



2022年第24期总347期

蔬菜育种专题

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中国农业科学院农业信息研究所

联系人：张晓静；祁冉；顾亮亮

联系电话：010-51503648

邮箱：agri@ckcest.cn

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▶ 前沿资讯

1. PNAS | 植物中维生素E生物合成途径的一个关键水解酶被鉴定到

简介: 近日, 来自美国Michigan State University 的研究团队在PNAS在线发表了一篇题为Genome-wide association identifies a missing hydrolase for tocopherol synthesis in plants的研究论文, 该研究基于全基因组关联分析鉴定了该关键 α/β 水解酶VET7, 并解析了VET7在生育酚生物合成中的重要作用。

该研究基于基因组关联分析鉴定了在生育酚生物合成中的关键 α/β 水解酶ABH, 并阐明了该酶的功能及介导生育酚合成的代谢机制。研究结果完善了生育酚生物合成途径, 有助于培育和改造植物以进行维生素 E 生物强化和增强抗逆能力。

来源: BioArt植物

发布日期: 2022-06-07

全文链接:

<http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKhW4GAXJFJAAXBnN2--jU784.pdf>

2. Nature Plants | 四维活细胞成像揭示植物叶肉组织形态发生的机制

简介: 近日, 加拿大萨斯喀彻温大学Ambrose团队在Nature Plants上发表了题为 CLASP balances two competing cell division plane cues during leaf development 的研究论文, 揭示了在拟南芥叶肉细胞发育过程中存在由CLASP协调介导的两种竞争分裂模式, 这一研究是该团队先前关于细胞形态学动态影像研究的继续 (Zhang et al., 2021)。

该研究揭示了在叶肉组织的发育中存在两种相互竞争的细胞分裂机制, 同时突出了微管相关蛋白CLASP在协调平衡两种分裂机制的作用, 为后续细胞分裂相关研究提供了新的方向以及植物叶肉组织的发育研究奠定了坚实的基础。

来源: BioArt植物

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全文链接:

<http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKhXAeAX3ayABIY9WLDcPw215.pdf>

▶ 科技图书

1. QTL Mapping in Crop Improvement - Present Progress and Future Perspectives (作物改良中的QTL定位 - 当前进展和未来展望)

简介: QTL Mapping in Crop Improvement: Present Progress and Future Perspectives presents advancements in QTL breeding for biotic and abiotic stresses and nutritional improvement in a range of crop plants. The book presents a roadmap for future breeding for resilience to various stresses and improvement in nutritional quality. Crops such as rice, wheat, maize, soybeans, common bean, and pigeon pea are the major staple crops consumed globally, hence fulfilling the nutritional requirements of global populations, particularly in the under-developed world, is extremely important. Sections cover the challenges facing

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maximized production of these crops, including diseases, insect damage, drought, heat, salinity and mineral toxicity. Covering globally important crops including maize, wheat, rice, barley, soybean, common bean and pigeon pea, this book will be an important reference for those working in agriculture and crop improvement.

来源: Elsevier

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全文链接:

<http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKhVfaAEqUiAA1JaVXmNrk430.pdf>

2. Application of Sampling and Detection Methods in Agricultural Plant Biotechnology (采样和检测方法在农业植物生物技术中的应用)

简介: Application of Sampling and Detection Methods in Agricultural Plant Biotechnology describes detection methods for seed, plants and grain derived from biotechnology. This international handbook, based on a series of workshops carried out for governments in collaboration with ILSI and Co-published in partnership with the Cereals & Grains Association, provides the technical and practical information needed to develop, validate and use detection methods. This useful resource provides readers with the tools necessary to carry out reliable sampling, detection and interpretation of data.

来源: Elsevier

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全文链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKhWvqAb_x-AAhD37BkKLM251.pdf

3. Soybean Physiology and Genetics (大豆生理与遗传学)

简介: Soybean Physiology and Genetics, Volume 102 presents comprehensive reviews on the latest development in soybean research, covering soybean genomics, physiology and genetics under biotic and abiotic stress, growth and development, nitrogen fixation and nutritional values, etc. Chapters in this new release cover Root Physiology and Morphology in Relationship to Stress Tolerance, Soybean Insects, Application of Genomic Studies in Soybean Breeding, Secondary metabolism in soybean, The roles of CLE peptides in nitrogen fixation in soybean, Seed morphology in soybean, Physiology and genetic regulations of oil and protein contents in soybean, Regulation of flowering and maturation in soybean, and much more. As soybeans are a key component in climate-smart agriculture because of their high nutritional value, large cultivation area, and nitrogen-fixing ability, this book fills a gap in information on this growing commodity.

来源: Elsevier

发布日期: 2022-04-20

全文链接:

<http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKhWNeAHF1kAA2bP3z3mKM342.pdf>