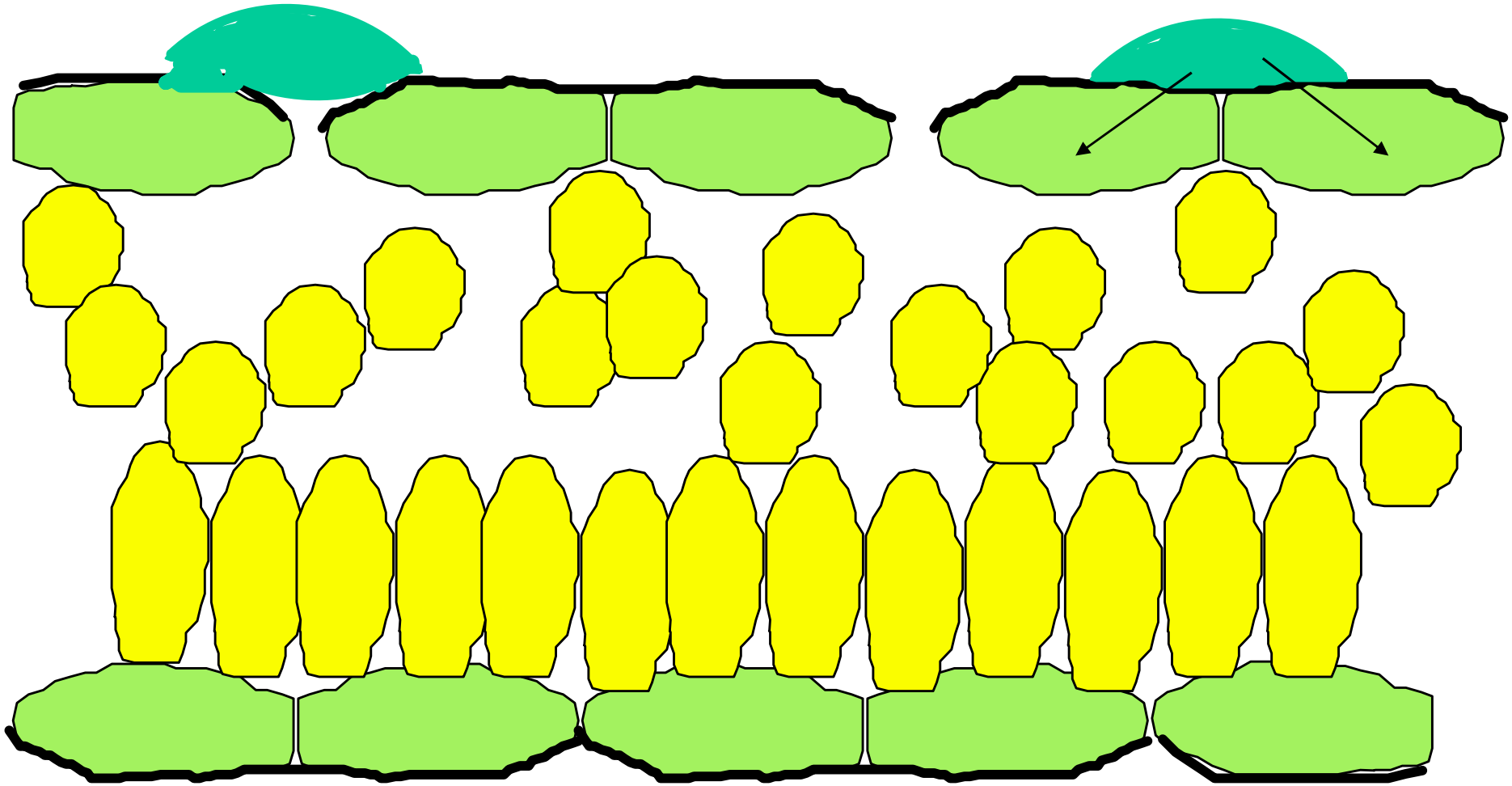
Water volume reduction with MSMA 5L/ha + 2L/ha Diuron (Brachiaria decumbens)

