



PESTICIDE DEROGATION

Type of document:	FSC Pesticide Derogation Approval
Confidentiality:	No restrictions
Approved by:	FSC Board Pesticides Committee
Effective Date:	23rd April 2012
Expiration Date:	23 rd April 2017
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 Sulfuramid in Colombia

FSC reference code: FSC-DER-30-V1-0 EN Sulfuramid Colombia 23042012

Date: 23 April 2012. Updated 23 May 2016.

The FSC Board Committee decision:

approve a derogation to use **sulfloramid** 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 holders:

1. identify which species of leaf-cutting ant cause most damage, estimates damage caused by ants, define a *critical density* (maximum acceptable number of ant nests per Ha for achieving silvicultural objectives), monitor distribution of nests, and locate *infested areas* where critical density is exceeded;¹
2. reduce use of sulfloramid to the minimum necessary for effective control, limit use to infested areas, nurseries or young plantations during establishment (year 1-3), and complement insecticide use with alternatives, e.g. spinosad, borax, rotenone, pathogenic fungi combined with diatomaceous earth, and plant extracts of *Manihot esculenta*, *Ateleia glazioviana* / Citromax[®], etc;
3. reduce risks to non-target animals (mammals, birds, reptiles, amphibians) to acceptable levels by identifying season and time of day when ants are most active, applying sulfloramid baits during that time and season (to ensure maximum collection of baits by ants and minimum remnant baits), and by limiting application of baits to the ant nest (entrances or trails on nest surface);

¹ 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., Zanuncio 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>

4. define voluntary reduction targets for sulfluramid use (e.g. -20% reduction in total annual use (Kg) of sulfluramid active ingredient), and apply sulfluramid baits in dispensers (porta-iscas) or sachets (mipis), unless the need for open application is shown in audit reports (e.g. based on cost-benefit analysis) and evidence is provided that measures for risk mitigation are effective (e.g. by analyzing residues of sulfluramid and metabolites in the environment and animals);³
6. conduct or participate 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*; explore the possibility of using spinosad or borax for ant control in field tests (if necessary based on a temporary registration by the authorities); and collaborate 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
7. record number of ant nests treated annually, estimates (approximate) number of ant nests per Ha in treated areas, total amount of insecticide used annually for ant control (Kg bait per Ha) tree age in treated areas, result of control operations (estimated nest density or damage, before and after control), and includes this information in audit reports;
8. take the greatest care that handling and application of sulfluramid does not endanger human health and natural enemies (mammals, birds, or predatory insects such as beetles, spiders) implement measures to reduce risk to acceptable levels, and strictly follow all legal requirements in Colombia for the use of pesticides, in particular the controls for occupational and environmental safety required by national/regional authorities (Instituto Colombiano Agropecuario www.ica.gov.co) and specific guidelines of the forest enterprise.

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

- ³ Ukan D. Avaliação qualitativa e quantitativa de micro-porta-iscas para o controle de formigas cortadeiras (...). UFPR 2008. http://www.floresta.ufpr.br/pos-graduacao/defesas/pdf_ms/2008/d497_0701-M.pdf
The Instituto Colombiano Agropecuario could analyze residues of sulfluramid and metabolites in water and organisms (<http://www.ica.gov.co/Areas/Agricola/Servicios/Regulacion-y-Control-de-Plaguicidas-Quimicos.aspx>), or the Universidad Nacional de Colombia, www.ciencias.unal.edu.co/unciencias/web/grupoinv/grupo.php?id=42
- 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>

FSC Certificate Holder	Certificate Number
Tablemac S.A. Medellín, Antioquia, Colombia Website: www.tablemac.com	FMO candidate under certification (certifier: RA)
Reforestadora de la Costa S.A.S.	RA-FM/COC-004221

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