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(54) **BAIT FOR HUMID REGIONS**

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(58) **Field of Classification Search** ..... None  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,756,118 A 7/1988 Evans, II  
4,874,611 A 10/1989 Wilson et al.  
5,031,355 A 7/1991 Ryan  
5,054,231 A 10/1991 Witherspoon  
5,165,199 A 11/1992 Tallon

6,026,609 A 2/2000 Rawls  
6,566,392 B1 \* 5/2003 Okada et al. .... 514/461  
2008/0249190 A1 \* 10/2008 Jensen et al. .... 514/777

**FOREIGN PATENT DOCUMENTS**

TW I262763 5/2005  
TW I264286 9/2005

**OTHER PUBLICATIONS**

James T. Vogt et al., Effects of Temperature and Season on Foraging  
Activity of Red Imported Fire Ants (Hymenoptera: Formicidae) in  
Oklahoma, Environ. Entomol. 32(3), 2003, 447-451.

Lekhnath Kafle et al., Microencapsulated Bait: Does It Work With  
Red Imported Fire Ants, *Solenopsis invicta* (Hymenoptera:  
Formicidae)?, Sociobiology, vol. 53, No. 3, 2009, 729-737.

Furman, B.D. et al., Determination of the Most Effective Chemical  
Form and Concentrations of Indoxacarb, as well as the Most Appro-  
priate Grit Size, for use in Advion, Sociobiology 48: 309-333, 2006.  
Jian Chen, Advancement on techniques for the separation and main-  
tenance of the red imported fire ant colonies, Insect Science, vol. 14,  
2007, 1-4.

Lekhnath Kafle et al., Simplified approaches to determine the  
attractant preference of *Solenopsis invicta* (Hymenoptera:  
Formicidae), Appl. Entomol. Zool. 43 (3), 2008, 383-390.

Lekhnath Kafle et al., Effect of Surfaces on the Foraging Efficiency of  
*Solenopsis invicta* (Hymenoptera: Formicidae), Formosan Entomol.,  
29, 2009, 51-58.

\* cited by examiner

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(57) **ABSTRACT**

The present invention is related to bait which is water resis-  
tance, especially for fire ants. Its water resistance, anti-oxi-  
dation and the use of fire ants favorite eating formula which  
can mix with different toxic substances, and the production is  
easy and low cost, suitable for use in Taiwan or other humid  
areas to control fire ants.

**10 Claims, 2 Drawing Sheets**

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