Sugar Cane



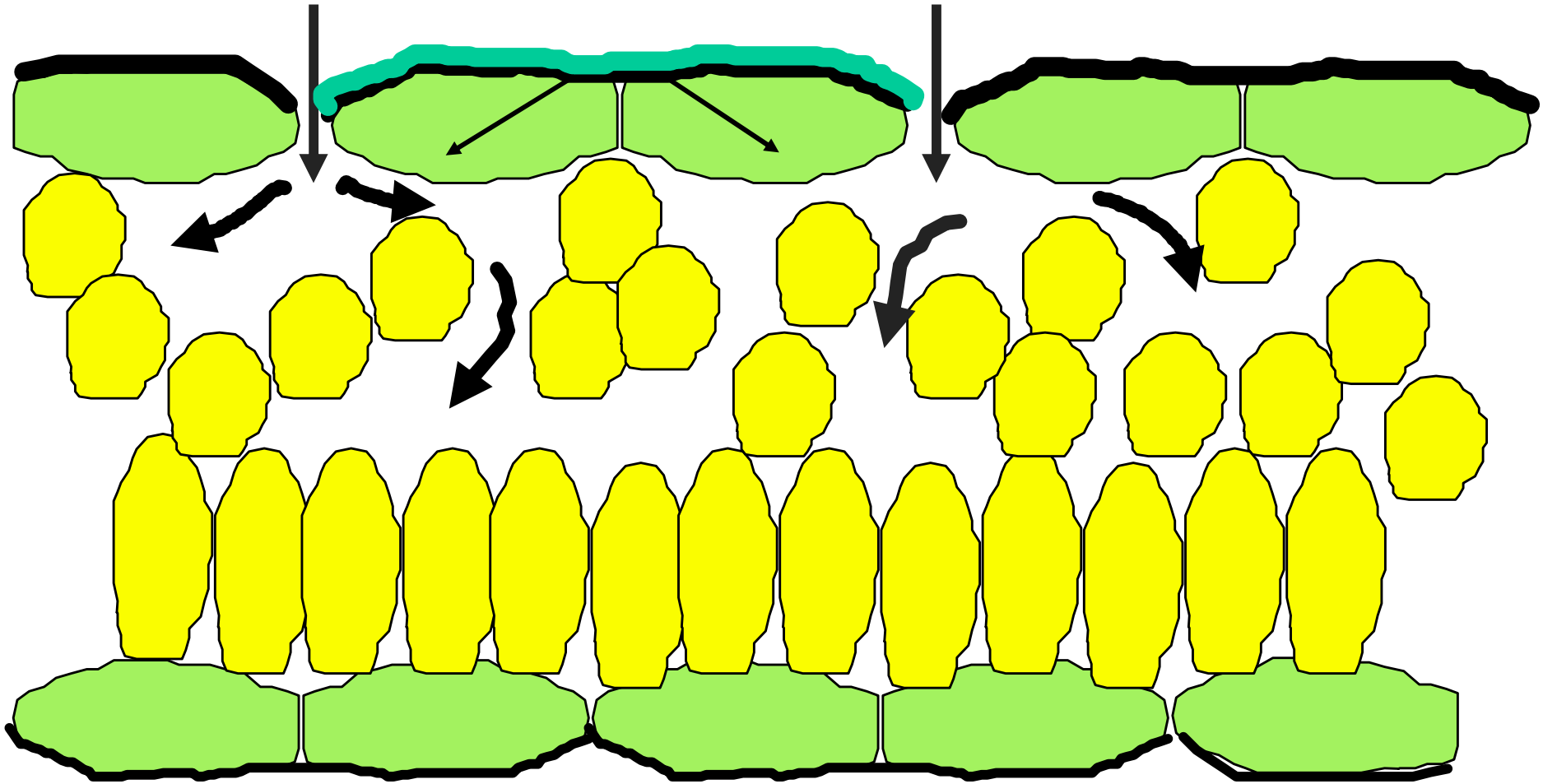
Rainfastening

Uptake with Conventional Adjuvants



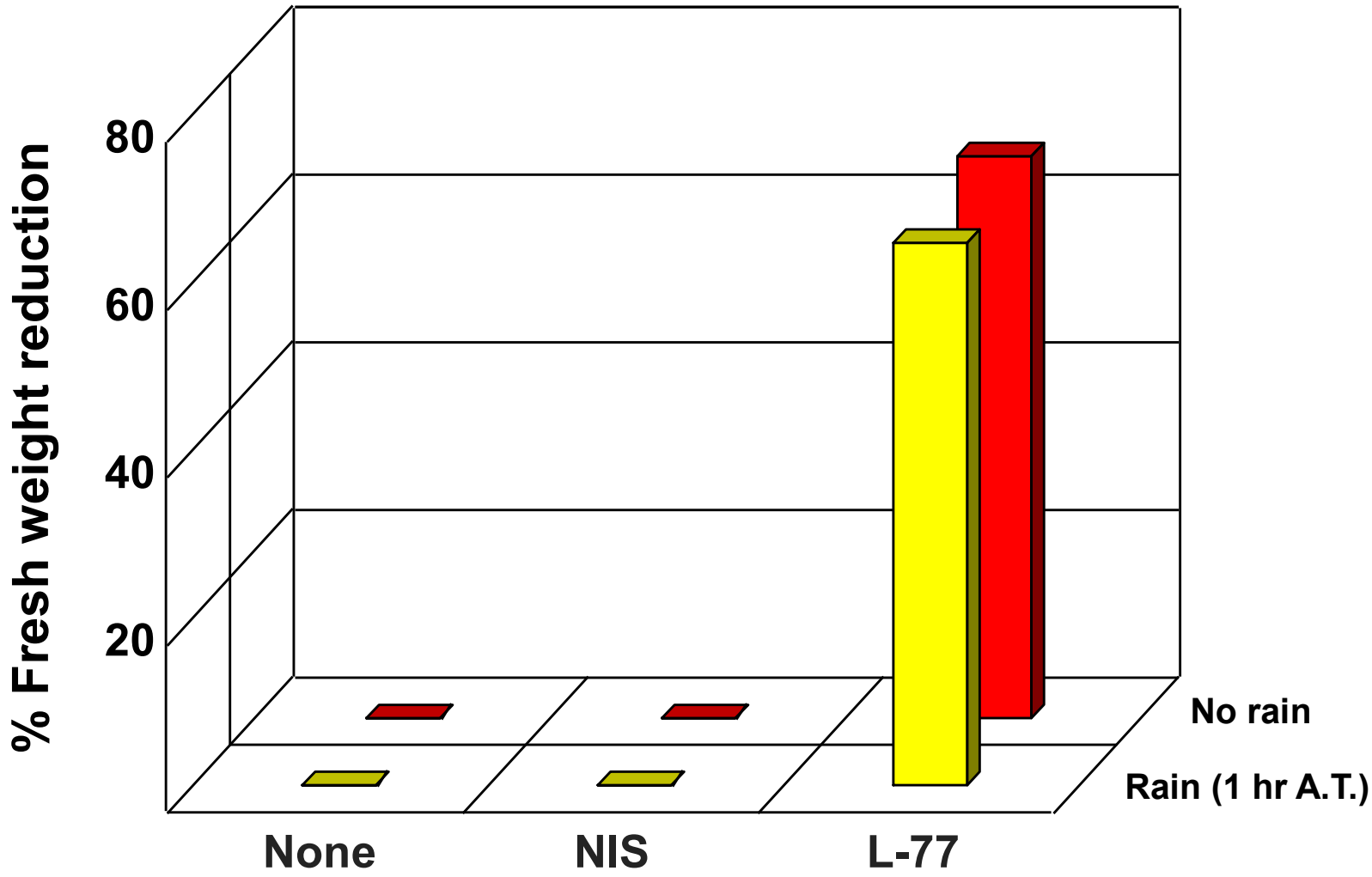
Rainfastening With Organosilicones

Rapid uptake by stomatal infiltration



