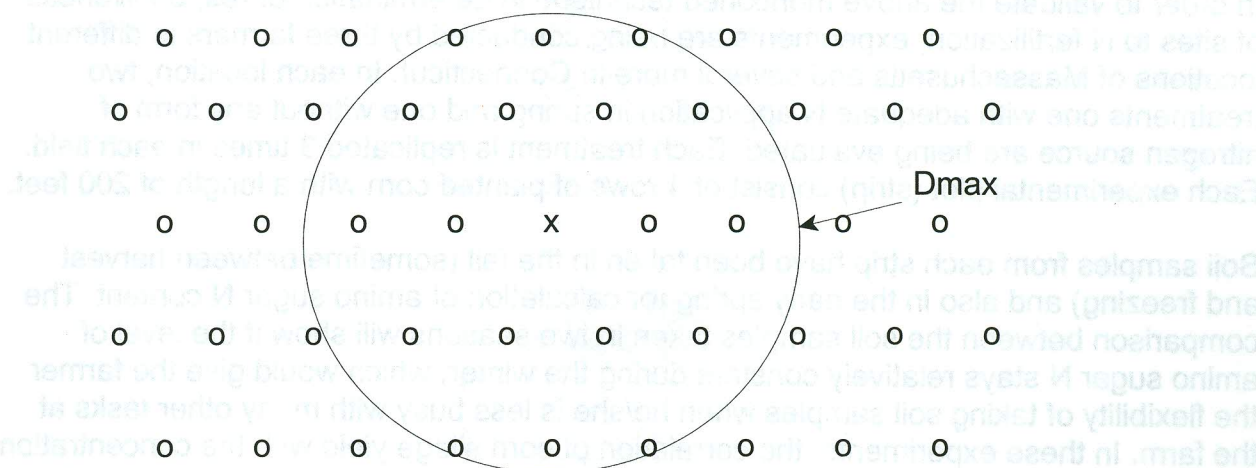


## Response of Corn to Plant Spacing

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Earlier in this research report we described a study examining the response of soybean to plant spacing. As with soybean the potential yield of corn or any crop will be specific to the genotype and the environment in which it is grown. For the crowding model proposed by Duncan (1984) the distance at which crowding competition between two plants becomes zero or negligible is termed  $D_{max}$  as shown in Figure 1.

Figure 1. Relationship of a field grown plant (x) to other plants growing in the same field (o); plants outside the circle will, in theory, have no influence on growth of plant x.



In this research, we are growing uniformly spaced ('isolated') corn plants at 3ft/3ft, 6ft/6ft, 9ft/9ft, 12ft/12ft, 15ft/15ft, and 18ft/18ft spacings. Given the larger stature of corn plants, these spacings are considerably further apart than those used for determining  $D_{max}$  of soybean (1.6ft/1.6ft to 5ft/5ft). Yield per plant will be measured and plotted against density of uniformly spaced plants. The yield response to separation will be determined by regression. In this way  $D_{max}$  can be evaluated without the confounding effects of plant population (density) and planting pattern.