



CRC

for

Premium

Quality

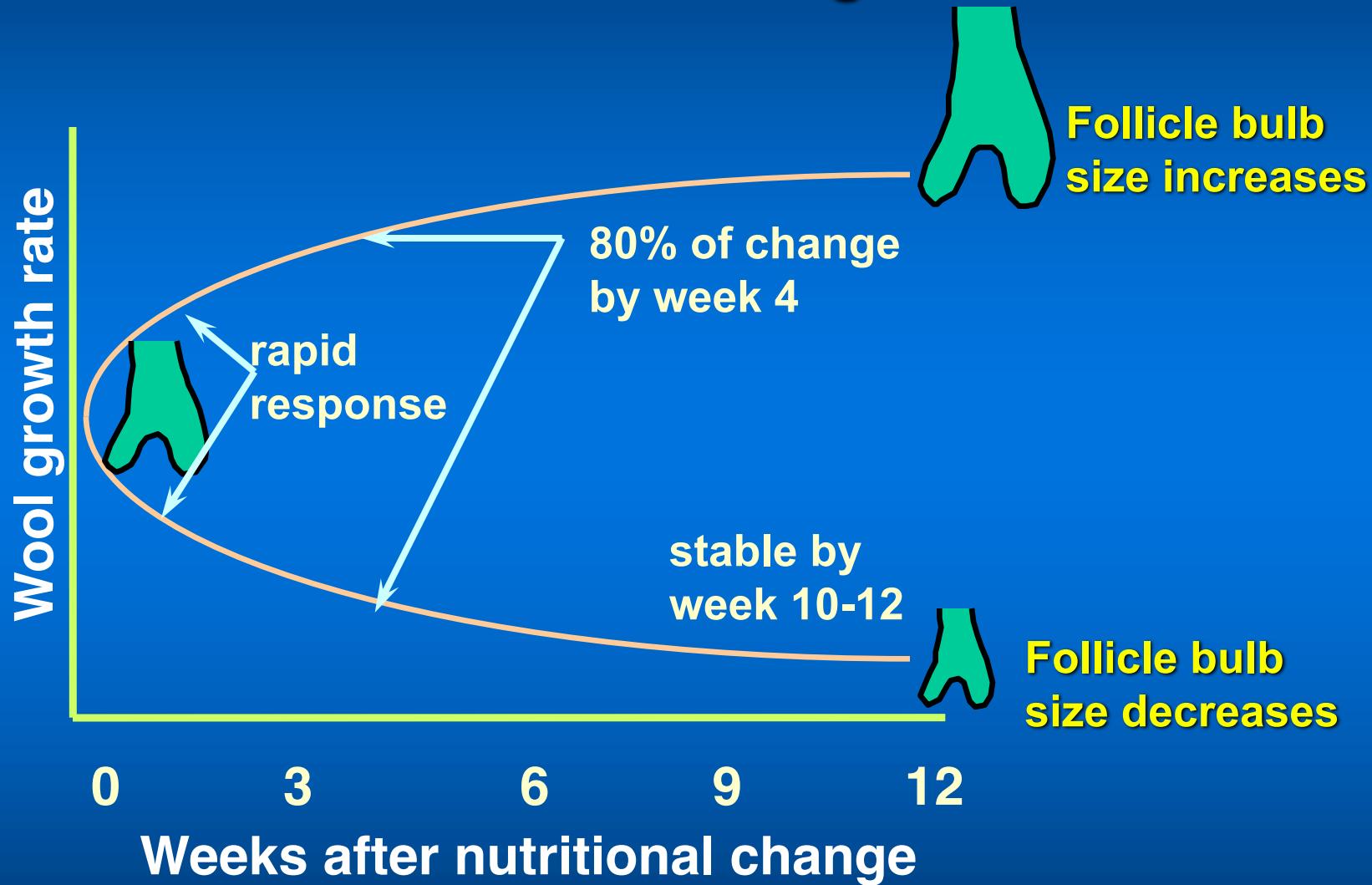
Wool

Nutrition and Wool Follicles

**Produced for the CRC for Premium Quality Wool undergraduate program by;
Prof. Phil Hynd, The University of Adelaide.**



Nutritional changes take a long time to be reflected in wool growth



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Nutrition has an effect on follicle bulb and papilla dimensions

CRC for Premium Quality Wool	Nutrition		
	Low	High	L/H
Bulb diameter (μm)	72	135	1.88
Bulb area (μm^2)	4645	13650	2.94
Papilla diameter (μm)	15	34	2.27
Papilla area (μm^2)	1157	3477	3.01

Fibre diameter is closely related
to bulb size ($r = 0.8$)



Nutrition alters fibre cell type and composition

Sheep	Low nutrition		High nutrition	
	Fibre diameter	proportion of paracortex	Fibre diameter	proportion of paracortex
1	26µm	0.19	32µm	0.46
2	25µm	0.05	27µm	0.18
3	23µm	0.01	29µm	0.28
4	23µm	0.22	27µm	0.37
5	26µm	0.22	31µm	0.29
6	27µm	0.38	31µm	0.38
7	19µm	0.38	21µm	0.47

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