14070
0.5 Hr Rain
1 Hr Rain
2 Hr Rain
4 Hr Rain
No Rain
Control

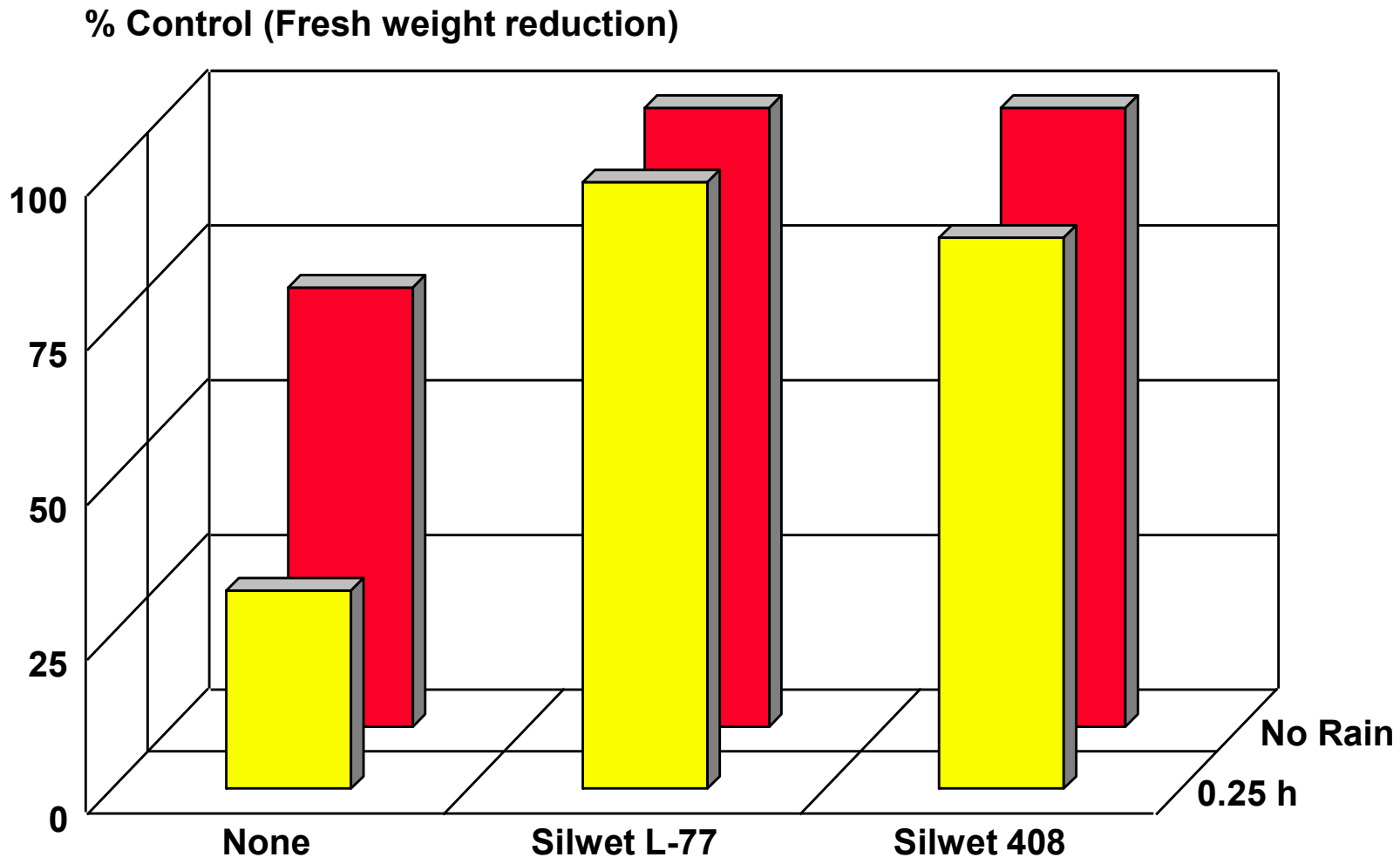
Rainfastening of Glufosinate (0.25X) with 0.25% Surfactant (*Abutilon theophrasti*, 14 DAT)



