N-Check for winter wheat

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Did you get your Nitrogen rate right?

1. **Was the yield more or less than expected?**

2. **Did the crop lodge?**

How do you know?

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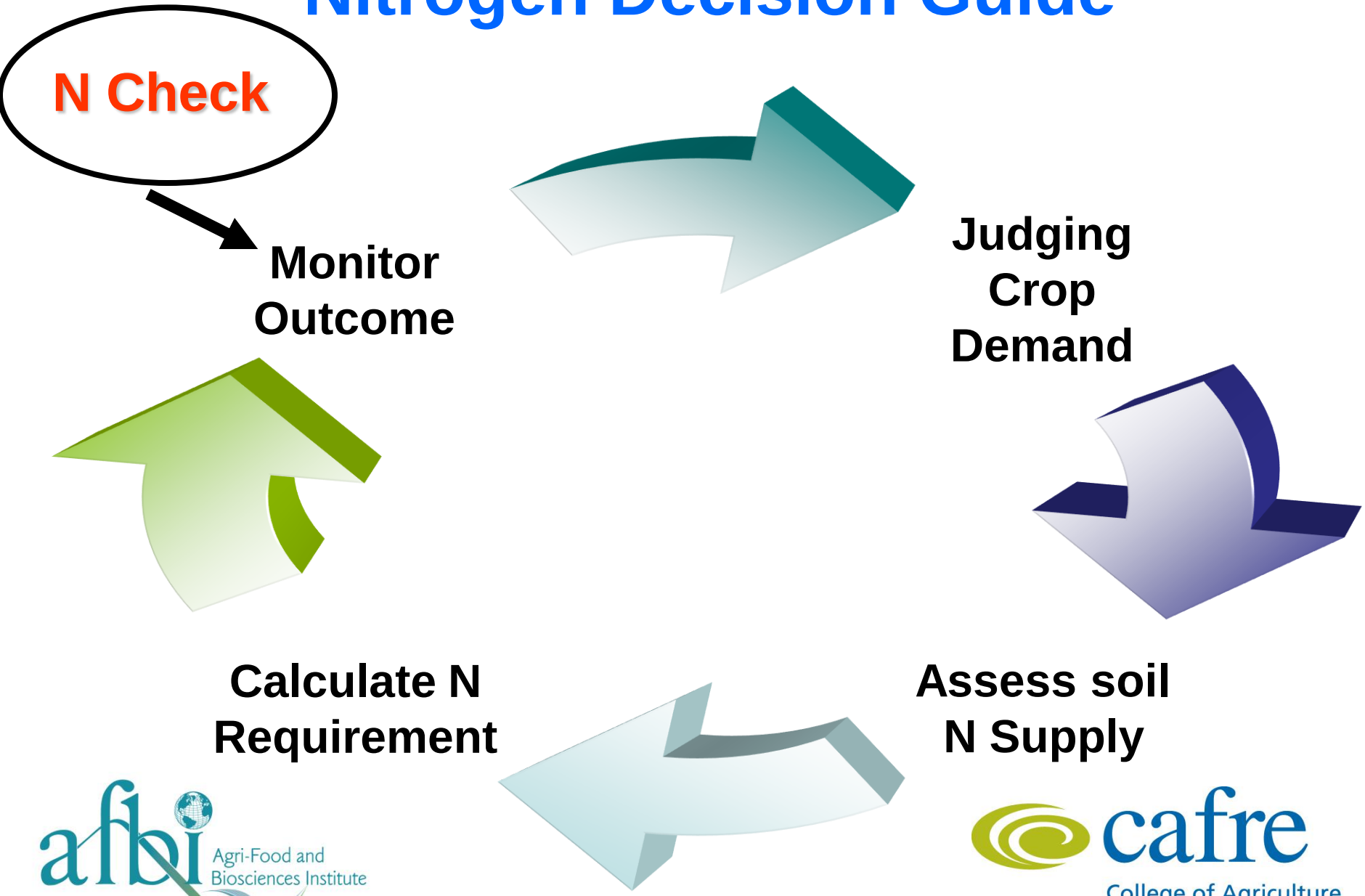
Nitrogen Decision Guide



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Yield variation and the use of grain nitrogen concentration

- **Farm nitrogen strategies for wheat should be assessed periodically using information on grain N concentration**

- **This is a better guide than yield to indicate whether nitrogen fertiliser use is correct**

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Yield variation and the use of grain nitrogen concentration

- **Where there is a consistent trend of low grain %N over several years then nitrogen rates should be increased**

  OR

- **When yields are consistently small, it is difficult to justify high amounts of nitrogen without good supporting evidence (e.g. from grain %N)**

