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植物生理科学

油茶优良无性系光合特性的影响因子——叶龄、叶位

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摘要：

以油茶优良无性系为试材，对油茶年生长周期（新稍生长期、果实生长期、果实成熟期、花期和休眠期）中光合特性的影响因子--叶龄、叶位进行了研究。结果表明:(1)不同叶龄叶片的净光合速率日变化曲线存在单峰和双峰两种类型，1年生叶片的平均净光合速率与最大净光合速率在果实成熟期达到最高值，2年生叶片的平均净光合速率与最大净光合速率均在新稍生长期达到最高值；(2)1年生叶片的叶绿素含量先升高后降低，2年生叶片的叶绿素含量一直降低，可溶蛋白含量随着叶龄的增加而减少，叶片全磷含量年变化趋势为“M”型；(3)上、下部叶片的净光合速率日变化趋势一致，上午上部叶片的净光合速率值高于下部叶片，下午下部叶片的净光合速率值高于上部叶片。

关键词： 油茶;优良无性系；光合特性；叶龄；叶位

Influencing Factors on Photosynthetic Characteristic of Superior Clones of Camellia oleifera——Leaf Age and Leaf Position

Abstract:

Influence factors on photosynthetic characteristic of superior clones of Camellia oleifera—leaf age and leaf position were studied during yearly growth periods（shoot growth stage、fruit growth stage、fruit maturation period、blooming stage and dormant stage）. The results showed that(1)The curves of the diurnal change in the net photosynthetic rate(Pn) present single and double curves in different leaf age,the average Pn and the maximun Pn of one-year-old leaves reached highest value in fruit maturation period,while two-year-old leaves,s in shoot growth stage; (2) Chlorophyll content of one-year-old leaves increased at first and then decreased,while chlorophyll content of two-year-old leaves kept decreasing, soluble protein content of all leaves kept decreasing, annual trend of phosphorus content of leaves present a “M” curve; (3) Diurnal variations of Pn of upper leaves and lower leaves are completely the same，Pn of upper leaves were higher in the morning while lower leaves,s were higher in the afternoon.

Keywords: Camellia oleifera;superior clones；Photosynthetic Characteristic；leaf age；leaf position

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