Liberty Formulation

Control of Velvetleaf with Primisulfuron

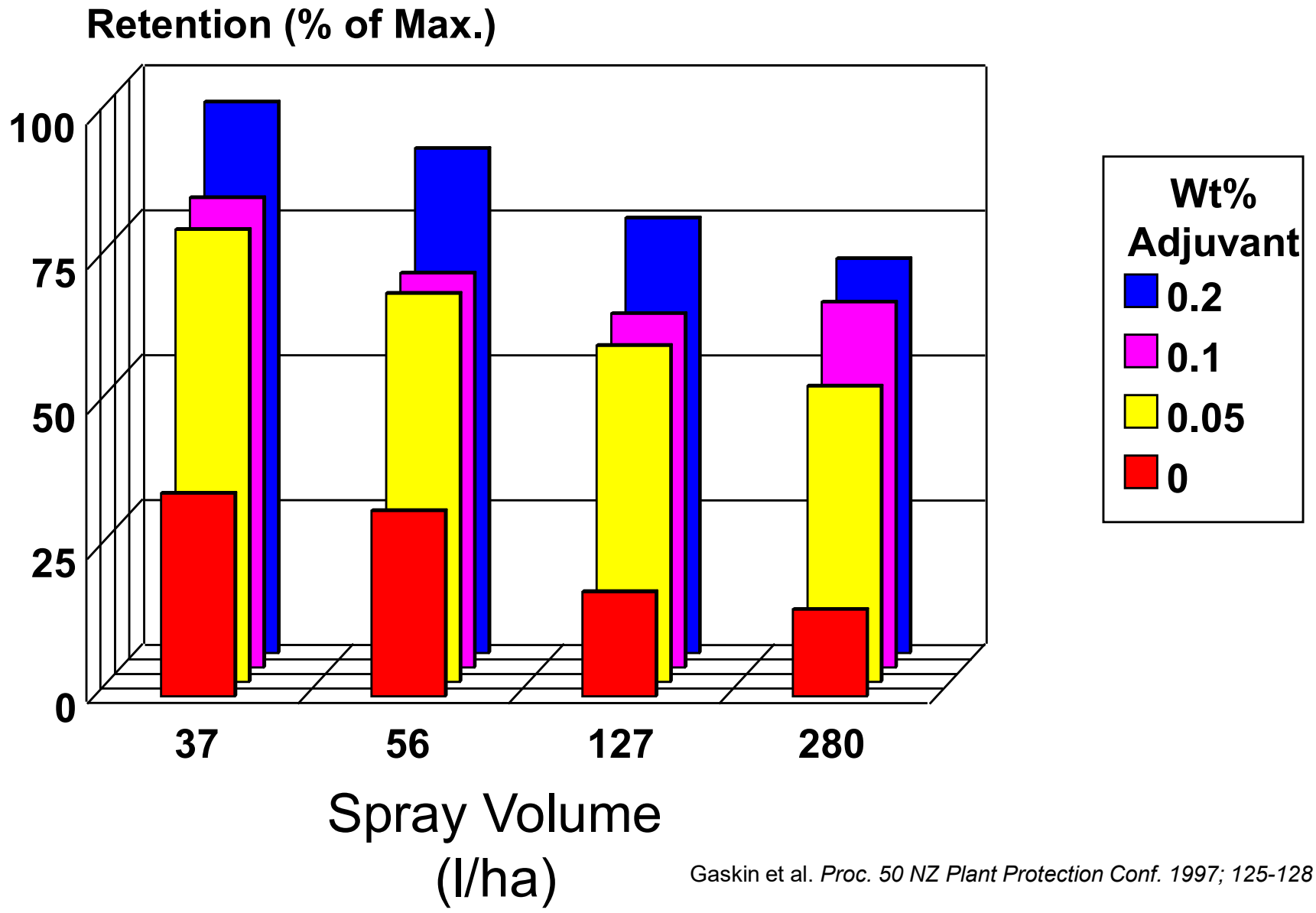
(40 g ai/ha, 20 DAT, 0.25% Silicone; +/- 1.25cm Rain)