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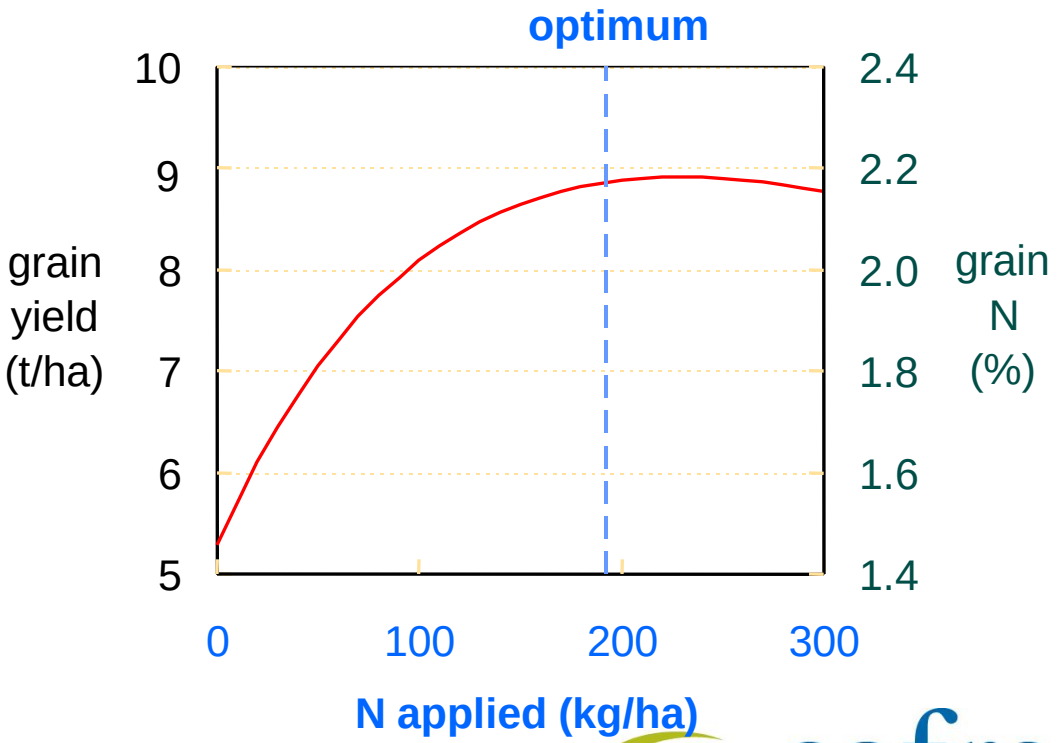
Yield response of winter wheat

- RB209 recommends economic optimum amounts
- The economic optimum gives close to the maximum yield



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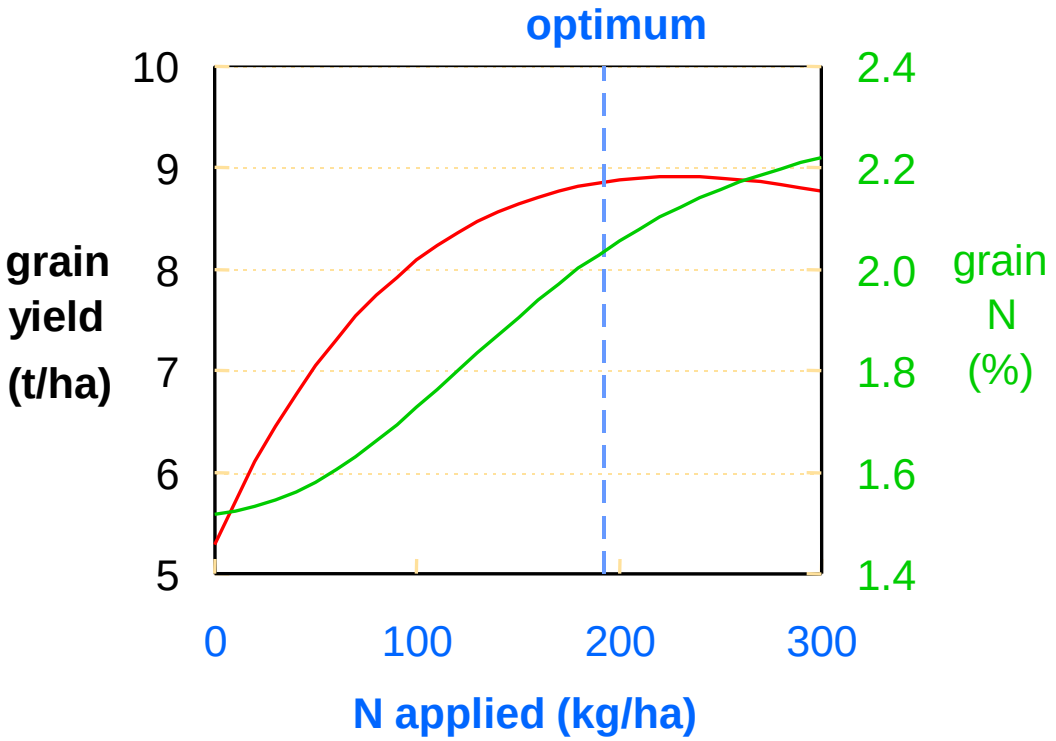
Yield response of winter wheat

- Yield is not sensitive to fertiliser N, if amounts are optimal
- Grain N% is more sensitive to fertiliser N policies



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Yield variation and the use of grain nitrogen concentration

