

- *In Canada:* Charles Saunders' development of **Marquis wheat** did as much to open up the Western Prairies to settlement as the railroad. At issue was the need for a bread wheat that would mature before the Prairie frosts came. In 1906, Saunders came up with one. **It was made available to farmers in 1909, and within 10 years, accounted for 90 per cent of Western Canada's spring wheat.** Moreover, it has been estimated that Marquis' higher yields pumped \$20 million more a year into the Canadian economy than any other variety available at the time would have done.
- Canola was also developed by Canadian plant breeders. Dr. Baldur Stefansson developed the first canola variety, with both reduced erucic acid and glucosinolate levels, in 1974. **Today, canola oil is considered the second most popular consumption oil in the world behind soybean oil.**
- *In North America:* The efforts of plant breeding have resulted in a **400-fold increase in corn yields** over the past 60 years.
- *The Green Revolution:* In 1943, the Rockefeller Foundation sent some of the world's best plant breeders to Mexico to introduce new germplasm, or genetic material, into Mexican wheat varieties. After these varieties were crossed with the dwarf wheat variety, Norin 10, from Japan, the resulting midget plants spawned a revolution due to their ability to remain standing up straight even while large amounts of fertilizer were being spread on them. By 1968, the plants had spread from Mexico to other South American countries, and then to India, Pakistan and other countries in Asia. **It's estimated the new wheat varieties affected the food supply of over 1 billion people, and for over 100 million, it was the margin of survival.**
- *Miracle Rice:* In 1966, the International Rice Research Institute in the Philippines released "IR-8", an advanced rice variety that was a cross between an Indonesian variety and one from Taiwan. Dubbed "miracle rice" by the press, IR-8 increased the value of Asia's rice crop – in just two years and on just five per cent of Asian riceland – by \$1 billion. **It's been said that the combined success of Norin 10 and IR-8 helped eliminate famine everywhere in the world, with the exception of China,** for a quarter of a century – from roughly 1950 to 1975.
- **Agricultural production has always been used for industrial and energy purposes, in addition to growing food.** The importance of these uses to produce primary renewable substances is increasing due to the risk of depletion of non-renewable resources of energy, particularly hydrocarbons. Today, plant improvement includes the creation of varieties better suited for the production of products such as biological combustibles, industrial oils and biodegradable plastic materials.

*With their higher yields, modern crop varieties have reduced the acreage that would otherwise be needed to feed the world population, thus allowing the preservation of millions of hectares of natural vegetation.*