PART I: A REVIEW OF THE NATURE AND THE PROPERTIES OF PLANT OESTROGENS

1. Introduction

The interest in plant oestrogens arose soon after the development of the Allen-Doisy method of assaying oestrogens. Loewe (1926) found that willow catkins (Salix caprea L.) and the water rose ovaries (Nuphar luteum L.) were oestrogenic. A leguminous plant, Butea superba Roxb., was shown to be very active and the extraction processes were patented in Germany, France and Britain (Schering-Kahlbaum, 1935 a,b; 1937 a,b,c,d; 1938; 1939). Butea superba Roxb. is the most highly oestrogenic plant reported, but the plant oestrogen has not been identified and there have been no recent studies of the species.

The German workers were interested in the pharmacological properties of the plant oestrogens. In contrast, it was the pathological symptoms in sheep which led Bennetts & Underwood (1944) to suspect that subterranean clover (Trifolium subterraneum L.) contained oestrogenic compounds. The effects of oestrogenic pastures on sheep were first observed during 1941 in Western Australia, where subterranean clover has been used extensively.

In Central Asia a leguminous weed, Psorolea drupacea, has been reported to have seeds with a high oestrogenic content. Sheep grazing pastures containing this weed had a lowered fertility (Simanov, 1959). All the other reports of reproductive disturbances in animals caused by plant oestrogens are associated with a crop plant and not a weed species.

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