

# The Effect of Land Levelling for Irrigation on the Nutrient Availability to Plants

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In 1966, a tomato crop was grown on land that had previously been levelled for irrigation. The plots were situated on an area that included two types of soil: that which had lost the top 6" through levelling (B plot) and that which had the top 6" present (A plot). One further treatment was added and this was the application of 40 tons barnyard manure to part of the B plot. This area was then called M plot. Tomatoes were grown under irrigation on all three plots. The yield and chemical quality of the fruit were used as an indication of the nutrient availability of the soil in the three plots. A, B and M yielded 19.9, 9.4 and 20.8 tons of tomatoes/acre respectively, but the chemical composition of the plants showed that Mn, Zn, B and Cu were affected by the soil type.

For example,

Soil Type	Mn	B	Zn	Cu
	(µg/g D.M.)			
A	128	29	28	6.7
B	77	28	18	11.6
M	117	22	18	5.7
LSD (0.5)	14	3	2	0.8

In 1967, oats, wheat and barley were grown on the same plots without irrigation. Again, the yield and chemical composition of the growing crop were used to assess nutrient availability.