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# *Welcome and Charge to the Meeting*

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It is indeed a pleasure to welcome you to Saskatoon to participate in the ninth annual meeting of the National Agricultural Biotechnology Council. My task this morning is to provide a brief orientation to the meeting and to present some preliminary remarks that will help guide our thinking.

First, I wish to make the point that this meeting did not happen spontaneously. Many people played different roles over the years that led the course of events to this time and place. I want to first mention Murray McLaughlin, who, as president of AgWest Biotech, attended NABC 4 and upon returning to Saskatoon had discussions with us at the university and encouraged us to become members of the NABC. Murray's encouragement and support in this as well as in many other activities related to agricultural biotechnology, are firmly appreciated. One cannot speak of NABC meetings without mentioning Ralph W. F. Hardy. Ralph, as we all know, was instrumental in the formation of the NABC as a powerful institution; we owe him a debt, and his presence here is warmly appreciated. Finally, I wish to recognize the co-chairs of this meeting. Bryan Harvey and Jim Germida have spent a great deal of time and effort over the past couple of years bringing the program together, working with the NABC Council to iron out the details, and, most importantly seeing that everything goes smoothly. For these efforts I want to thank them personally, as well as on behalf of the university and the NABC.

For those of you who may be attending your first NABC meeting, I want to speak briefly about the format of these meetings. The NABC meetings are all about dialogue, discussion, and education. The NABC celebrates education. It is the focus of our activities – it is the prime reason for the existence of the NABC

— and the educational process at these meetings is carried out in a unique way. We have plenary sessions at which outstanding leaders present material for us to digest. These meetings start out in a very general way, with general discussions drawing our attention toward the issues around agricultural biotechnology. The meeting then moves to plenary sessions that are more specific, with particular items worked out in detail, and then moves to workshops. The workshops are a very important aspect of the NABC meetings. In them, the information that has been provided by the plenary speakers is augmented by specialists at a more focused level. Then discussion, dialogue, exchange of ideas, and work toward a consensus is undertaken. It is important to recognize that the results of these discussions will be summarized and that a publication will appear in the coming months that will record not only the thoughts of our key speakers but also the thoughts of the attendees as reflected in the dialogue in the reports generated in the workshops.

I want to thank you all for coming. I want to encourage you to participate fully and to gain through the process that has been laid out for you.

I now wish to turn your attention to a few thoughts about the Canadian prairies and about the setting in which this meeting takes place. About two years ago, when we were sitting around talking about the focus for this meeting, it came to us that one of the unique features about the prairies and about the agriculture that survives here is that it takes place in a challenged environment. We use this concept in our title, and the title “Resource Management in Challenged Environments” is very appropriate for the setting in which we find ourselves. On this beautiful June day it may seem that this is a hospitable and welcoming environment. Let me assure you that other parts of the year are less accommodating. The extreme range of physical limitations confront us in agriculture on these prairies. Saskatoon is at the apex of what we in Canada call the Palliser Triangle. This triangular area is bounded roughly by the Rocky Mountains at the U.S.-Canadian border on the southwest, the Red River as it crosses the American-Canadian border on the southeast, and Saskatoon at the apex. The area is an extension of the Great Plains. It is semiarid; at its extremes it becomes an arid area. It was, in the mind of the explorer Palliser, who first traveled it, an area not likely fit for settlement. He probably traveled these plains in one of the periodic drought cycles, and following his report it was some years before settlers ventured into this vast sea of grass. Surrounding the Palliser Triangle is a horseshoe-shaped area of more fertile soils but one that faces other limitations such as a short growing season, extremely severe winters, and considerable variation in rainfall.

In summary, the effect of these environmental challenges for agriculture on the prairies, we work very close to the margin. We work close to moisture and temperature limitations, and we are very much at the mercy of fluctuations in either of these variables.

In this environment, technology has always played a major role. Throughout

the last hundred years, technological change has helped us deal with the narrow margins and has pushed back the limitations of our environment and our location in some rather remarkable ways. The production and export of grain from these prairies was almost impossible economically until the development of steel and steam in the transportation system. Steel-hulled boats driven by steam, as opposed to sail, changed the economics of moving grain over long distances in the last couple of decades of the nineteenth century and were a major factor in opening up the prairies as one of the bread baskets of the world. Early in the twentieth century, the development of a wheat that would come to maturity within the prairie growing season was another major technological breakthrough that reduced the environmental hazard of farming on the prairies. In addition, the development of dryland farming technology was an important breakthrough that made it possible to make a living from these plains. We are all familiar with the dust bowl of the 1930s. In Saskatchewan there was a smaller, but just as severe, drought period in the early 1920s, and developments such as the placing of the Swift Current Experimental Station in the heart of the dryland agricultural area were instrumental in allowing people in this province to learn to cope with the vagaries of dryland agriculture.

One of the ongoing battles farmers on these prairies faced was the rust epidemic in the cereal crops. Major advances, particularly during the 1930s and again during the 1950s, in developing varieties, particularly of wheat, that were resistant to the prevalent strains of rust led to the possibility of continuing to crop these vast semiarid areas.

In setting the stage for our thinking about agricultural biotechnology, it is important to recognize that technology has been, in a sense, the saviour of the narrow-margin agriculture of these plains, but at the same time we must recognize that all of the impacts of technology have not been favorable. As we have overcome one challenge, we often recognize that the methods we used have side effects that cause new problems, or second-generation problems, that we must then address. This is the setting in which we find ourselves. We continue to face challenges. We look to the development of agricultural biotechnology to resolve them. At the NABC Council meeting yesterday, we talked about the necessity and the means to continue the trend of a two percent annual increase in agricultural productivity. This is an ongoing challenge, and we will be looking to agricultural biotechnology for assistance. There are many other challenges. In Saskatchewan, as in most parts of the agricultural world, we recognize the changing face of the agricultural marketplace. As primarily an exporting industry, we must become more cognizant of our market imperatives. We also are becoming more cognizant of the questions of sustainability in agricultural production and of the social impacts of the changes in the structure of agriculture brought about not only by technology but by the changing face of trade, marketing, and sustainability needs.

In planning this meeting, we recognized that we must draw attention to these issues. Therefore, the meeting has been structured to address resource management in challenged environments, and the subtopics used to identify and explore this issue include the regulatory system, biodiversity, and social issues. The workshops are designed to challenge your thinking, to lead your thinking, and to position you to form opinions and action plans that can assist individuals and the total industry in moving forward to meet these challenges.

Finally, I want to remind you that the success or failure of this meeting — the value to you by attending this meeting — is totally dependent on the way you participate. I urge you to submerge yourself in these issues, to listen carefully to the speakers, and to join freely in the discussions and the formation of consensus statements that will take place during the latter parts of the workshop sessions. I wish you a successful and enjoyable experience over the next two days.