

园艺园林科学

龙眼雌花数和坐果率与温度及降雨量的关系

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摘要:

为了解龙眼雌花开放数量和雌花坐果率与温度及降雨量的关系, 应用调查研究和数理统计方法对石硌龙眼开花前后的温度、降雨量与雌花开放数及雌花坐果率的关系进行了分析。分析结果表明: 开花前30d的气温对正处于雌蕊形成期的小花原基分化具有影响, 日均温21.0℃时雌花开放数最多; 当开花前30d、50d的降雨量依次<41.8mm和<57.5mm时, 降雨量增加可提高雌花开放数, 降雨量过大雌花开放数减少; 开花当日和开花后1-15d的气温影响雌花坐果率, 开花当日日均温越高, 坐果率越低, 日均低温<20.2℃时, 随温度升高, 雌花坐果率提高, 开花后1-15d日均温和日均低温越高, 坐果率越低, 日均高温<30.7℃时, 温度升高雌花坐果率提高; 在开花坐果和第一次生理落果期, 降雨量增多雌花坐果率下降。

关键词: 龙眼 雌花数 雌花坐果率 温度 降雨量

Relationship between the pistillate flower number, fructifying rate of Longan and the temperature and rainfall

Abstract:

To find out the relationship between the pistillate flower number and fructifying rate of Longan and the temperature and rainfall, investigation and statistical methods were applied to the study of the relationship between pistillate flower number and fructifying rate of Shixia Longan and the temperature and rainfall before or after blossom. The results indicated that the temperature on 30 days before blossom (DBB) had effect on the differentiation of flower primordium during pistillate forming, and the pistillate flower number was the highest when the average diurnal temperature was 21.0 degree. When the rainfall was less than 41.8 mm 30 DBB or was less than 57.5 mm 50 DBB, the more the rainfall, the more the pistillate flower, while the pistillate flower decreased when the rainfall was excessive. The temperature on blossom and 1-15 days after blossom (DAB) affected the pistillate flower fructifying rate. Specially, the higher the temperature on blossom, the lower the fructifying rate, while when the average diurnal temperature was lower than 20.2 degree the fructifying rate increased with the increasing of temperature. In the other hand, the higher the average diurnal temperature and lowest temperature on 1-15 DAB, the lower the fructifying rate, while when the average diurnal highest temperature was lower than 30.7 degree the fructifying rate increased with the increasing of temperature. During the period of blossom and fructify and the first physiological drop, the increasing of rainfall caused the decreasing of the pistillate flower fructifying rate.

Keywords: Longan, pistillate flower number, pistillate flower fructifying rate, temperature, rainfall

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