From J. Sun et.al; Weed Technology 1996. Vol 10:263-267

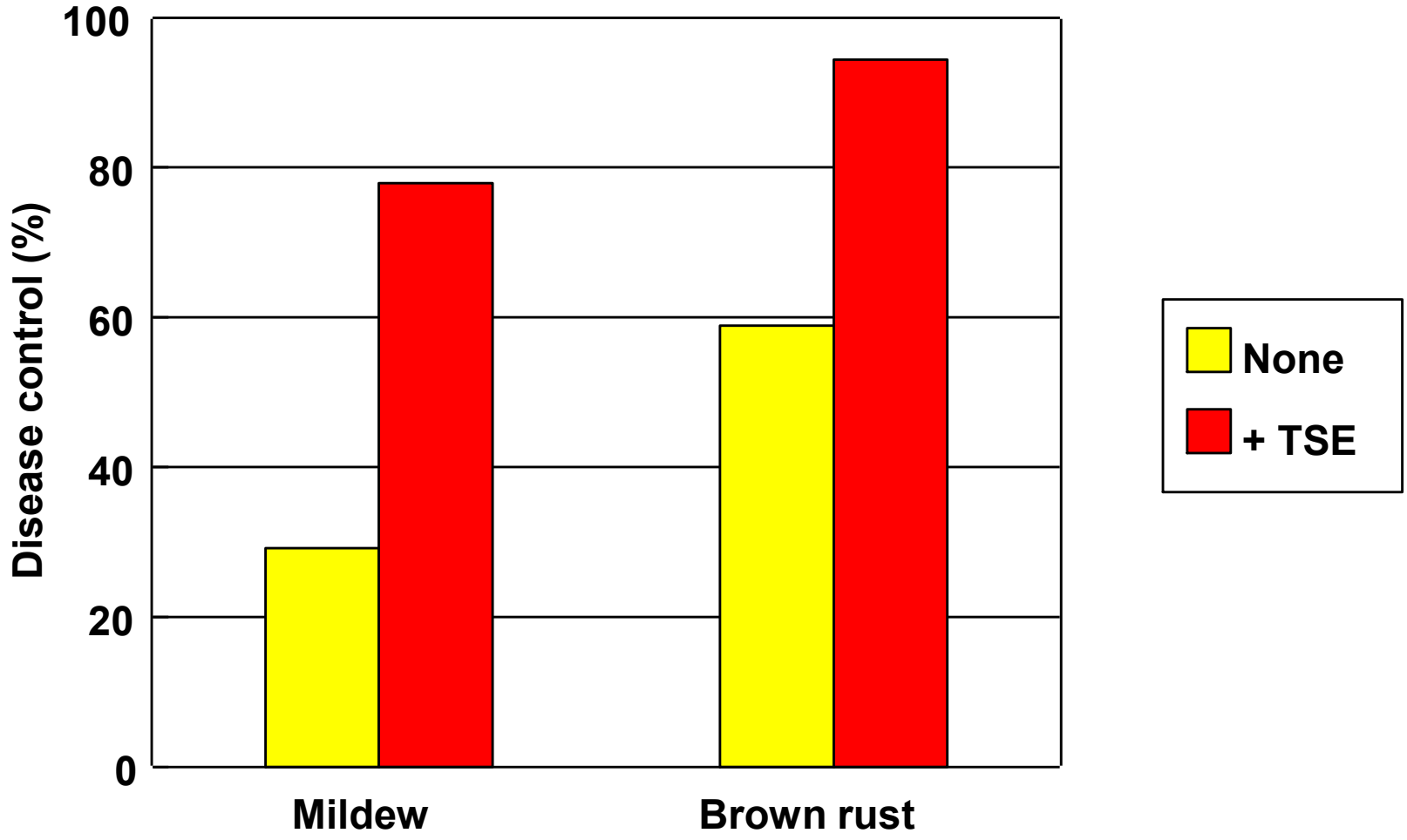
Spray Retention on Wheat

Relative to Silwet 408 Rate & Spray Vol.

