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摘要： 在防雨棚条件下研究了不同阶段水分胁迫对4个夏大豆品种五星3号、冀豆15、冀豆16和冀豆17冠层发育和耗水特性影响。结果表明：大豆耗水规律为出苗后20 d内日耗水强度较低，初花期~鼓粒初期较高，最高峰出现在初花期前后，鼓粒中后期较低。最大叶面积指数（LAI）出现在盛花期，不同阶段水分胁迫使多数品种的LAI明显下降。从冠层发育角度，冀豆16苗期抗旱性较强，五星3号花期和鼓粒期抗旱性较强，冀豆15鼓粒期抗旱性较强。五星3号、冀豆15和冀豆16的LAI相近，但五星3号的耗水量较低，冀豆17 LAI和耗水量均较高。大豆主要耗水层在0~100 cm，尤其0~50 cm土层土壤水分状况对大豆的生长发育影响效应更大。

Abstract: Effects of drought stress on water consumption and canopy development in four summer soybean genotypes of Wuxing 3, Jidou 15, Jidou 16 and Jidou 17 were studied under rain shelter condition. The results showed daily water consumption was lower within the 20 d after seedling, much higher daily water consumption was observed from early flowering to early pod filling, with a peak around early flowering. The maximum of leaf area index (LAI) occurred at full flowering. Periodical drought stress led to reduced LAI in most of the varieties. In terms of canopy development, Jidou 16 was more resistant to drought at seedling, Wuxing 3 was more drought resistant at middle and late growth stages, and Jidou 15 at late growth stage. The varieties of Wuxing 3, Jidou 15, Jidou 16 had similar LAI, whereas Wuxing 3 consumed much less water than the other two varieties. Jidou 17, with the greatest LAI, also used the greatest amount of water in the four varieties. The main water consumption soil layer of soybean was 0-100 cm. Soil moisture condition in 0-50 cm layer was most important to the growth and development of soybean plant

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