AZACONAZOLE, A NEW COMPOUND IN WOOD PRESERVATION

by

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In the past few years, organic fungicides have proved their interest in replacing non-organic and organic biocides in plant protection and wood preservation. Up to now triazole-fungicides, well known in plant protection, have not yet been introduced in wood preservation.

In comparison with commonly used wood preservatives, the compound azaconazole is active at low dosage rates and is safe for man and the environment.

On pine and beech blocks impregnated with azaconazole, the toxic values (kg a.i./m3 wood) against brown and white rot fungi were 0.40-1.12 for Coniophora puteana and 0.06-0.10 for Coriolus versicolor. The lower value just allows decay, while the upper value prevents decay with < 3% dry weight loss.

Against the blue stain fungus Pullularia pullulans, the toxic concentration (% w/v) of azaconazole was determined to be 0.1-0.5 in preliminary investigation. Results from later tests with a 1% solvent based formulation confirmed the activity against P. pullulans. Toxic values were 0.15-0.31% (w/v) without leaching and < 0.15% after leaching.

Comparison of azaconazole water-borne and solvent-based formulations with CCA, showed superior activity against the Basidiomycetes. In the water-based formulation, azaconazole is 2-10 times more active than CCA salts:

Table 1: Toxic values of azaconazole water based and solvent based formulations and CCA

	AFTER LEACHING		WITHOUT LEACHING
	WATER BORNE	SOLVENT-BASED	CCA*
Coniophora puteana	0.90	1.20	2.3
Poria placenta	0.45	1.00	2.7
Coriolus versicolor	0.35	0.51	4.0

*) Mid-points of toxic values without leaching as reported by Cockcroft 1974.