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(*Prunus domestica* L.)

1, 1*, 2, 1, 1, 1, 1
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Pollen Tubes Growth Rate and Initial Fruit Set in Some Plum (*Prunus domestica* L.) Genotypes under Different Pollination Modes

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SUMMARY

Pollen tubes growth rate in three fixation terms (72 h, 144 h and 240 h after pollination), as well as the initial fruit set of six promising plum genotypes developed at Fruit Research Institute, Čačak (the hybrids 38/62/70, IV/63/81, 32/21/87, 34/41/87, 22/17/87 the cultivar Nada') were investigated under self-, cross- ('Čačanska Lepotica' as pollenizer) and open pollination variants over the two years (2010/2011). Dynamics of pollen tubes growth varied depending on genotype and pollination variant. 72 h after pollination, location of the longest pollen tube was between the medium part of style and the nucellus. Pollen tubes were predominantly observed in the ovary 144 h after

			144	pollination, while 240 h after pollination
			240	penetration of pollen tube into the
			-	nucellus was not observed only in hybrid
			-	32/21/87, in self-pollination variant.
		32/21/87,	-	
		.	-	The highest amount of pistils with
			,	penetration into the nucellus 240 h after
		240	,	pollination was obtained in cross-
			,	pollination variant in all of the investigated
			,	genotypes and in both years, except in
			IV /	hybrids IV/63/81 and 22/17/87 in 2011
63/81	22/17/87	2011	.,	where this parameter achieved the
			-	highest value in self-pollination and open
			-	pollination variants, respectively.
			-	
			-	The average value of initial fruit set varied
			-	from 1.08% (hybrid 32/21/87, self-
		1,08% (-	pollination) to 54.06% ('Nada', cross-
)	-	pollination).
		54,06% („	-	
		“,	-	
).	-	
			,	The highest percentage of the initial fruit
			-	set for the majority of investigated
			-	genotypes was recorded in the cross-
			-	pollination variant, except in hybrid
		34/41/87,	-	34/41/87, where the best result was
			-	obtained in self-pollination variant.
			,	
			,	Key words: plum genotype, self-,
			,	open- and cross-pollination, pollen tubes
			,	dynamics, fruit set
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