- **Grain %N at the economic optimum rate of nitrogen is 1.9% N (100% DM basis) for feed wheat**

- **Where concentrations in yields from a number of adjacent fields are consistently above or below 1.9%N over several years, nitrogen fertiliser application rates should be adjusted**

- **Increase or decrease by 30 kg N/ha per 0.1% difference in grain %N**

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Grain nitrogen concentrations from 2009 harvest

- Collected 34 grain samples

Collect data on

- Nitrogen fertiliser rate and timing
- Disease Control
- Lodging
- Yield

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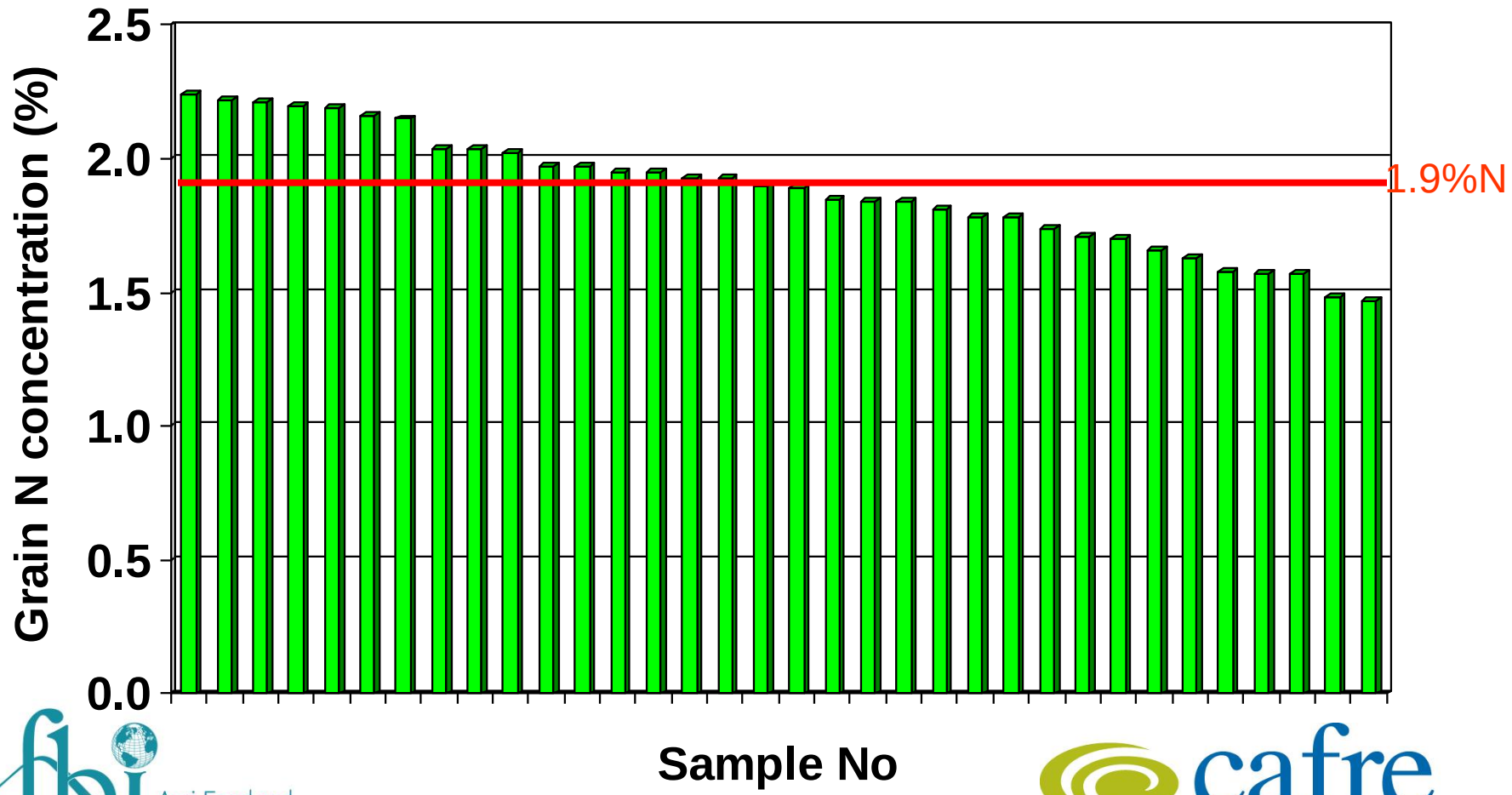
Grain Nitrogen concentrations from 2009 wheat harvest



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Grain nitrogen concentrations from 2009 harvest

- 6 samples Grain N of 1.9%
- 13 samples were **above** 1.9%
- 15 samples were **below** 1.9
- Range in Nitrogen fertiliser from 138kgN/ha – 216kgN/ha

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Where to now?

- **Each grower will receive a report on their grain N which will develop a strategy for future N applications**

- **Encourage growers to monitor their N efficiency using grain nitrogen**

- **Any grower interested should contact their local Crops Development Advisor**

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