



Cool Nights: Better Potatoes?

By Dr. Darcy Driedger & Dr. Michele Konschuh

The potato processing industry in Alberta has been active for over 30 years and we all know that good processing potatoes make good French fries. Alberta is widely known for quality potatoes and potato seed production. The potato acreage in Alberta has increased from 25,000 acres in 1990 to 51,000 in 2001. In southern Alberta, this increase is a result of expansion in potato processing capacity. Seed potato acreage in other regions of the province has increased to serve our processing industry and meet the growing export demand.

As acreage increases, so do the challenges facing our industry. Southern Alberta typically has greater temperature extremes, lower relative humidity, and more intensive irrigation than other potato growing regions in Canada. In 2001, potato growers were faced with one of the hottest, driest growing seasons on record, and irrigation allotments were insufficient for potato production. Researchers at the Crop Diversification Centre South in Brooks are investigating how temperature levels during the growing season affect the growth and quality of potatoes for processing.

Dr. Michele Konschuh and Dr. Darcy Driedger are growing Russet Burbank potatoes in growth chambers where they are able to manipulate temperature and day length. Initial data indicate that

potatoes grow most rapidly when daytime and nighttime temperatures remain relatively cool. High daytime temperatures appear to inhibit growth, especially during plant emergence. This effect may be partially alleviated if nighttime temperatures are cooler, or if the temperature extremes are short-term. Once the plants mature, yield and tuber quality will be evaluated for potatoes grown under various temperature conditions.

Unfortunately, we cannot control the weather, however, a better understanding of the effect of heat on potato growth and quality may lead to improved management practices specific for Alberta potato production. This type of research, funded in part by ACIDF is a step toward marketing consistent, quality products.



Drs. Driedger and Konschuh examine potato plantings in growth facilities at CDC South.

Electronic Application Deadline

The 2003 Science & Research Call for Preproposal is well underway. The closing date for preproposals is October 11th 2002, which is scarcely a few weeks away.

There are a few things different about this year's call. First, a single application will be reviewed by six separate funding organizations. ACIDF, AARI, the Ag & Food Council, AVAC Ltd., Alberta Livestock Development Fund and the Diversified Livestock Fund of Alberta are coordinating their application process ultimately sharing resources to fund projects.



This year electronic application is a requirement. Each funding agency has provided a link from their websites to the electronic application page. To apply, point your browser to <http://www.innsci-webapps.gov.ab.ca/aariapp/Application/First.asp> and follow step-by-step through the questions.

For those very thorough people, ACIDF has kept last year's preproposal form on the website (www.acidf.ca/library.htm). While this application is out-of-date, it can be used as a draft copy of the current application. You can cut-and-paste from the draft into the electronic form.

CAUTION! Last year we received many last minute applications. Remember, this electronic application is new and untested. As much as we all like the immediacy of electronics, it is possible for the system to fail under high demand situations. Don't leave things to the last minute and get caught in a computer failure.

Finally, ACIDF will require a letter of recommendation for a signatory organization before it can consider funding applications. Don't forget to arrange industry endorsement early.

Good luck on your applications!

NEW ACIDF TELEPHONE NUMBER: 403 782 8034

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