

Figure 1: Average rapeseed yield.

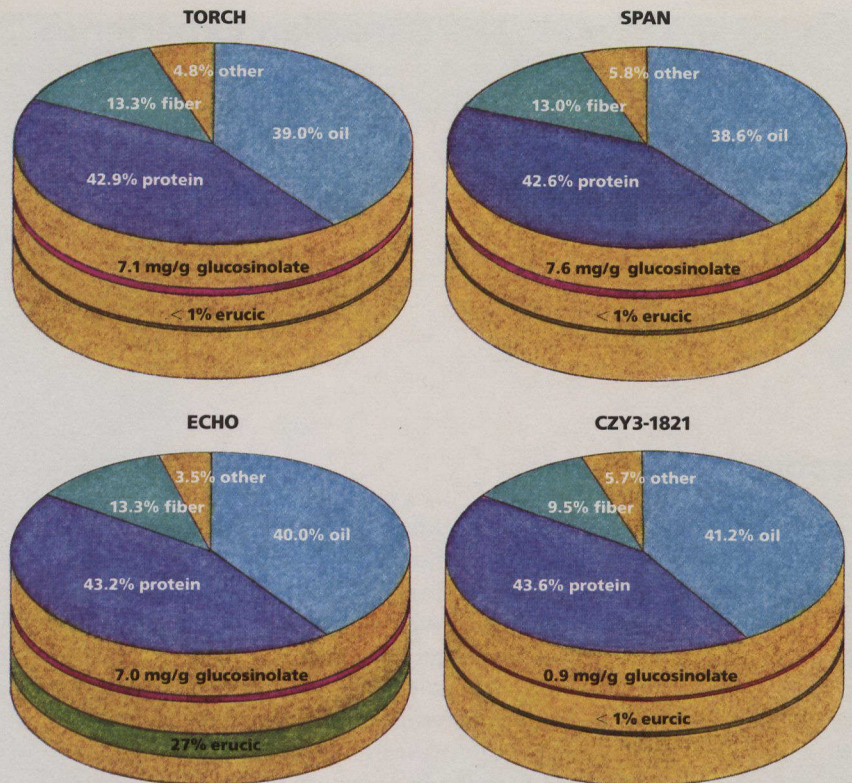


Figure 2: Composition of *B. campestris* rapeseed varieties.

katchewan, Research Station and licensed in 1973. Tower, the double-low rapeseed developed at the University of Manitoba in 1974, is now the major *B. napus* variety grown in Canada. The recent licensing of two new, higher-yielding double-low varieties, Regent and Altex, will ensure conversion to double-low rapeseed in the *B. napus* species by 1980. All are particularly suited for production in central Alberta, Saskatchewan and Manitoba.

Of the *B. campestris* varieties, Torch and Span were developed at the Saskatoon Research Station and licensed in 1973 and 1971 respectively. Span was the first turnip-rape variety virtually free of erucic acid in its seed oil.

The *B. campestris* varieties require a two to three week shorter growing season than the *B. napus* ones and are well suited to the Prairie climate, as well as to that of the Peace River area of British Columbia. However, the higher potential yield of the *B. napus* varieties is sufficiently attractive to offset their requirements for a longer growing season wherever achieving maturity is possible.

The yield factor is of great importance in any breeding program. The average farm's yield of rapeseed has increased by 56 per cent since the first five years the crop was grown (1943 to 1947); 40 per cent of this increase has occurred since 1961 (see table 1).

Further developments in the acreage being sown in the early maturing *B. campestris* will determine how quickly a complete Canadian conversion to double-low seed can take place. The first strain, Candle, was commercially tested in 1976 and licensed for contract production in 1977. It is the first with a seed coat that is partially yellow (rather than dark brown or black), a characteristic that accompanies decreased fibre and increased oil and protein content, both important advantages (see table 2). For 1978, experts forecast a tenfold expansion over 1977 in commercial planting and processing of the Candle

seed to a total of 226,000 hectares or 560,000 acres. By 1980, production of Candle is expected to be sufficient for both domestic demand and launching an export program.

Canadian rapeseed breeders are now attempting to develop pure-yellow seed forms in both *B. napus* and *B. campestris* species in order to create a marketable product that contains all the desirable characteristics — low erucic-acid content, high oil content, high protein content, low fibre content and low glucosinolate content.

**Harvest brand products are produced from rapeseed.**