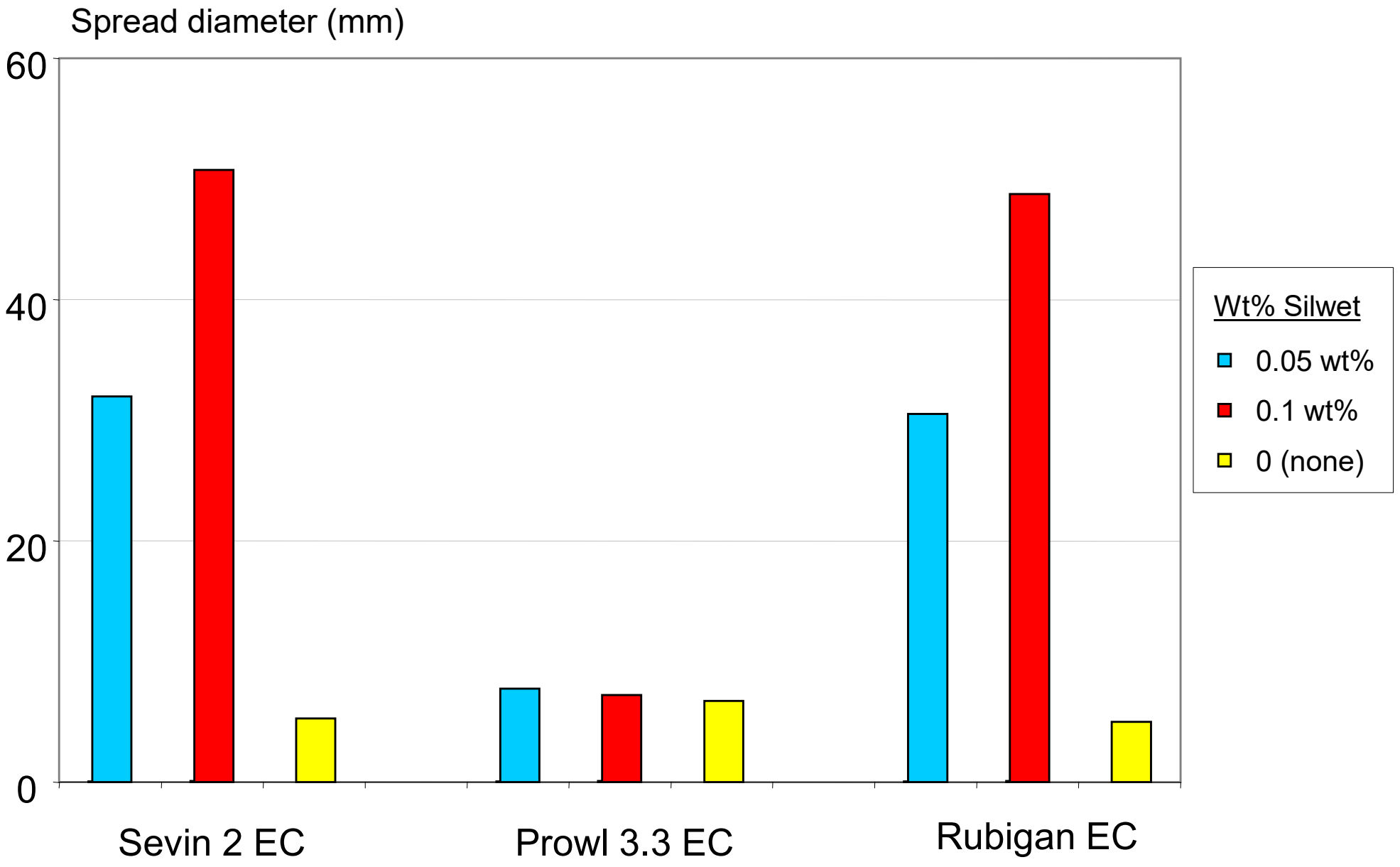


Gaskin et al. *Proc. 50 NZ Plant Protection Conf. 1997; 125-128*

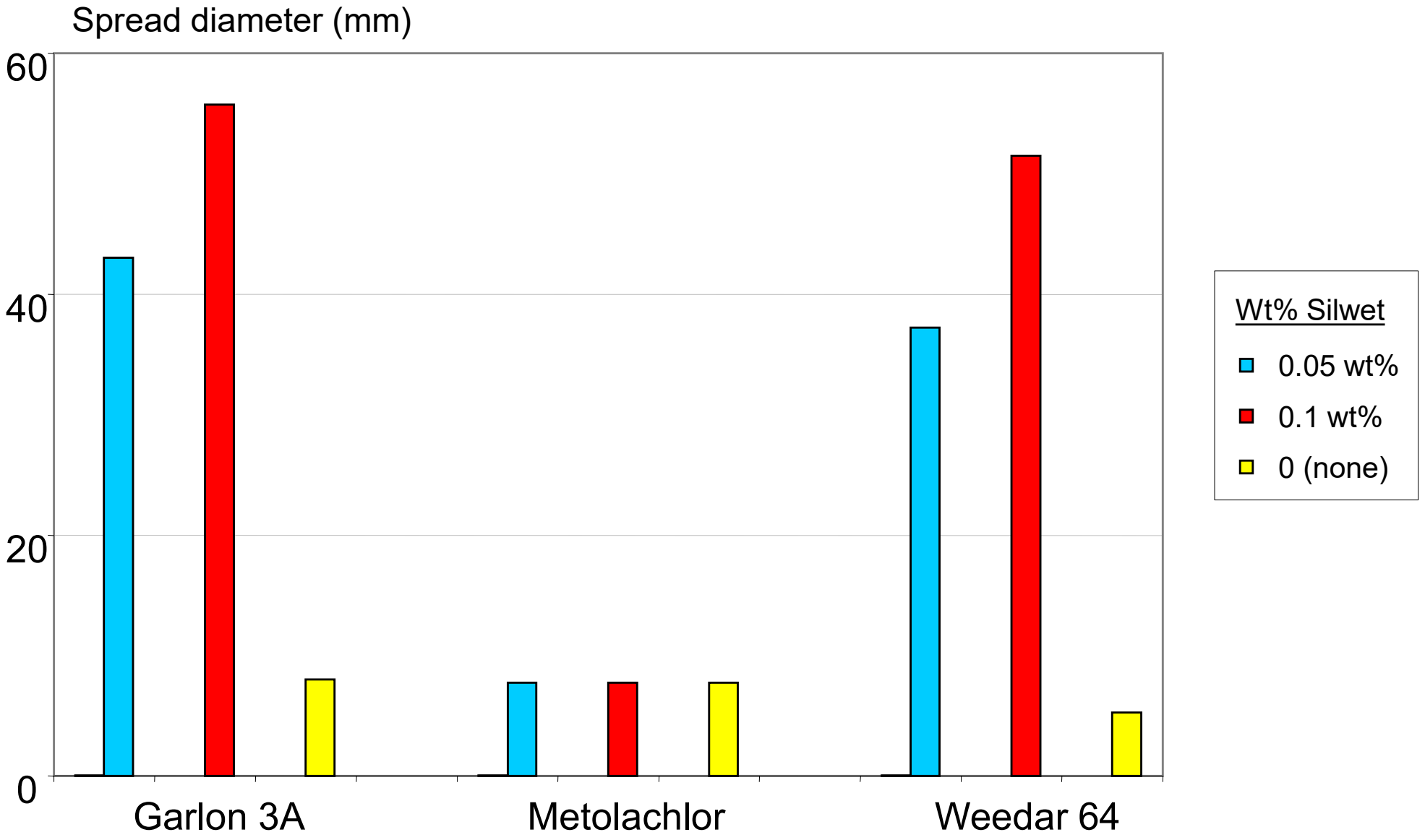
