



PESTICIDE DEROGATION

Type of document:	FSC Pesticide Derogation Approval
Confidentiality:	No restrictions
Approved by:	FSC Board Pesticides Committee
Effective Date:	04 th October 2010
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Related Documents:	<i>FSC-POL-30-001 FSC Pesticides Policy</i> <i>FSC-GUI-30-001 FSC Pesticides Policy Guidance</i> <i>FSC-PRO-01-004 Processing pesticide derogation applications</i>

Pesticide derogation: Use of Chlorpyrifos in Colombia

FSC reference code: FSC-DER-30-V1-0 EN Chlorpyrifos Colombia 04102010

Date: 04 October 2010

FSC Board Committee decision:

Approve a derogation to use **Chlorpyrifos** for the control of leaf-cutting ants (*Atta laevigata*, *Atta colombica*, and *Acromyrmex landolti*) in certified forest plantations in Colombia, provided that during the derogation period the certificate holder:

1. identifies which species of leaf-cutting ant cause most damage, estimates the level of damage, defines a critical nest density (maximum acceptable nest density for achieving the silvicultural objectives), monitors distribution of ant nests, and locates infested areas with critical density;¹
2. reduces use of chlorpyrifos to the minimum necessary for effective control, limits use to infested areas (where estimated nest density exceeds critical density) or nurseries and young plantations during establishment (in years 1-3), and complements these with alternatives, e.g. spinosad, borax, rotenone, pathogenic fungi combined with diatomato-maceous earth, and plant extracts of *Manihot esculenta*, *Ateleia glazioviana* / Citromax[®], etc;
3. reduces risks to non-target animals (mammals, birds, reptiles, amphibians) to an acceptable level by identifying season and time of day when ants are most active and applying baits to nests during that season and time (for maximum collection of baits by

² Cantarelli E.B. Silvicultura de precisão no monitoramento e controle de formigas cortadeiras em plantios de *Pinus*. UFSM 2005. http://cascavel.cpd.ufsm.br/tede/tde_busca/arquivo.php?codArquivo=756
Link D, Hormigas cortadoras, hábitos y su control. Concordia 1997. <http://www.inta.gov.ar/concordia/info/Forestales/contenido/pdf/1997/68%20I%20link%2097.pdf>
Pinto R. Amostragem e distribuição espacial de colônias de formigas cortadeiras (...) em Eucaliptais. UFV 2006. http://www.controbiol.ufv.br/Teses/Rosenilson_doutorado.pdf
Zanetti R., Zanoncio J.C. Monitoramento de formigas cortadeiras em florestas cultivadas no Brasil. Plagas Forestales Neotropicales 17, 2005. <http://web.catie.ac.cr/informacion/RMIP/rev75/BoletinPlagasForestales.pdf>

ants and minimum remnant baits), limits application of insecticide baits to nests (entrances or trails on surface);

4. conducts or participates in field tests on ant control with pathogenic fungi (*Beauveria bassiana*, *Metarhizium anisopliae*, *Paecilomyces* species or *Trichoderma viride*) **combined with** *Bacillus thuringiensis*, diatomaceous earth, plant extracts,⁴ or an antifungal agent (which inhibits symbiotic fungi) such as *Trichoderma harzianum* or *Escovopsis weberi*; explores the possibility of using spinosad or borax for ant control in field tests (if necessary based on a temporary registration by the authorities); and collaborates with research institutions in tests on improving bait attractiveness through plant extracts (e.g. of *Hovenia dulcis* or *Aleurites fordii*), attractant pheromones or an alarm pheromone (beta-eudesmol);⁵
5. during the derogation period, keeps records on the number of ant nests treated annually, estimated (approximate) number of ant nests per hectare in treated areas, the total annual use of chlorpyrifos (litres), tree age in treated areas, result of control operations (estimated nest density and percentage of damaged trees – before and after control), and includes this information in forest management reports;
6. takes measures to ensure that handling and application of chlorpyrifos does not endanger human health and natural enemies (mammals, birds, or predatory insects such as beetles, spiders) and that risks are reduced to acceptable levels, and strictly follows all legal requirements in Colombia for safe use of pesticides, especially national legislation and internal guidelines regarding occupational and environmental safety.

List of FSC certified forestry units covered under this Chlorpyrifos derogation:

FSC Certificate Holder	Certificate Number
Reforestadora de la Costa S.A. (Refocosta S.A.S.)	SW-FM/COC-4221

Note : Failure to demonstrate compliance with the conditions included in this document may result in the termination of the derogation.

⁴ E.g. *Ateleia glazioviana*, *Canavalia ensiformis*, *Centrosema brasilianum*, *Citrus sinensis*, *Helietta puberula*, *Hymenaea courbaril*, *Ipomea batata*, *Manihot esculenta*, *Myroxylon peruiferum*, *Pilocarpus grandiflorus*, *Piper cenocladum*, *Raulinoa echinata*, *Ricinus communis*, *Sesamum indicum*, or *Trichillia glauca*.

⁵ Universidad Nacional de Quilmes, ANTZ, Grupo de investigación, Dr P. Folgarait. Hormigas cortadoras de hojas, géneros *Atta* y *Acromyrmex*. <http://hormigas.unq.edu.ar/cortadoras.htm>