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 Versatility of the BioRoom™



History of the walk-in growth room and Canola/rapeseed at the University of Manitoba

BioChambers and the University of Manitoba have a long history together. The 1970s were not just about personal expression and bell-bottoms; it was a decade that transformed oilseed agriculture across the world. That transformation had its roots at the University of Manitoba in the early 1970s under the leadership of Professor Baldur Stefansson. In 1974 Professor Stefansson registered Tower as the very first Canola, a variety of summer rape that was low in both erucic acid and glucosinolates, making it a valuable cooking oil and food source for livestock¹. Today, Canola is a \$19.3 billion industry and the most valuable commodity for Canadian farmers.

At the same time Tower was released, Charlie Lamont founded what is now BioChambers. One of BioChambers first projects was to work with Professor Stefansson and the University of Manitoba to build large walk-in growth rooms for the burgeoning Canola/rapeseed research program. These first of their kind walk-in growth rooms provided large growth areas with reliable temperature control. This allowed Professor Stefansson to research the effects of temperature on male sterility in Canola hybrids, critical to improve cultivar development². The Canola research program at the University of Manitoba grew with the addition of Professors Peter B.E. McVetty and Rachael Scarth in the early 1980s. They picked up Professor Stefansson's work on male sterility³, and used these original walk-in rooms to study the effects of temperature on Canola/rapeseed growth and development. In collaboration with Dr. M.J. Morrison, Professor McVetty used these walk-in rooms to determine the baseline temperature for Canola growth⁴, and the effects of temperature on leaf appearance and expansion rate, area, and longevity^{5,6}. This data was then related to growing degree days and corroborated well with field data, providing farmers useful information on growth, development, and projected yields for a given growing season.

Today, Professors Rob Duncan, Genyi Li, and Dilantha Fernando continue to conduct world-class Canola/rapeseed research using these original walk-in rooms. Installed in 1974, these walk-in rooms have withstood the test of time over the decades. BioChambers, the University of Manitoba, and Canola/rapeseed research, a long history built on quality and innovation.

References

1. Stefansson, B. R., & Kondra, Z. P. 1975. Tower summer rape. *Canadian journal of plant science* 55, 343-344.
2. Fan, Z., & Stefansson, B. R. 1986. Influence of temperature on sterility of two cytoplasmic male-sterility systems in rape (*Brassica napus* L.). *Canadian journal of plant science* 66, 221-227.
3. Burns, D. R., Scarth, R., & McVetty, P. B. E. 1991. Temperature and genotypic effects on the expression of pol cytoplasmic male sterility in summer rape. *Canadian Journal of Plant Science* 71, 655-661.
4. Morrison, M. J., McVetty, P. B. E., & Shaykewich, C. F. 1989. The determination and verification of a baseline temperature for the growth of Westar summer rape. *Canadian Journal of Plant Science* 69, 455-464.
5. Morrison, M. J., & McVetty, P. B. E. 1991. Leaf appearance rate of summer rape. *Canadian Journal of Plant Science* 71, 405-412.
6. Morrison, M. J., Stewart, D. W., & McVetty, P. B. E. 1992. Maximum area, expansion rate and duration of summer rape leaves. *Canadian journal of plant science* 72, 117-126.

