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CA 2051489 C 2002/01/29

(11)(21) **2 051 489**

(12) **BREVET CANADIEN
CANADIAN PATENT**

(13) **C**

(22) Date de dépôt/Filing Date: 1991/09/16

(41) Mise à la disp. pub./Open to Public Insp.: 1992/03/16

(45) Date de délivrance/Issue Date: 2002/01/29

(30) Priorité/Priority: 1990/09/15 (9020207.8) GB

(51) Cl.Int.⁵/Int.Cl.⁵ A01N 43/54

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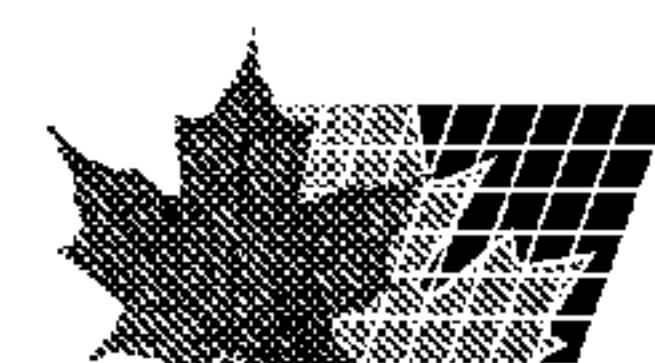
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(54) Titre : METHODE DE LUTTE CONTRE VENTURIA

(54) Title: METHOD OF COMBATING VENTURIA

(57) Abrégé/Abstract:

The fungal disease Venturia, especially Venturia inaequalis, can be combatted using 2-anilino-4,6-dimethylpyrimidine.



ABSTRACT

The fungal disease Venturia, especially Venturia inaequalis, can be combatted using 2-anilino-4,6-dimethylpyrimidine.

This invention relates to an anilinopyrimidine compound having fungicidal activity.

5 In DDR Patent 151 404 there are described a group of anilinopyrimidine compounds having fungicidal activity. The species listed against which the compounds are said to be active are Phytophthora infestans, Aspergillus niger, Botrytis cinerea, Erysiphe graminis and Rhizoctonia solani. Test data are given for a number of compounds but
10 for the chemically simplest compound exemplified in the patent, namely 2-anilino-4,6-dimethylpyrimidine, no biological activity is exemplified.

In EP 270 111, there are disclosed further anilino-pyrimidines having fungicidal activity. Five test Examples
15 are given in this patent application. In these Examples 2-anilino-4,6-dimethylpyrimidine is used as a comparison compound. The activities for the compounds of that application which are disclosed are Botrytis cinerea, Alternaria brassicola, Pseudoperonospora cubensis,
20 Pyricularia oryzae and Rhizoctonia solani. In these examples 2-anilino-4,6-dimethylpyrimidine only showed significant activity against Botrytis cinerea. From this prior art, one would not expect 2-anilino-4,6-dimethylpyrimidine to have useful fungicidal activity except
25 possibly against Botrytis cinerea.

It is an object of the present invention to provide a method of combating Venturia spp. fungal growth.

We have now surprisingly found that 2-anilino-4,6-dimethylpyrimidine has excellent activity against Venturia spp. and especially apple scab, Venturia inaequalis.

Thus according to the invention there is provided a method of combating Venturia spp., especially Venturia inaequalis, at a locus infested or liable to be infested

therewith, which comprises applying 2-anilino-4,6-dimethylpyrimidine to that locus.

The invention also provides the use of 2-anilino-4,6-dimethylpyrimidine for combating Venturia spp.,
5 especially Venturia inaequalis.

The compound can be applied in conventional manner for applying fungicides to trees. It is generally formulated as a conventional agrochemical concentrate, which is diluted with water to the desired concentration prior to
10 application. The concentrate usually comprises conventional surfactants and can be in the form for example of a suspension concentrate in water or a wettable powder.

The rate of application can vary over a wide range but the
15 compound is usually applied at a concentration of 5 to 200 g active ingredient/hectolitre of spray, preferably 20 to 100 g/hectolitre.

The invention is illustrated in the following Example.

Example 1

20 A wettable powder concentrate of 2-anilino-4,6-dimethylpyrimidine was diluted with water and then used to spray plots of apple trees infested with Venturia inaequalis at a rate of 40 g active ingredient per hectolitre of spray.

The test was carried out at two different sites in
25 Germany. Both sites consisted of three replicate plots each comprising three trees. Trial 1 was sprayed nine times. Infection on the leaves was assessed 10 days after the eighth spray and infection on the fruit was assessed 7

weeks after the last spray. Trial 2 was sprayed seven times. Infection on the leaves was assessed 1 day after the last spray and infection on the fruit was assessed 8 weeks after the last spray. The results are as follows:

5 Site 1

		% infection	
		Leaves	Fruit
	Compound of invention	3.5	1.6
10	Untreated	18.4	87.7

Site 2

		% infection	
		Leaves	Fruit
15	Compound of invention	0.01	2.1
	Untreated	20.0	48.0

It will be seen that 2-anilino-4,6-dimethylpyrimidine gives excellent control of Venturia inaequalis, compared with untreated trees.

20 Example 2

A wettable powder concentrate of 2-anilino-4,6-dimethylpyrimidine was diluted with water and then used to spray plots of apple trees infested with Venturia inaequalis at rates of 30 and 40 g active ingredient per hectolitre of
25 spray.

The test was carried out at a site in Belgium, which consisted of three replicate plots each comprising three trees. The trial was sprayed nine times. Infection on the leaves was assessed 7 days after the last spray. The

results are as follows:

	Active ingredient	Concentration (% w/v)	% leaf infection
5	Compound of invention	0.15	0.4
		0.2	0.2
	<u>Standards</u>		
	dithianon ¹	0.05	20.4
	metiram ²	0.2	15.6
10	mancozeb ³	0.2	10.0
	captan ⁴	0.13	10.7
	Untreated		81.3

¹ = 2,3-dicyano-1,4-dithiaanthraquinone

² = zinc ammoniate ethylenebis(dithiocarbamate) -

15 poly(ethylenethiuram disulfide)

³ = ethylenebis(dithiocarbamate) metal complex of copper
and manganese

⁴ = 1,2,3,6-tetrahydro-N-(trichloromethylthio)phthalimide

20 It will be seen that 2-anilino-4,6-dimethylpyrimidine
gives excellent control of Venturia inaequalis, compared
with untreated trees and compared with the standards used
at recommended rates for this disease.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of combating Venturia spp., especially Venturia inaequalis, at a locus infested or liable to be infested therewith, which comprises applying
5 2-anilino-4,6-dimethylpyrimidine to that locus.
2. The use of 2-anilino-4,6-dimethylpyrimidine for combating Venturia spp., especially Venturia inaequalis.