The Effect of Protein Supply on Wool Production

Produced for the CRC for Premium Quality Wool undergraduate program by;
Prof Phil Hynd, The University of Adelaide.
What limits wool growth?

protein → carbohydrates

protein → NH₃ → ATP → microbial protein → butyric

carbohydrates → acetic, propionic, glucose, amino acids, ketones

amino acids
Postruminal protein limits wool growth

- Abomasal or intravenous infusions of proteins and amino acids increase wool growth by up to 100%
- Different proteins have different effects on wool growth (e.g. gelatin, zein, casein, egg white)
Wool growth response to postruminal protein

Maximum wool growth is achieved when 160g/day of protein reaches the intestines.