

## How does native vegetation improve farm profitability?

The widespread clearance and decline of native vegetation has been identified as one of the major environmental issues facing Australia. Impacts of clearing vegetation include dryland salinity, weed invasion, soil erosion, soil structural decline and loss of species.

There is an expanding body of evidence related to the benefits of native vegetation to both on-farm production and broader catchment values.<sup>1</sup>

Healthy catchments and farming land can be estimated to increase farm productivity nationally by over \$1 billion per annum (2002). This is a 5% increase in the total value of agricultural production.<sup>2</sup>

Farms with good native vegetation can improve economic outcomes for farmers by improving land value, increasing productivity, and reducing operating costs.

### Land value

- > Farms with good remnant vegetation have increased capital value. A 15% increase in farm value was observed in a survey in the central west area of NSW.<sup>3</sup>
- > The best vegetated farm in the Boorowa district was assessed by the Valuer-General at \$140/ha more than the average farm (1996). In the Orange district there was a 35% premium for well-vegetated land over average values.<sup>4</sup>
- > In a survey of landholders in the Murray Catchment, 82% of participants said they gained benefits from their remnant native

vegetation, such as increased stock and crop production and mitigation of land degradation.<sup>5</sup>

### Pasture productivity

- > Native vegetation provides habitat for the natural enemies of pests, such as birds and bats. These can help control pest outbreaks and can considerably cut the cost of pest control. This is particularly beneficial for horticulture, vegetable, cropping and grazing industries.<sup>6</sup>
- > Sheltered pastures in Armidale lose 12mm less water than open pastures during the spring growing season.<sup>8</sup>
- > Gross value of pasture output at Gunnedah is at its highest level when the cover of remnant trees on a farm is 34%.<sup>9</sup>
- > On the NSW Southern Tablelands, pasture productivity was an average 26% higher in eucalypt woodland than in sites without trees.<sup>10</sup>
- > Plots sheltered by vegetated barriers at Armidale had 18% more pasture.<sup>11</sup>

### Cattle industry

- > Cold and heat stress can be significantly reduced by native vegetation. Cold stress reduces live weight gain in cattle by 31% over several weeks.<sup>12</sup>
- > Heat stress can markedly reduce stock fertility, milk production and weight gain, and increase the mortality of calves and sheep.<sup>13</sup>

- > Cattle affected by exposure to wind and rain are more susceptible to grass tetany, a fatal cattle health disorder.<sup>14</sup>

## Sheep and wool industries

- > When comparing sheep in sheltered areas to those with no shelter, there is a 31% increase in wool production and 21% increase (6kg) in live-weight.<sup>11</sup>
- > Cold stress in sheep reduces live-weight gain by 6kg and depresses wool growth by 25%. Similarly, heat stress reduces wool growth.<sup>12</sup>
- > When comparing sheep in sheltered areas of the southwest and eastern highlands of Victoria to those with no shelter, there is a 50% increase in lamb survival.<sup>13</sup>

## Dairy industry

- > Farms with sheltered areas increase their dairy milk production by an estimated 17%.<sup>15</sup>
- > On a 27°C day, unsheltered cows will have 26% less dairy milk production than shaded stock.<sup>7</sup>
- > In Victoria, sheltered pasture results in a 30% increase in total dairy production (20% improved pasture growth, 10% improved milk production). This equates to \$150/ha (1994).<sup>7</sup>

## Grain industry

- > Windbreaks increase crop yields by 25%.<sup>16</sup>
- > An increase in wheat and crop yields in sheltered zones at Rutherglen was estimated between 22% and 47%.<sup>17</sup>
- > In the Moree district, 360 degree wind protection would be expected to increase yield of wheat by more than 9%.<sup>18</sup>

## Horticulture industry

- > Increased yields of 20% to 100% were observed in sheltered horticultural crops compared with unsheltered crops.<sup>7</sup>
- > As much as 50% of pollination is carried out by native insects that fly to crops from nearby bushland.<sup>19</sup>

- > Pollination of crops by insects and birds has been estimated to be worth between \$600 million and \$1.2 billion (1990 estimate).<sup>20</sup>

## How can I get the benefits of native vegetation if my land is already over-cleared?

The restoration of native vegetation, in combination with the protection and rehabilitation of remnant vegetation, can reverse the negative effects of clearing and habitat fragmentation.<sup>21</sup>

Farmers can get advice on revegetating their land from their local Catchment Management Authority (CMA).

To assist this process, the NSW and Australian Governments have allocated \$436 million over four years to CMAs from the National Action Plan, Natural Heritage Trust, State Sustainability Fund and Land & Water Management Plan funding.

### References

1. Walpole, S.C. (undated) [http://www.nationalparks.nsw.gov.au/PDFs/sbs\\_drp\\_stage1\\_04\\_econ\\_value\\_native\\_veg.pdf](http://www.nationalparks.nsw.gov.au/PDFs/sbs_drp_stage1_04_econ_value_native_veg.pdf)
2. Morton et al (2002)
3. Clowes, A., McMahon, S. (1997)
4. Reported at the Remnant Vegetation Conference Orange (1996)
5. Lockwood, M., Walpole, S.C. and Miles, C.A. (2000)
6. Binning et al. (2001)
7. Fitzpatrick, D. (1994)
8. Siepen, G. (1983)
9. Walpole, S.C. (1998)
10. Williams et al, (1999)
11. Lynch, J.J., and Donnelly, J.B. (1980)
12. Anderson, G. (1986)
13. Cremer, K.W. (1990)
14. DPI Agfact AO.9.29 (2nd ed.)
15. Blare, D. (1994)
16. Dengate, J. (1983)
17. Bird, P. R (1993)
18. Carberry, P.S (2002)
19. CSIRO Wildlife and Ecology, and Sidney Myer Centenary Celebration, (2000)
20. Greening Australia (1999)
21. Bird, R. (1981)

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*Note: This information does not constitute legal advice. Please seek specific advice from your local CMA before undertaking any clearing.*