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植物保护

马铃薯晚疫病菌卵孢子菌系的繁育及生物学特性研究*

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摘要　对马铃薯晚疫病菌［*Phytophthora infestans*（Mont.）de Bary］卵孢子形成的影响因素及卵孢子菌系生物学特性进行研究。卵孢子形成的影响因素试验结果表明：在黑麦A培养基中卵孢子产生的量最多，其次是燕麦培养基，V8培养基最少，在Mira品种上卵孢子产生量最多，而在PB06上只有少量产生，在10℃下产生卵孢子的量最多，15℃最少。用液体培养基产生的卵孢子悬浮液涂于黑麦A抗菌素培养基或直接挑单卵孢子培养于黑麦A抗菌素培养基上，获得单卵孢子菌落，继续培养获得单卵孢子菌系。以A1和A2孢子囊等量混合制成悬浮液，接种于Mira叶片上，获得卵孢子群，经穿薯片培养获得卵孢子群菌系。将获得的单卵孢子菌系和卵孢子群菌系进行交配型、抗药性和致病性测定，结果表明：所测的18个卵孢子菌株中，有17个为A2交配型，1个为A1交配型；占75%的卵孢子菌株对甲霜灵表现为中抗，25%的表现为抗性；对非水平抗性品种表现为较强的致病性，而对水平抗性品种的致病性较弱，不同的卵孢子菌系的致病性表现较明显的差异。

关键词　马铃薯晚疫病菌；　卵孢子菌系；　抗药性；　致病性

分类号　S 435.32

Breeding of Oospore Offspring Strains of *Phytophthora infestains* and Study of Biological Characteristic

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Abstract

This paper studed on the influential factors of oospore formation and biological characteristics of *Phytophthora infestans*（Mont.）de Bary. As a result of the influential factors of oospores showed: it produced the most oospores in rye A media, the second was the oat media and V8 juice was the least; It produced the most oospores in the Mira cultivars leaflet and only a little oospore in the PB06; oospores was the most at 10 ℃and the least at 15 ℃. Spreading oospore suspension which produced by liquid media on the rye A media with antibiotic or directly select the single oospore to the rye A media with antibiotic, in order to obtain the single oospore strains, continue to cultivate in order to obtain the single oospore clan; Inoculate sporangial suspension with equal A1 and A2 to the leaflet of Mira, obtain oospore cluster, then drill through potato slice to gain the strains of oospore cluster. The acquired single oospore strain and oospore colony strains were measured with mating type, anti-metalaxyl and pathogenicity, the results showed that 17 out of 18 measured oospore strains were A2 and only one is A1; 75% of oospore strains were medi-resistant, 25% of ones were resistant; It showed higher pathogenicity to non-horizontally resistant cultivars, and lower pathogenicity to horizontaly resistant ones. different oospore strains showed obviously different pathogenicity.

Key words　*Phytophthora infestans*；　oospore offspring strains；　anti-fungicide；　pathogenicity

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