

Triticale Industry Strategic Focus Group

December 17th, 2002



The Alberta Crop Industry Development Fund board called a meeting of triticale industry representatives on December 17th in Edmonton. Participants represented the common value chains within the industry, specifically forage, feed grains, human food and non-food applications. Within the value chains participants were selected from each level, including research, production, marketing and processing. The purpose of the meeting was to identify where the greatest opportunities are to develop the Alberta triticale industry and to suggest priorities for investment by the ACIDF or similarly mandated funding agencies.

Immediate Priorities

Specific bottlenecks within the mandate of ACIDF were identified by the group. Priority areas were:

- ♦ Development of a component database for triticale (grain and plant)
- ♦ Development of a non-food industrial platform (sweeteners, biopolymers etc)
- ♦ Minor use registration (recognized as a serious production issue)
- ♦ Further research in triticale applications as winter forage/grazing

Discussion of a western Canadian triticale extension platform resulted from the belief that considerable knowledge of the crop and its use were already on hand, but were not implemented in the industry. One comment that summed the issue was “farmers know a lot about 20 year old varieties, but nothing about current ones.” One specific area of priority for the extension work was in promoting modern triticale to hog producers.

Stability of supply is also of concern, though not recommended as a priority at this time. Much of the variation in production is weather related, plus competition in returns per acre from other crops. Triticale production has not reached a critical mass in our industry. Variation in available stocks year to year prevents some industries from adopting the crop as a standard. Estimates of a reasonable level of supply would be a minimum of 3 million bushels of seed per year. Assuming an average production of 50 bushels per acre and current seed production in the industry from 3% of seed acreage, triticale acreage would need to increase by 13 times over present acreages.

Focus Group Notes & Methodology

The focus group, under facilitation, began with an overview of strengths and weaknesses of this sector in the crop industry. From this the group were challenged to identify and prioritize bottlenecks in the value chains, and if possible identify solutions to the problems.

Industry issues were divided into four primary areas: components, nutrition, consistent supply issues, technology transfer, and government regulation issues. Within each, a number of sub-actions were identified and prioritized. These were rated twice, once for

their importance in the short term (1 to 3 years) and once for their mid-term ranking (3 to 5 years). The following bottlenecks, derived from the process, are listed in order of priority:

Ranking by Primary Area

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|--------------------------------|------------------------------|
| Nutrition – 22 | Components – 30 |
| Tech transfer - 18 | Nutrition – 16 |
| Components - 15 | Tech transfer - 10 |
| Government regulation - 14 | Consistent supply – 7 |
| Consistent supply - 7 | Government regulation - 5 |

Number ranking indicates order of magnitude.

Group discussion on these primary areas supported this ranking. Issues of consistent supply were generally discounted because they are weather and market situation dependant.

Ranking within Primary Areas

Sub-actions within each primary area were ranked according to short or mid-term priority. Additional detail for some sub-actions is included in order of decreasing priority.

Nutrition

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|---|--|
| Feed and food components – 10 - Proximate database - Human nutrition done 2 nd | Market scan for human nutrient opportunities - 6 |
| Comparative analysis - 6 - Compile for silage and grain | Promote grain for cattle feed - 4 |
| Promote grain for cattle feed - 6 | Comparative analysis –3 - Includes component analysis |

Extension / Tech Transfer

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|---|---|
| W. Canadian Triticale Extension Platform - 11 | Information on ergot - 5 |
| Extension with currently available information (esp hogs) - 3 | Extension with currently available information (esp hogs) - 3 |

Components

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|--|---|
| Non-food industrial platform – 13 - Biopolymers - Sweeteners | Non-food industrial platform – 20 - Industrial proteins (glue) - Biopolymers - Bleaching enzymes |
| Fractionation – 1 | Fractionation – 7 |
| Basic food research - 1 | Basic food research - 3 |

Government Regulations

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|----------------------------------|----------------------------------|
| Crop Insurance Coverage – 10 | Healthy vibrant grower group - 3 |
| Healthy vibrant grower group - 4 | Define bushel weight - 1 |
| | Crop Insurance coverage - 1 |

Consistent Supply

| Short Term (1 to 3 yrs) | Mid Term (3 to 5 yrs) |
|----------------------------------|---|
| Seed availability and access - 5 | Seed availability and access - 4 |
| Minor herbicide registration - 2 | Multiple markets for sustainability - 4 |

The Next Steps

All information from the meeting will be distributed to triticale industry representatives with the hope that project submissions will occur to the funding agencies utilizing information from the meeting.

