

**Geostatistical analysis of the spatial variability of *Cyperus esculentus* L. and *Oxalis* spp. in wheat (*Triticum* spp.) research lots. (CIMMYT, El Batan, Mexico).**

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*C. esculentus*, *O. latifolia* H.B.K., *O. corniculata* L. and *O. tetraphylla* Cav. are serious problems in the research lots used by the Wheat Breeding Program at CIMMYT's El Batan Experiment Station, Mexico. Thirty lots, averaging one hectare each, were systematically sampled in order to quantify the degree of infestation and the spatial distribution of the weeds. This information would be useful to better plan our management practices as well as for establishing a point of reference to assess their effectiveness.

Underground vegetative structures and subsequently aerial structures were sampled in a 10 by 10 m grid. At each grid point the sampled area and depth were 625 cm<sup>2</sup> and 20 cm. The spatial variability was analysed using geostatistics, and the kriging estimates were compared with the maps obtained by conventional interpolation using SAS-Graph. The weeds showed aggregated spatial distributions which could be detected by the systematic sampling. There was considerable variation between lots in the extent of the infestation and structure of the variability. This permitted the classification of the lots in stages of development of the infestations. The geostatistical analysis was useful in identifying the existence of trends, which could be associated with natural or management features.