

and other maize relatives have yet to be investigated, the above data support the hypothesis that maize is domesticated teosinte.

This work was begun at the Genetics Department, University of Missouri, Columbia, Missouri, U.S.A.

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J. Giles Waines

2. Leaf phenolics of Zea mays, Zea mexicana and Tripsacum species.

A project is underway to investigate leaf phenolic constituents of primitive races of Zea mays, geographically diverse collections of Zea mexicana and several biotypes of each species of Tripsacum.

J. Giles Waines
Tony Swain*

*Biochemical Laboratory, Royal Botanic Gardens, Kew, Surrey, England.

3. New chromosome techniques for knob detection in mitotic chromosomes in maize and teosinte.

Recent advances in cytological techniques have made possible the linear differentiation of mitotic chromosomes in many plant and animal species (Caspersson et al. 1969; Vosa, 1970, 1971; Pardue and Gall, 1970; Arrighi and Hsu 1971).

There are now two new main cytological methods; one exploits the differential DNA binding specificity of certain fluorochromes of the acridine group and the other the property of the Giemsa stain to differentiate, after various kinds of denaturation and reannealing, between repetitive and less repetitive DNA sequences in the chromosomes. The