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Pork CRC Research Summary

Project Number & Title:

1A-111 "Dedicated Geed Grain Production Systems: An Assessment of Wheat, Barley and Triticale Systems in Australia"

Principal Investigator:

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Background:

A major objective of the Pork CRC is in securing more reliable and consistent energy (and protein) supplies for pig diets that will cause: (a) reduced variation in the annual cost of pig feed, (b) reduced total cost of pig feed, (c) a wider range of feed ingredients available to more producers, and (d) a closer match of diet specifications to pig requirements. Subprogram 1A, Innovative grain production, is targeted towards delivering commercial quantities of cereals (and pulses) of high yield and high energy content and acceptable nutritional characteristics for pigs, with cost-effective agronomy, and appropriate marketing arrangements for grain and pig producers.

Methodology:

A multidisciplinary approach combining qualitative and quantitative activities was combined to study the reasoning behind growing and using high energy feed grains. Activities included: A desktop search of the literature; a survey (semi-structured, interactive, open-ended interview approach) of 25 relevant stakeholders to record respondents' perceptions to issues such as the introduction in Australia of new high yielding, high energy grain varieties and possible marketing systems for dedicated feed grains; development of a gross margin model to understand economically rational behaviour of grain growers; use of a feed formulation model to help understand economic decisions made by pig producers.

Key Findings/Conclusions:

- High-energy grains are of value to some pig producers but depending on the price and availability of substitute energy sources, as well as handling capacity, this value varies amongst producers. Hence interest in high-energy grains is variable but important for some;
- For some diets selecting higher energy wheat lines may not be economically efficient due to a decreasing marginal value of energy at higher DE levels;
- Feed producers who have the ability to effectively segregate grain are in a better position to extract value from high energy grains than those who do not have this facility;
- If yield is similar, "dual purpose", high yielding grains are more attractive to the grain grower than dedicated feed grain varieties because of more market options;
- As the market place currently does not provide supply and demand signals to buyers and sellers then it is likely that increased communication amongst players wishing to participate in this market will be important, particularly with regard to grain standards;
- **Yield** remains the major trait for selection in plant breeding and this is the characteristic that will encourage growers to grow varieties suitable for feed. They may consider high energy grain varieties if they are high yielding and open up an additional market for them, although such a decision is likely to be contingent upon region;
- Specific agronomists and seed companies should be identified to promote new varieties of grains that are of value to the pig industry;
- In the foreseeable future, generally closed loop contracts may be difficult to implement;
- Seed price and EPR payments associated with a new variety may influence adoption decisions as both can negatively affect gross margins, particularly at lower yields;
- A premium for feed grains based upon \$/MJ DE was considered by pig industry participants to be the most logical, although it will be extremely difficult to implement.

Potential Users of Information (including value assessment):

This project will provide information for the commercialisation/adoption strategy of feed grain breeding projects in Subprogram 1A of the Pork CRC as well as background information for future research projects concerning encouragement of feed grain production in Australia.

