<<生物燃料>>

图书基本信息

书名：<<生物燃料>>

13位ISBN编号：9787030369970

10位ISBN编号：7030369971

出版时间：2013-3

出版时间：科学出版社

<<生物燃料>>

内容概要

生物燃料领域是生物技术相关学科中被讨论得最多的研究领域。
《生物燃料 可再生能源、农业生产和技术进步对全球的影响（影印版）》艺术地总结了生物燃料的经济现状、农业生产力和可持续发展，以及全球视角。
本书很好的把生物燃料的知识分隔成了不同的章节和特定知识点，使之更易阅读和理解。
此外，每章的参考文献都是进一步研究的宝贵资源。

<<生物燃料>>

作者简介

Dwight Tomes为艾奥瓦州约翰斯顿市，杜邦先锋（DuPont Pioneer）公司特质研发和技术组研究员。
自1982年以来，其主要职责为在几个玉米农业性状地区进行多种作物物种和性状的转化技术研发。
现任期刊In Vitro Cellular and Developmental Biology—Plant的主编。
PrakashLakshmanan博士在澳大利亚糖业试验站管理局（BSES Limited），David North植物研究中心领导分子育种计划。
他的研究重点是通过对植物生长和资源利用效率的调控实现作物改良。
自1998年以来，他致力于一个主要的工业和生物燃料作物——甘蔗的研究。
David Songstad于南达科他州立大学获得微生物学学士学位和植物学硕士学位，又于田纳西大学获得了植物和土壤科学博士学位。
他曾经分别工作于伊利诺伊大学和加拿大植物生物技术研究所，并曾在Pioneer Hi-Bred和孟山都两家公司从事玉米组织培养和玉米转化技术的研发工作。
他现在主持孟山都公司全球新产品计划。

<<生物燃料>>

书籍目录

章节摘录

 插图： For example, a single uredinium (pustule) of the rust fungus Puccinia sparganioides (Ash-Cordgrass rust) can produce thousands of urediniospores and these propagules can easily become airborne. However, the probability that any given spore will land on a susceptible host (namely prairie cordgrass) is inversely proportional to the density and diversity of the host species in a given area. In other words, if another susceptible host is too far away from the infected source plant, then the chances of the epidemic progressing to a substantial level are minimal. In contrast, monocultures are composed of single plant species and are often very genetically uniform. This greatly increases the chance that pathogens and pests will be able to spread within a given location and more importantly that such organisms can become highly adapted to a given host genotype and impact the crop even more dramatically. The loss of genetic variability through the process of selection and varietal improvement and the subsequent planting of crop monocultures are the primary reasons why pathogens and pests should be study extensively in perennial feedstock crops. A variety of fungi and water molds, bacteria and mollicutes, protozoa, and nematodes can be pathogenic to plants and there are also several virus and viroid groups that utilize plants as a host. Similarly, many different insect and mite species can feed on plants and cause damage. The potential effects of diseases and pests on herbaceous perennial feedstock crops like prairie cordgrass and little bluestem can be organized into three general groupings based on what the final impact(s) will be (a) photosynthetic capacity, (b) plant-water relations, and (c) seed production and viability. It should be noted that these groupings are not mutually exclusive but are simply used in this review to partition impacts into concise categories. The most obvious impact in terms of economic importance to feedstock crops is the disruption of photosynthetic capacity. Specifically, if the ability of a plant to photosynthesize is reduced, then the potential to produce aboveground biomass will be limited. Reductions can occur through physical means, such as when a pest feeds on a leaf. A prime example would be locust swarms where complete or near-complete defoliation of plants is known to occur, often over enormous regions (Stewart 1997; Todd et al. 2002; Ceccato et al. 2007). Reductions may also occur when a plant is parasitized by a pathogen and both prairie cordgrass and little bluestem have been documented to be susceptible to multiple foliar pathogens (Mankin 1969;Farr and Rossman 2009), some of which are highly specific (e.g., P. sparganioides on prairie cordgrass). In addition to pathogens, natural stands of prairie cordgrass have also been found to be heavily infested with insects, such as the lygaied lschnodemus falicus (Johnson and Knapp 1996; Boe and Stein 2008, unpublished data). This piercing-sucking bug reduced biomass production of natural stands of prairie cordgrass by 40% in Kansas (Johnson and Knapp, 1996) and could become economically important as the feedstock industry develops.

<<生物燃料>>

编辑推荐

该书以宏观视角全方位介绍了生物能源领域的研究、应用进展，并分析了生物能源对种植业结构和农业可持续发展的影响，以及对世界经济的影响。
各章节作者来自不同部门、国家，身份各不相同，从不同视角对生物能源领域做了各自的阐述。
——朱祯中国科学院遗传与发育生物学研究所

<<生物燃料>>

名人推荐

该书以宏观视角全方位介绍了生物能源领域的研究、应用进展，并分析了生物能源对种植业结构和农业可持续发展的影响，以及对世界经济的影响。
各章节作者来自不同部门、国家，身份各不相同，从不同视角对生物能源领域做了各自的阐述。
——朱祯 中国科学院遗传与发育生物学研究所

<<生物燃料>>

版权说明