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for

Premium

Quality

Wool

# WOOLPLAN

Produced for the CRC for Premium Quality Wool undergraduate program by;  
Dr. Brad Crook, The University of New England.



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# WOOLPLAN: *Breeding Objectives*

| <i>Option</i>   | <i>Micron Premium</i> |
|---|-----------------------|
| 1 CFW, RR, HWT, MWT increase;<br>slight decrease in FD  | 5 %                   |
| 2 As for 1, but FD maintained at current<br>flock level | 1-2 %                 |
| 3 As for 1, but moderate emphasis<br>on reducing FD     | 10 %                  |
| 4 As for 1, but strong emphasis<br>on reducing FD       | 20 %                  |
| 5 Breeder-specific economic values                      | ? %                   |

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# Phenotypic and Genetic Parameters used in WOOLPLAN

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|                | GFW         | CFW         | FD          | NLW         | HWT         | BWT         |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| GFW            | <b>0.35</b> | 0.85        | 0.13        | -           | 0.30        | -           |
| CFW            | 0.75        | <b>0.40</b> | 0.20        | -           | 0.30        | -           |
| FD             | 0.16        | 0.25        | <b>0.50</b> | -           | 0.13        | -           |
| NLW            | -0.10       | -0.10       | -0.10       | <b>0.10</b> | -           | -           |
| HWT            | 0.20        | 0.20        | 0.10        | 0.25        | <b>0.40</b> | -           |
| BWT            | 0.20        | 0.20        | 0.10        | 0.25        | 0.80        | <b>0.40</b> |
| <hr/>          |             |             |             |             |             |             |
| V <sub>p</sub> | 0.28        | 0.25        | 4.70        | 0.22        | 20.25       | 20.25       |

Brad Crook  
Source: Ponzoni (1991)



# Predicted genetic change after 10 years of index selection, based on CFW, FD and HWT

| Option | CFW<br>(kg) | FD<br>( $\mu\text{m}$ ) | NLW<br>(%) | HWT<br>(kg) |
|--------|-------------|-------------------------|------------|-------------|
| 1      | 0.465       | -1.78                   | 2.9        | 2.51        |
| 2      | 0.691       | 0                       | 0.5        | 3.23        |
| 3      | 0.196       | -2.81                   | 4.1        | 1.45        |
| 4      | -0.017      | -3.25                   | 4.6        | 0.54        |

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# Challenges to WOOLPLAN

- low level of understanding of concepts and terms
- different opinions as to what constitutes profit
- perceived lack of flexibility and “proof”
- concerns over wool quality
- lack of confidence in test figures
- the WA “Code of Practice” issue

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Source: Brien et al. (1991)