

HAZELNUT (*Corylus avellana*)  
Kernel Mold; *Cladosporium cladosporioides*

J.W. Pscheidt, S.A. Cluskey and J. Stone  
Dept. of Botany and Plant Pathology  
Oregon State University  
Corvallis, OR 97331-2903

PLASTIC TENTS FOR REDUCTION OF KERNEL MOLD OF HAZELNUT, 2000: The objective of this trial was to determine if kernel mold could be reduced through the use of plastic tents and if the time of infection could be localized to the dormant or spring season. Treatments were randomized in a block of different hazelnuts planted in 1994 on a 10 x 20 ft spacing at the Botany and Plant Pathology Field Laboratory, Corvallis, OR. These hazelnuts were selected for consistent high production of moldy kernels. Plastic tents were installed on 20 Dec 99 over 3 single tree replicates of hazelnut selection 379.050. Additional plastic tents were installed on 23 Mar 00 (bud break) over 3 single tree replicates of hazelnut selection 391.001. All plastic tents remained over trees through flowering and/or early spring shoot growth until removal on 12 Jun. Nuts were hand harvested off of trees on 29 Aug 00 and again off of the ground on 21 Sep 00. A total of 100 nuts were collected each time from each tree, cracked open "green" (not dried) and evaluated for tip discoloration (associated with *Ramularia* sp in the past) and/or mycelial growth. Mycelial fragments from moldy nuts were transferred to agar media for growth and identification. Isolations were not made for nuts with tip discoloration.

Rainfall during the dormant season was normal but short during the growing season. Nontreated trees of selection 379.050 had a higher percentage of nuts with mycelial growth when compared to nontreated trees of selection 391.001. Analysis was limited to only comparisons of treatments within the same hazelnut selection. Trees covered with plastic did not have significantly fewer kernels with tip discoloration and/or decay when compared with nontreated trees. Trees covered with plastic did have significantly fewer kernels with mycelial growth when compared with nontreated trees. The fungus *Cladosporium cladosporioides* was isolated when mycelial fragments were plated on agar media. Other fungi present in much lower numbers included *Alternaria alternata*, *Trichoderma viride* and *Penicillium spinulosum*.

Selection	Treatment	Tip Discoloration or Decay (% kernels)		Mycelial Growth (% kernels)	
		29 Aug 00	21 Sep 00	29 Aug 00	21 Sep 00
379.050	Nontreated	25.0	32.0	28.3	34.7
379.050	Plastic tents during flowering and spring.	27.3	38.3	8.7*	16.0*
391.001	Nontreated	23.7	43.7	15.3	10.0
391.001	Plastic tents during spring only.	19.7	26.3	2.7*	1.0*

\* Significantly different at the 5% level.