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前沿资讯

1. Darjeeling planters claim tea imported from Nepal is not FSSAI - compliant（大吉岭茶种植者声称从尼泊尔进口的茶不符合FSSAI标准）

简介：印度食品安全和标准管理局（FSSAI）已指示海关当局密切关注从尼泊尔进口茶叶的质量，在大吉岭茶业反对进口廉价尼泊尔茶叶供国内消费后，强调监测执行关于特定食品茶叶的安全规范。由Ambootia集团董事长Sanjay Bansal领导的大吉岭茶叶种植园主提出了一个问题，即从尼泊尔进口的茶叶不符合食品安全标准法规，并说它使印度消费者的健康处于危险之中。大吉岭茶种植者解释说，尼泊尔茶叶应遵守FSSAI 在茶园中固定的三氯杀螨醇、乙硫氨酸、芬杀螨，草甘膦等化学品的最大残留限量（MRLs）。

来源：The Economic Times 网站

发布日期:2018-11-27

全文链接:http://agri.ckcest.cn/file1/M00/02/9D/Csgk0Fv-TqKAHzc3AAKkMHTsWzU898.pdf

学术文献

1. Exploitation of Insect Vibrational Signals Reveals a New Method of Pest Management（昆虫振动信号的开发揭示一种新的害虫管理方法）

简介：Food production is considered to be the main source of human impact on the environment and the concerns about detrimental effects of pesticides on biodiversity and human health are likely to lead to an increasingly restricted use of chemicals in agriculture. Since the first successful field trial, pheromone based mating disruption enabled sustainable insect control, which resulted in reduced levels of pesticide use. Organic farming is one of the fastest growing segments of agriculture and with the continuously growing public concern about use of pesticides, the main remaining challenge in increasing the safety of the global food production is to identify appropriate alternative mating disruption approaches for the numerous insect pests that do not rely on chemical communication. In the present study, we show for the first time that effective mating disruption based on substrate-borne vibrational signals can be achieved in the field. When disruptive vibrational signals were applied to grapevine plants through a supporting wire, mating frequency of the leafhopper pest *Scaphoideus titanus* dropped to 9 % in semi-field conditions and to 4 % in a mature vineyard. The underlying mechanism of this environmentally friendly pest-control tactic is a masking of the vibrational signals used in mate recognition and location. Because vibrational communication is widespread in insects, mating disruption using substrate vibrations can transform many open field and greenhouse based farming systems.

来源：PLoS One 期刊

发布日期:2012-03-21

全文链接:http://agri.ckcest.cn/file1/M00/02/9E/Csgk0FwAjX6AVpRNAAOpDYZ43GY618.pdf

2. Inter-Plant Vibrational Communication in a Leafhopper Insect

（昆虫叶蝉在植物间的振动传播）

简介：Vibrational communication is one of the least understood channels of communication. Most studies have focused on the role of substrate-borne signals in insect mating behavior, where a male and a female establish a stereotyped duet that enables partner recognition and localization. While the effective communication range of substrate-borne signals may be up to several meters, it is generally accepted that insect vibrational communication is limited to a continuous substrate. Until now, interplant communication in absence of physical contact between plants has never been demonstrated in a vibrational communicating insect. With a laser vibrometer we investigated transmission of natural and played back vibrational signals of a grapevine leafhopper, *Scaphoideus titanus*, when being transmitted between leaves of different cuttings without physical contact. Partners established a vibrational duet up to 6 cm gap width between leaves. Ablation of the antennae showed that antennal mechanoreceptors are not essential in detection of mating signals. Our results demonstrate for the first time that substrate discontinuity does not impose a limitation on communication range of vibrational signals. We also suggest that the behavioral response may depend on the signal intensity.

来源：PLoS One 期刊

发布日期:2011-05-05

全文链接:http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_tCKAcvIKAALxIObSr_M719.pdf

3. Manipulation of Insect Signaling for Monitoring and Control of Pest Insects（昆虫信号转导技术在害虫监测与防治中的应用）

简介：Knowledge is obtained from inherited information, information gained from learning (experience), and by information received from others through communication (teaching). The importance of the role of communication in the life histories of living organisms has been recognized since ancient times, and there are many reasons to study communication in animals. For example, reproduction in sexual animals is not possible without communication, and communication is essential for the proper functioning of all types of social organisms that live together in groups or colonies. Furthermore, the study of animal signals can be used to understand general principles of evolution, and many practical applications of communication have their origins in basic studies of information exchange between animals. The manipulation of insect signaling for monitoring and control of pest species are just two examples that illustrate some of the applications that have been developed from basic studies of communication processes in animals.

来源：Biorational Control of Arthropod Pests 图书

发布日期:2009-07-28

全文链接:http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_rhKAEuO7AApdPPVmpSo249.pdf

4. The Behavioral Ecology of Insect Vibrational Communication（昆虫振动传播的行为生态学）

简介：Vibrational communication is widespread in insect social and ecological interactions. Of the insect species that communicate using sound, water surface ripples, or substrate vibrations, we estimate that 92% use substrate vibrations alone or with other forms of mechanical signaling.

Vibrational signals differ dramatically from airborne insect sounds, often having low frequencies, pure tones, and combinations of contrasting acoustic elements. Plants are the most widely used substrate for transmitting vibrational signals. Plant species can vary in their signal transmission properties, and thus host plant use may influence signal divergence. Vibrational communication occurs in a complex environment containing noise from wind and rain, the signals of multiple individuals and species, and vibration-sensitive predators and parasitoids. We anticipate that many new examples and functions of vibrational communication will be discovered, and that study of this modality will continue to provide important insights into insect social behavior, ecology, and evolution.

来源：BioScience 期刊

发布日期:2005-04-20

全文链接:http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_qoSAXST7AAfy0SQjPPk593.pdf

相关专利

1. Detecting modified behaviour in bees（蜜蜂改良行为的检测）

简介：A device (102, fig 1) detects modified behaviour of bees in a local bee hive 312 which may form part of a network of hives. An audio frequency transducer (103, fig 1) generates an audio frequency signal from detected audio and vibrational activity. A transforming device transforms the audio frequency signal into frequency representations and a processing device processes these frequency representations. The audio frequency is preferably transformed by a fast Fourier transform (FFT). The local hive may be provided with a receiving device 314 for receiving signals from the other hives in the network and a transmitting device 313 for sending information to a local collecting station. The frequency representations can be used to detect when swarming is about to occur or whether a particular hive is under threat. The user can be issued a message is such circumstances or an alarm may be raised.

来源：英国专利

发布日期:2012-10-03

全文链接:http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_pA2ABLJUAAp239TIkFY912.pdf