

One of the world wide elite pasture-clovers

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Introduction Clovers are one of the main members in pasture family , having with multiple purposes , functions and benefits . It does not only serve as the feed resources for domestic animals , but an essential plant resource for conservation of water and soil as well . The clovers are distributed nearly all over the world , and are one of the pastures with widest distribution , especially in temperate area . Clovers were introduced to China and subjected to trials since 30's and had been used on large scale in 1980's in southern China . They have been crucial in the development of livestock industry . Although the long history of utilization , clovers will continue to play an important role in social development .

Review Trifolium are annual or perennial pasture . They belong to *Trifolium Linnæus* of *Trifoleae* , and are also called Dutch clovers . They are mainly originated in Europe , basins of Mediterranean and the near east , and Savanna area in Africa , and are famous feeding plants in the world . They are the widest distributed among the *Leguminosae* pasture . There are over 400 cultivars and 100 species , around 25 with high agronomy values . They are distributed nearly all over the world , mainly in temperate area . Nearly every country has some establishment , with the biggest area in west Europe and North America , followed by former Soviet Union . Australia , New Zealand , Britain , Denmark and Dutch are the countries with the most cultivars so far .

There are wild and cultivated clover distributions in humid temperate and mid subtropical area in China , in Menla county of Yunnan to the south and Shangzhi county of Heilongjiang to the north^[1-3] . There are more than 10 varieties in China , including wild breeds and introduced ones with large area establishment . Over 200 cultivars have been introduced and trialed , Yunnan has introduced and trialed 162 cultivars of 14 species . The wild species are *Trifolium pratense* L . , *T. repens* L . , *T. fragiferum* L . and *T. lupinaster* L . The five species with widest cultivation and high agronomy values are red clover , white clover , alsike clover , crimson clover and subterranean clover . America scholar , F . A . Koffman ranked the clovers with importance as red , alsike , crimson and white clover (reference) .

Most of the clovers are not self pollinated , such as red clover , white clover and alsike clover . They are self pollen infertile . The plant sets fewer seeds when insect vectors activity is low . A few are self pollinated , such as Persian clover and strawberry clover . In human society , clovers are mainly used as feedstuff in livestock industry , fertility recovery plant in ecological agriculture , covering plant in erosion control , honey resources and herbal plants . The main clover species are red clover , white clover , Egyptian clover , crimson clover , subterranean clover , Kenya white clover , and arrowleaf clover over 100 cultivars of 20 species .

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