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Genetic Improvement of Oiltea Camellia in China

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Oiltea camellia (*Camellia* spp.) is an important economic tree crop special to China. There are over 200 fine clones used in production, with which 200 000 ha of plantations have been newly established or upgraded. They comprise the precocious and prolific bigfruit type of *C. oleifera*, such as the "medium Red Boll", "Big Boll", "Red Ball", "Red Boll", "Red Orange", "Ruanzhicha", "Balingzi", "Red Peel", "Big Red Fruit", "Wangmo Oiltea Camellia", and "Grapefruit". They also include the types adaptable in the upland areas, e.g. *C. reticulata* and *C. wein-*

ingensis. Of these desirable cultivar types over 16 000 plus trees have been screened out, and plus-tree repositories totalling 153 ha are existent by topworking with these elected scionwood. There are more than 20 improved varieties selectively bred across the country, with which 1 680 ha of seed production stands and 404 ha of seed orchards have been set up. On the basis of plus tree selection and varietal comparative test 9 superior families have stood out of the studied 40 families. Cross breeding has also generated good results, thousands of cross combinations have been formed, many promising progeny have come out, with 'XLH13' and other 4 good combinations produced by Central South Forestry University and Forestry Academy of Hunan Province in the early 1990s. In other breeding activities some resistant and radiation breedings are under the process of trial plantings. Another important work in breeding is the preservation of germplasm of rare, elite and other desirable stocks of camellia trees. The collected phytomass resources include 130 species with 1 500 entries, all growing in special botanic gardens with a total area of 20 ha in Hunan, Jiangxi, Guangxi, and Zhejiang provinces and autonomous region respectively.

Key words: *Oiltea camellia*, woody edible oil plant, germplasm resource, genetic improvement, China

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