Participants

Organizers: Doug Walkey, ACIDF; Don Salmon, AAFRD

Facilitation: Connie Phillips, AAFRD

Attendance:

Kevin Swallow, AAFRD

Keith Briggs, GrainTek

Alan Hall, AAFRD, AARI

Linda Hall, AAFRD, U of A

Gail Lemke, AAFRD

Tom Machacek, ACIDF

Marvin Nakonechny, ACIDF

William Farley, Seed Grower

Len Solick, Seed Grower

Sulo Luoma, Seed Grower

Jaimie McAllister, Champion Feeds

Tom Jackson, Alberta Rye and Triticale Assn.

Blair Carruthers, Quality Assured Seeds

Francois Eudes, Ag & Agrifood Canada

Trevor Kloeck, AAFRD

Mel Stickland, Progressive Seeds

Appendix A: Growth Potential of Triticale in Western Canada Summary list

(17/12/02 From March 2001 Report, GrainTek)

Summary recommendations (with page number in the report).

***** Highest priority**

Breeding programs (10 items p4)

*****Swine feed (p4-5)**

1. On-farm demo / research studies, determine real grain value
2. Prairie-wide information workshops (eg. W. Nutrition Conference, Fa112002)
3. Basic research to fine tune use in Canada
 - a) Optimal ration combinations with triticale
 - b) Use with canola meal rather than soy meal
 - c) Are trypsin or chymotrypsin a problem at all ?
 - d) In breeding - how long till a low phytase triticale ?
4. Economic studies to determine floor price based on nutritional value vs other grains
5. Establish one extensive proximate analysis data base for W. Canadian samples triticale

Poultry feed use (p5)

1. Establish one extensive proximate analysis data base for W. Canadian samples triticale
2. Establish a working group network of W Canadian 'grower-processor-feeders' to carry out replicated commercial run trials on outstanding research questions
 - a) Optimize custom rations with triticale
 - b) Check for variety differences
 - c) Check best enzyme supplementation, formulations
 - d) Check feed processing aspects
3. Do basic research at Poultry Centre etc. on items flowing from item 2

Ruminant use (p5) Triticale is fully substitutable for barley in this use

1. Survey feedlot users of triticale - capture current experience and technical aspects, constraints
2. Write special bulletins for this use, paper and web form, and promote
3. Low priority research - Are there variety differences in weight gain and meat quality?

***** Use for forage (p6)**

1. Survey current users - capture current field use and feeding experience. Emphasize silage use for feedlots where greatest potential lies
2. Write new technology chapters to print and put on web; up-to- date with all current research results in it. (Also includes recommendation5 in this section)
3. New research needed at feedlot scale
 - a) Optimal silage harvest dates to balance yield and quality
 - b) Cutting and processing to minimize animal acceptance problems
4. Expand agronomy trials (especially in light of droughts)
 - a) Extend forage season, early and late
 - b) Crop for manured lands and to reduce nutrient runoff (Nutrient sink)
 - c) Low input crop, weed control, rotational break crop, alone or in mixtures

5. Are all research results available now, or in files, yet to be publicized?
6. Target major silage users with custom made promotional packages to encourage triticale use adoption. Identify lead adoptees for triticale forage and have them give talks at farmer meetings, workshops etc., not researchers!
7. Lobby cattle and dairy industry to create Chair in Forage Harvesting and Processing Systems at U of A
8. Put Alberta 'On-Farm triticale demo' results into summary form in printed and web form

Value-added human food applications (p7)

9. Expand University level research capacity in this area
10. Basic research on fractionation, food, nutraceutical and processing applications

Ethanol and co-product production (p8) 10 recommendations

Minor use herbicide registrations (pIO)

Breeder's Rights, Royalty earnings, brown-bagging issues, checkoff at seed cleaning (p 10)

*****Education and technology transfer** about triticale (the 'invisible' crop (pll-13»11 recommendations

Appendix B: Participant Contact list

| | Affiliation | Phone | E-mail |
|-------------------|-----------------------|--------------|--|
| Keith Briggs | GrainTek | 780 434-4472 | graintek@shaw.ca |
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| William Farley | Seed Grower | 306 757-6844 | farleyseeds@imagewireless.ca |
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