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The history and characteristics of troodos and olympus rose clover

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ROSE CLOVER is being produced and used in increasing quantities in south-western Australia. The first line named was designated Kondinin and five lines have now been given cultivar (variety) names.

One of the first samples of rose clover, C.P.I. 13949, introduced into Western Australia proved to be a mixture of two very similar types, differing visibly only in leaf markings. The mixed sample was named Troodos,* and the selection from it, Olympus. This paper describes the origin of the two varieties, their history and characteristics.

Origin
During 1950-51, two officers of CSIRO, Mr. C. Donald and Mr. J. F. Miles, collected seed from Cyprus in the Mediterranean region, which was identified as *Trifolium purpureum*. Their collecting notes relative to this introduction read “28 miles along Nicosia-Troodos road on dark-coloured soils of foothills of igneous area. Small plants to two inches high, stunted due to short, wet season. Grazing legume for short season area to 20 inches.”

History of development
The seed was received in Canberra in July, 1951, and in Western Australia in May, 1952. It was grown at Kelmscott in 1952 and 1955 but was not rated highly except for its early flowering. It proved to be *Trifolium hirtum*. In 1958, because of the work being done in the drier areas, much annual material was grown again and re-assessed. The Cyprus introduction was included in the material for this work.

Grown as spaced plants, the growth habit of this introduction contrasted markedly with all other rose clover material. Its ability to set seed freely and reliably was noted. Two types with distinct leaf markings were recognised. They were separated in 1960 and grown as separate lines in 1961. They bred true, indicating that the original sample was a mixture of two distinct lines. These were identified as 13949A and 13949B. The latter was eventually named Olympus, the name “Troodos” having been used for the original mixed material.

Field trials followed, but it was not until repeated cuttings were imposed during the winter period that the remarkable ability of Troodos and Olympus to give high yields and a reliable seed set under simulated grazing was appreciated and their grazing potential recognised.

The first seed increase of Troodos was in 1960 at Kojonup. More seed was harvested at Kojonup in 1961 and 1962. In 1962 the seed was sown for the first time in the northern wheatbelt by Mr. J. Hogbin of Marchagee.

Field trials from 1960–64 by CSIRO, and farmers’ trials mostly originating from seed produced by Mr. Hogbin showed that Troodos could set seed reliably even under adverse conditions and that its ability to carry stock was much better than expected from its appearance. During this period

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* The name “Troodos” was applied to C.P.I. 13949 before the registration of cultivar names was instituted. Olympus is a registered name. Reg. No. B-le-3. Herbage Plant Register Supplement-1.
appreciable quantities of seed were supplied to the Western Australian Department of Agriculture.

Agronomically there are only minor differences between either of the 13949 lines or the mixed material but for seed certification purposes the line 13949B was selected as being the more easily distinguished from other cultivars and unnamed lines. Preliminary seed increase was done at Kelmscott in 1964 and the first field scale production of seed was in 1965. The first seed available commercially was from the 1966 harvest.

Principal characteristics

The main characteristics of Troodos and Olympus were described in a previous article.* These are distinguished from others by a prostrate growth habit, small leaflets, short petioles and stems with short internodes. The leaflets are rather narrower than those of Kondinin and somewhat flatter on the top, particularly in Olympus. They are distinguished from one another by their leaf markings.

In Troodos the predominant type has a pale crescent in the form of an inverted “V” about half way up the leaf. This is bordered by a prominent dark brownish line with a triangular point in the region of the midrib. The portion of the leaflet below the crescent is usually paler than that above the crescent.

In Olympus the leaves are generally a paler green than is usual in rose clover. The crescent is in the same position but it is rounded and there is frequently also a light spot at the base of the leaflet. There is no dark line or point.

Both Troodos and Olympus usually flower about 10 days earlier than Kondinin. If growth starts very early (before mid-March) because of late summer rains, the plants will flower before the onset of winter, but will later revert to the vegetative state and flower again at the normal time.

The heads of both Troodos and Olympus tend to break up more readily than those of other cultivars. A suction harvester will nearly always be necessary to gather the seed. Seed size and hard seed content conform to the usual patterns for rose clover.

Agricultural potential

Much has still to be learned about using rose clover to its best advantage. It would seem that Troodos and Olympus will have a place in the eastern wheatbelt where seasons are too short for Kondinin. Actual limits will only be determined by the success or failure of the plants under field conditions. A tentative guide for their use would be areas below 15 inches of rain in the northern wheatbelt and below 13 inches in the southern wheatbelt.

Both cultivars can stand heavy and continuous grazing in areas to which they are adapted and usually set seed freely. Nodulation seems to be less of a problem than with Kondinin and Sirint.

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