

Visiting this vast and beautiful province makes one vividly aware that agriculture and farming of all types is an integral part of life in Saskatchewan. As is well known, Saskatchewan produces 60 percent of Canada's total wheat crop and most of the country's canola, rye, barley, oats and flax.

Supplying 20 percent of the global wheat market, Canada is, in fact, the world's seventh largest producer of wheat. More than 50 percent of our agricultural exports are in grain; grain exports -- which represent 5 percent of Canada's total exports -- were worth \$5.5. billion in 1984.

It is interesting to note that Canada finds its largest single wheat market in the Soviet Union; exports to that country were valued at \$2.2 billion last year. Canada -- and significant sections of the world -- depend on the abundant harvests from this land.

In an agricultural community, weather assumes a special significance. It requires constant monitoring and analysis. It must be both understood and anticipated. Too little rain or too early frost can mean disaster to a crop which is sensitive to minor variations in temperature and precipitation. In Canada, we cultivate our crops on the very margin of permissible climatic conditions. The prairies lose their capability for maturing wheat when the temperature decrease is slightly more than 2 degrees celsius for wheat and 4 degrees for barley. Weather is a constant concern to farmers.

Here then, in this land so bountiful in its harvest, and yet so vulnerable to the climate, is an appropriate place to consider the full meaning of "Nuclear Winter."

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In 1971, the Mariner 9 space-probe began orbiting Mars and transmitted to Earth photographs of a planet enveloped in the dust of a Martian storm. Astronomers, planetologists and geologists studying this phenomenon recorded that the surface temperature of the planet was lower than that of the dust in the upper atmosphere.

Drawing on this data, scientists, including the pre-eminent astronomer and author of Cosmos, Carl Sagan, determined that there might be similar effects on Earth should vast amounts of dust and smoke be released into the atmosphere as a result of volcanic eruptions, mass forest fires or a major nuclear exchange. Follow-up work,