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前沿资讯

1．D54-丽透体垫刃线虫被巴西列为生防剂 用于防治云杉蓝树蜂 (Brazil Anvisa approves bioinsecticide Deladenus siricidicola)

简介：近日，巴西国家卫生监督局董事会将有效成分D54-丽透体垫刃线虫D54 - Deladenus siricidicola列入杀虫剂、家庭清洁产品和木材防腐剂名单。 Deladenus siricidicola是一种线虫，可用于松树入侵害虫云杉蓝树蜂（Sirex noctilio）的生物防治。根据巴西线虫学会报告，受这种膜翅目昆虫袭击的树木，其树干在生长阶段被若虫侵染，除了造成植物死亡之外，还会降低木材品质。将D54－Deladenus siricidicola用于农用品，表明该活性成分已通过了监管评估，可以用于农业用途、住宅用途、水生环境甚至作为木材防腐剂。该文件指出了更多的信息，例如通用名称和化学名称、类别用途、毒理学分类以及有效成分被授权的农作物的最大残留限量。

来源：AgroNews

发布日期:2018-05-24

全文链接:

http://news.agropages.com/News/NewsDetail---26419.htm

2．Indian regulator clears Bayer's deal for Monsanto

简介：India’s antitrust regulator has approved the acquisition of Monsantoby Bayer AG, in a decision that moves the $62.5 billion deal a step closer to the finish line, according to Reuters’ report.Bayer is preparing to close the takeover this quarter, giving it control of more than 25 percent of the world’s seed and pesticides market.Both Bayer and Monsanto had subsidiaries in India, making it mandatory for them to receive clearance from the Competition Commission of India (CCI).

来源：AgroNews

发布日期:2018-05-30

全文链接:

http://news.agropages.com/News/NewsDetail---26407.htm

3．我国三熟制早熟油菜新品种选育获重大突破

简介：近日，笔者从中国农科院油料所获悉，我国三熟制早熟油菜新品种选育获得重大突破，该所培育的三熟制早熟油菜新品种“阳光131”，在江西吉安、湖南衡阳等表现出良好的极早熟和高产优势，解决了我国三熟制油菜发展的重大瓶颈问题。据介绍，“阳光131”实现了三熟制早熟油菜单产突破。该品种单产达到147.7公斤/亩，比传统品种翻了一倍，2014-2016年连续三年居早熟区试第一名，比对照品种增产达45.1%，平均生育期仅173天，品质达双低油菜标准，抗菌核病能力强，抗倒伏适宜机收。2017年秋播，农科院油料所联合江西农科院、华中农大等单位，将“阳光131”、种子包衣、免耕直播、缓控肥、机械收获五大技术进行组装，在江西吉安市、湖南衡阳市等双季稻主产区建立了早熟油菜绿色高产高效技术集成示范。2018年4月22—26日，现场测产亩产达156—166公斤，现场机械化实收亩产144—150公斤。该技术每亩生产投入仅270元，商品菜籽收入730元，用工不到0.5个，净利润达460元，与传统三熟制早熟油菜技术相比，实

现了机械化高产高效生产，首次扭亏为盈。
来源：基因农业网
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全文链接:
http://www.agrogene.cn/info-5004.shtml

学术文献

1．Analysis of the functions of TaGW2 homoeologs in wheat grain weight and protein content traits(TaGW2 同源物在小麦粒重和蛋白质含量性状中的功能分析)

简介：GW2 is emerging as a key genetic determinant of grain weight in cereal crops; it has three homoeologs (TaGW2‐A1, ‐B1 and ‐D1) in hexaploid common wheat (Triticum aestivum L.). Here, by analyzing the gene editing mutants that lack one (B1 or D1), two (B1 and D1) or all three (A1, B1 and D1) homoeologs of TaGW2, several insights are gained into the functions of TaGW2‐B1 and ‐D1 in common wheat grain traits. First, both TaGW2‐B1 and ‐D1 affect thousand‐grain weight (TGW) by influencing grain width and length, but the effect conferred by TaGW2‐B1 is stronger than that of TaGW2‐D1. Second, there exists functional interaction between TaGW2 homoeologs because the TGW increase shown by a double mutant (lacking B1 and D1) was substantially larger than that of their single mutants. Third, both TaGW2‐B1 and ‐D1 modulate cell number and length in the outer pericarp of developing grains, with TaGW2‐B1 being more potent. Finally, TaGW2 homoeologs also affect grain protein content as this parameter was generally increased in the mutants, especially in the lines lacking two or three homoeologs. Consistent with this finding, two wheat end‐use quality‐related parameters, flour protein content and gluten strength, were considerably elevated in the mutants. Collectively, our data shed light on functional difference between and additive interaction of TaGW2 homoeologs in the genetic control of grain weight and protein content traits in common wheat, which may accelerate further research on this important gene and its application in wheat improvement.
来源：Annual Review of Plant Biology期刊
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http://agri.ckcest.cn/ass/757ac33c-4b99-4beb-b1ba-ea31d531c299.pdf

2．Similar geometric rules govern the distribution of veins and stomata in petals, sepals and leaves(相似的几何规律支配花瓣、萼片和叶片中的气孔和气孔的分布)

简介：The plant hormone gibberellin plays key roles in almost all aspects of plant development, but its detailed function and underlying regulatory mechanism in embryo development are not yet clearly defined. Here, we illustrate an essential role of gibberellin in late embryogenesis of Arabidopsis. Bioactive gibberellins are highly biosynthesized during

the late developmental stage of embryos. At that time, deficiency in gibberellin biosynthesis or signalling results in an abnormal embryo phenotype characterized by less-developed cotyledons and shortened embryo axis. In contrast, gibberellin overdose leads to a significantly larger size of mature embryo. We reveal that the gibberellin signalling repressor DELLA interact with LEAFY COTYLEDON1 (LEC1), the key regulator in late embryogenesis. Gibberellin triggers the degradation of DELLAs to relieve their repression of LEC1, thus promoting auxin accumulation to facilitate embryo development. Therefore, we uncover a space/time-specific role of gibberellin in regulating late embryogenesis through the gibberellinDELLALEC1 signalling cascade, providing a novel mechanistic understanding of how phytohormones regulate embryogenesis.

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http://agri.ckcest.cn/ass/e231c878-5509-457c-a574-ffde9b09be01.pdf