Activity of Cyproconazole fungicide + TSE on wheat



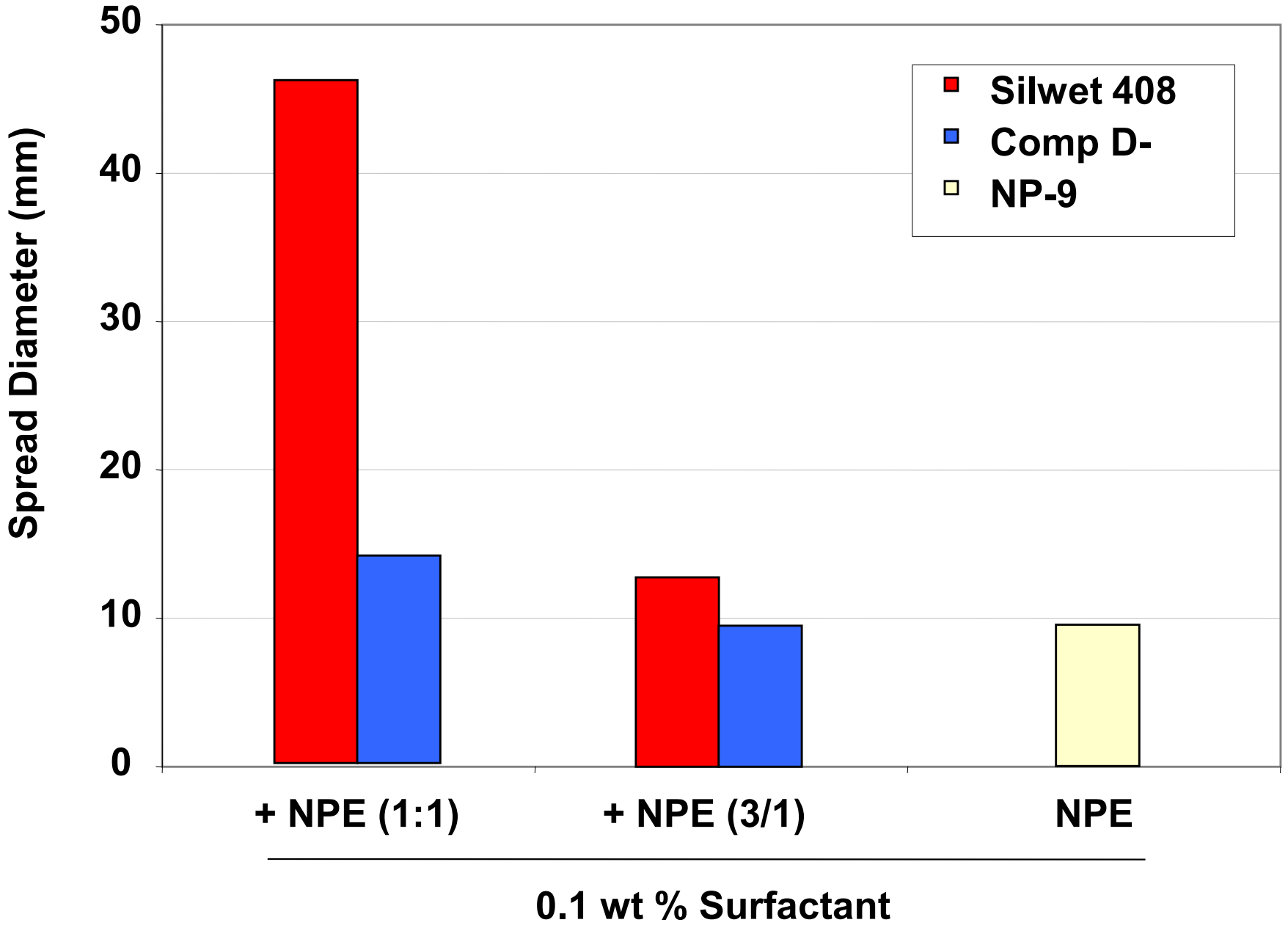
Influence of Pesticide Formulation on Silwet Spreading



