Supplement Materials for

"Growth and the Standard of Living in a Pioneer Economy", *WMQ* January 1999. By Frank D. Lewis and M. C. Urquhart.

Wheat Output and Acreage by District (for footnote 15 of article)

Wheat output is divided among the eleven districts on the basis of improved acreage. It is assumed, first, that the ratio of wheat acreage to improved acreage moved by the same proportion in all districts and, second, that wheat yields did not change. Estimates of wheat output and wheat acreage by district are then generated, where the potential source of error is the variation across districts in the growth of wheat relative to other crops. The bias, however, would tend to affect the district values rather than the provincial aggregates.

Wheat growing conditions varied across the province. Wheat was less prevalent in the east and far west. By making our adjustment at the district level, we allow at least in part for these differences. The equations on which the wheat output and acreage measures are derived are as follows:

$$q_{wi}^{j} = k_w.A_i^{j}.q_{wi}^{5l}/A_i^{51}$$
,

$$k_{\rm w} = Q_{\rm w}{}^{\rm j}/\Sigma I {=}^{11} 1 \; A i^{\rm j}/A i^{\rm 51}.qw i^{\rm 51}, \label{eq:kw}$$

where qwi^j is wheat output, Ai^j is improved acreage, i refers to the district and j the year. Qw^j is total wheat output in year j.