Time to refresh R & D priorities to make sure the needs of Canada’s forest industry are being met

By Tony Kryzanowski

There is an old Monty Python comedy sketch called, “the 100 yard dash for people with no sense of direction.” As the starter fires the pistol, the competitors scatter in random directions. That’s my impression of the current relationship between Canada’s forest industry and the many research and development groups mandated to serve it. There’s no doubt that R & D organizations want to do a good job, but the question is whether they are properly aligned and networked to serve industry’s immediate, medium, and long-term needs.

Given the massive changes that have occurred in Canada’s forest industry over the past decade and what’s in store in the near term, there’s no doubt in my mind that the relationship between Canada’s various forest industry sectors and the research and development organizations that cater to them definitely needs a ‘refresh’.

Is industry getting the best bang for its buck? Have R & D groups swung the pendulum too far away from delivering on science and technology with tangible deliverables in favor of support for more academic, less immediately tangible research? Are R & D groups doing the type of priority work that should be done to help position the industry for the next 20 years? Is their role to assist in marketing commercially-ready technology clearly defined? Should they be involved in its marketing at all?

The answer for me is, I don’t know, and I’m quite sure that is the same answer that most forest industry executives and government policy advisors would give today. Recently, I’ve noticed that the R & D groups themselves seem to be struggling to find their footing and purpose, and would likely appreciate some feedback from stakeholders like industry and government to help set clear priorities.

What’s needed is a detailed inventory of all research being done to assist the solid wood, pulp and paper, and bioproducts sectors, to determine just how close to commercialization or market-readiness each project goal is, with the objective of setting clear short, medium, and long term deliverables for each project.

Industry change is being driven largely by three forces: markets, technology and the environment.

Firstly, from a market standpoint, there are several new industry players in Canada’s forest industry. EACOM Timber is a new entry in the solid wood sector. Resolute Forest Products has been reinvigorated with its major investments in northwestern Ontario. Paper Excellence is a new entry in the pulp and paper sector, and the massive Alberta-Pacific Forest Industries (AL-PAC) pulp mill has a new owner.

Furthermore, the bio-energy sector is a growing force within forestry, with companies like Rentech and Resolute showing the way in Ontario, and Active Energy Group working with Métis communities in Alberta.
New markets, such as China, have brought greater solid wood industry diversification, and with the prospect of a free trade agreement with the European Union, what was unthinkable a decade ago now seems entirely possible. Canadian wood products could soon find new markets in fortress Europe.

Second, technology continues to advance by leaps and bounds. For example, a British company called BioCarbon Engineering is currently demonstrating its aerial drone tree planting technology, which it claims is capable of planting a billion trees per year at only about 15 per cent of the cost of current tree planting methods. While it will likely find limited use in natural forest regeneration, where it will shine is in afforestation to establish tree crops on cultivated land at a fraction of the time and cost. In other words, the cost of producing fibre of all sorts for a variety of uses has just fallen through the floor. Imagine how cheap it could now become to grow specialty crops of all kinds for specific bio-energy and bioproducts.

And why stop at seedlings, when this technology could also be used to fertilize and apply herbicides and pesticides. As far as adopting new technology like this, take the example of computer-based, lumber grading systems. About a decade after it first broke onto the scene, it has become standard in most Canadian planer mills. The same scenario could develop with this type of tree planting technology because novel new uses for aerial drone technology are being discovered on a regular basis.

Third, climate change will create both challenges and opportunities over the next 20 years for the Canadian forest industry. The issue of human-assisted migration will preoccupy industry over that time to ensure that well-adapted tree seedlings are used to combat the retreat of the Canadian boreal forest further north. On the flip side, there could be increased demand for biomass-based power to replace fossil fuel sources, creating greater demand for bio-energy from wood-based materials. Many of Canada’s forest companies are already in the power generation business.

So… are Canada’s R & D organizations at all levels sufficiently tuned into these industry priorities to help the forest industry survive and prosper in a cellulose-driven world? It’s time to take stock and find out before we lose any market advantages we have already created through R & D efforts to date.