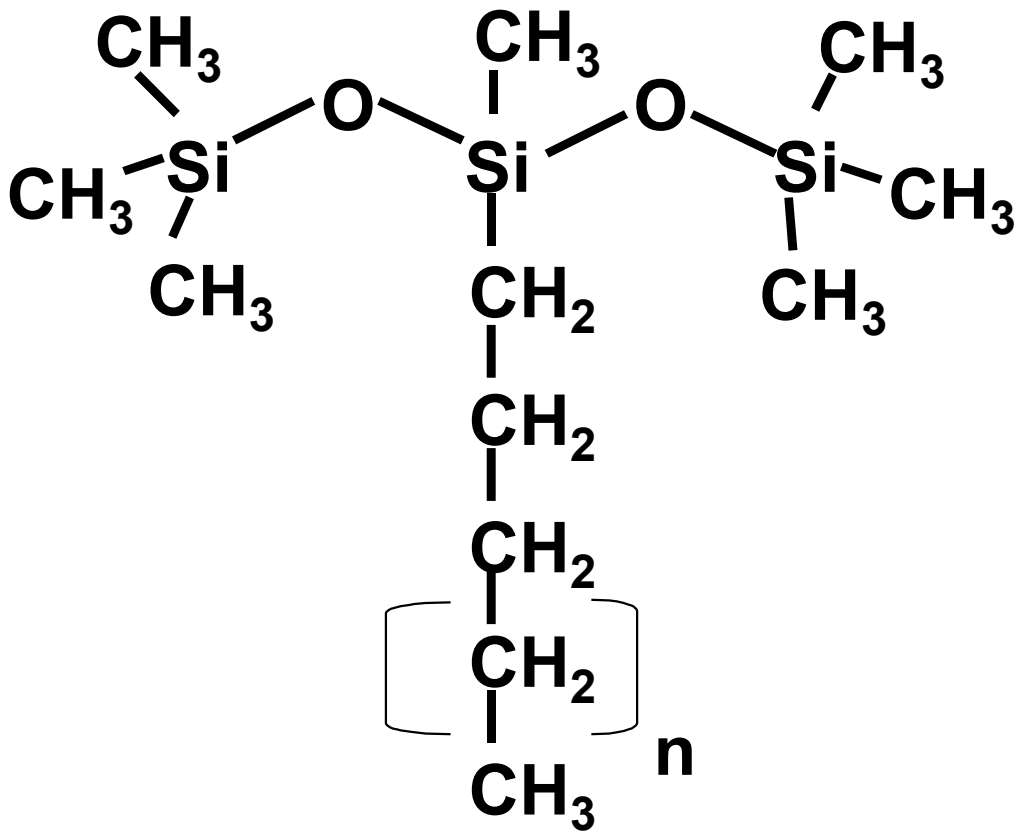
Influence of Pesticide Formulation on Silwet Spreading



Effect of NPE on Spreading of Trisiloxane Surfactants



Silwet® 560 Alkyl Modified Trisiloxane



Effect of Silwet 560 Conc. on Spreading of Oils
(4 h. after application)