

Taking research inventory

By Leeann Minogue Editor



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Last month the Western Grains Research Foundation released a new report. “Fertile Ground: Agronomic Research Capacity in Western Canada” is the result of a lot of surveys conducted by the Edmonton-based consulting firm, Toma and Bouma Management Consultants.

The WGRF funded this study to take a snapshot of the current state of Prairie agronomic research. This is important stuff. In other sectors, we can piggyback on research from other places. A cancer drug developed

in France should work in Medicine Hat. That doesn’t apply to agronomy. Our short growing season, our cold climate, and our particular collection of soil, weeds and bugs require agronomic research targeted specifically to our area.

The web of Canadian Prairie ag research involves a pretty complicated network of people and funding. (In fact, it’s so complicated that there’s sometimes a bit of accidental duplication.) This study is all about the people who actually do the work. The study left plant breeding out of the equation and focused on agronomy. And, rather than trying to find a way to value the quality of the work that researchers are doing, the report is basically a head count of the number of researchers, with an underlying assumption that agronomists with PhDs are better researchers than those with other qualifications.

I was pleasantly surprised to read this (long, long) list — there are a lot of people out there working on our problems.

The long, long list

First, the feds. Agriculture and Agri-Food Canada does agronomic research at six main sites and other trial sites for a total of 11 locations across the Prairies. They have well-respected scientists (the equivalent of 39 full-time PhDs, not including support staff, says the study). With similar research practices and equipment at each location, AAFC can replicate trials across the Prairies, to get better data.

If you’re wondering, the study says that the rough cost of an AAFC researcher is estimated at about \$400,000 per scientist per year. This includes the cost of technicians, labs, equipment and offices.

Next: higher education. The universities in Edmonton, Regina and Winnipeg have several research scientists on staff (the full-time equivalent of 20 PhDs, says the study.) The study says the rough cost of a university researcher is about \$300,000 per year, including all of the associated expenses.

These university scientists are performing high-quality agronomic research, and also supervising the research work of graduate students (167 of them!).

The problem: The more experience these top-drawer researchers at AAFC and the universities get, the more likely they become to want to retire. The study says we’ll lose up to 25 per cent of them in the near future. At AAFC, the study says, “This is recognized, but no replacement plan is known yet.”

The provincial governments are doing a lot of research too. Alberta has PhDs on staff at the Alberta Innovates Technology Futures (formerly Alberta Research Council), and also 10 PhDs at Alberta Agriculture (the study says the Alberta government is “unique in Canada for its internal research capacity”).

Saskatchewan doesn't have as many researchers on staff (two PhD full-time agronomy equivalents at Saskatchewan Agriculture), but the provincial government funds research through its Agriculture Development Fund and ADOPT program (Agriculture Demonstration of Practices and Technologies)

The Manitoba government organizes most of its agronomic research through four crop development centres.

Applied Research Organizations

These groups are generally farmer-led, doing locally driven research. At the Saskatchewan Pulse Growers regional working in Regina on February 5, Chris Holzapfel, research manager at the Indian Head Agriculture Research Foundation, was asked more questions about his local, field-ready research than anyone else on the agenda.

In B.C., the B.C. Grain Producers has the run of this field.

In Alberta, two colleges do some agronomic work: Lakeland (at Vermillion) and Olds College. Then there are 10 (yes, 10) additional applied research associations. There is:

- ARECA (the Agriculture Research and Extension Council of Alberta), an association of non-profit groups;
- Farming Smarter, a Lethbridge-based, privately operated research association;
- SARDA (Smoky Applied Research Association), a research and extension association in the Peace River Region;
- The West Central Forage Association focuses on livestock and forage research;
- CARA (Chinook Applied Research Association), a farmer-directed group based in Oyen;
- The Gateway Research Association in the Westlock area;
- LARA (Lakeland Agricultural Research Association) at Bonnyville;
- NPARA (North Peace Applied Research Association), a farmer-driven research and extension group;
- The Peace Country Beef & Forage Association demonstrates new forage varieties and technology; and
- MARA, in the farthest north part of the province.

Obviously, research results in the north part of the province won't help farmers near Lethbridge. It makes to support local research applicable to local conditions.

In Saskatchewan, Parkland College does some agriculture training, and there are eight applied research associations: Indian Head Agricultural Research Foundation, the Irrigation Crop Diversification Corporation at Outlook, the Northeast Agriculture Research Foundation Inc. at Melfort, the Western Applied Research Corporation at Scott, the Wheatland Conservation Area at Swift Current, the Conservation Learning Centre at Prince Albert and the East Central Research Foundation at Canora.

And, that's still not the end of the list. The WGRF's study also include local, private companies, with a note that, as governments and universities lose researchers to retirements, these organizations tend to be increasing in size. This category includes Alberta-based Agri-Trend, which has a number of respected researchers on staff, Western Ag, a Saskatchewan-based company that's heavily involved in agronomic research, and Ag-Quest Inc., a contract research organization, ICMS, Incs which does contract research. And, of course we can't forget global ag companies like Monsanto, Dow, Syngenta, CPS, Agrium and Pioneer that are doing long lists of local research relevant to our climate.

Most producer-funded commodity organizations don't have agronomy PhDs on staff, but more of them are hiring highly-qualified research coordinators and looking for better ways to promote agronomic extension.

In the WGRF's press release, board chair Dave Sefton says, "In order to plan for increased funding of agronomic research we first needed to understand the capacity of the public system to carry out increased agronomic research."

There are a lot of researchers working to help you get better agronomic results. Keep your eyes open for the results, and use that knowledge on your farm.