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中国农业科学院农业信息研究所

联系人：王玉芹

联系电话：010-82109896

邮箱：agri@ckcest.cn

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▶ 前沿资讯

1. China Orders 5 Million Kilos of Kenyan Black Tea (中国订购500万公斤肯尼亚红茶)

简介: 据新华社报道, 中国对肯尼亚红茶和紫茶日益增长的需求导致本月双方达成了每年500万公斤的协议, 这项交易价值6700万美元/年。肯尼亚内阁部长Mwangi Kiunjuri说, 这项为期三年的协议“预计在未来10年里将增加到每年超过3000万公斤, 价值约3.85亿美元。”据统计, 全球红茶消费量正在上升, 但产量也在上升。截至6月份红茶产量增长了2%, 这压低了出口价格。在肯尼亚, 今年上半年红茶产量下降了8.4%, 降至2.44亿公斤。

来源: World tea News 网站

发布日期: 2019-09-17

全文链接: <http://agri.ckcest.cn/file1/M00/0E/CB/Csgk0F2cRHGAIfmdAAUlod2vB-o239.pdf>

▶ 学术文献

1. Polyphenols in Liubao Tea Can Prevent CCl₄-Induced Hepatic Damage in Mice through Its Antioxidant Capacities (六宝茶多酚通过其抗氧化能力预防CCl₄诱导的小鼠肝损伤)

简介: The present study investigated the preventive effect of polyphenols in Liubao tea (PLT) on carbon tetrachloride (CCl₄)-induced liver injury in mice. The mice were initially treated with PLT, followed by induction of liver injury using 10 mL/kg CCl₄. Then liver and serum indices, as well as the expression levels of related messenger RNAs (mRNAs) and proteins in liver tissues were measured. The results showed that PLT reduces the liver quality and indices of mice with liver injury. PLT also downregulates aspartate aminotransferase (AST), alanine aminotransferase (ALT), triglycerides (TGs), and malondialdehyde (MDA), and upregulates superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px) in the sera of mice with liver injury. PLT also reduces serum levels of interleukin-6 (IL-6), interleukin-12 (IL-12), tumor necrosis factor- α (TNF- α), and interferon- γ (IFN- γ) cytokines in mice with liver injury. Pathological morphological observation also shows that PLT reduces CCl₄-induced central venous differentiation of liver tissues and liver cell damage. Furthermore, qPCR and Western blot also confirm that PLT upregulates the mRNA and protein expressions of Gu/Zn-SOD, Mn-SOD, catalase (CAT), GSH-Px, and nuclear factor of κ -light polypeptide gene enhancer in B-cells inhibitor- α (I κ B- α) in liver tissues, and downregulates the expression of cyclooxygenase 2 (COX-2) and nuclear factor κ -light-chain-enhancer of activated B cells (NF- κ B). Meanwhile, PLT also raised the phosphorylated (p)-NF- κ B p65 and cytochrome P450 reductase protein expression in liver injury mice. The components of PLT include gallic acid, catechin, caffeine, epicatechin (EC), epigallocatechin gallate (EGCG), gallic acid gallate (GCG), and epicatechin gallate (ECG), which possibly have a wide range of biological activities. Thus, PLT imparts preventive effects against CCl₄-induced liver injury, which is similar to silymarin.

来源: Nutrients 期刊

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全文链接:<http://agri.ckcest.cn/file1/M00/0E/C9/Csgk0F2Ihp2AE5qWADCB07sei9k158.pdf>

2. The tea landscape of Assam: Multi-stakeholder insights into sustainable livelihoods under a changing climate (阿萨姆邦茶纵览: 多方利益相关者对气候变化下可持续生计的见解)

简介: Tea plays a pivotal role in India's national economy, with the state of Assam the world's largest regional producer of black tea. However, various socio-environmental factors are threatening tea production and the livelihoods of millions of people reliant upon the industry. Little documentation exists which provides comprehensive spatial insights into tea production practices and associated livelihoods. Additionally, vulnerability from climate change to those livelihoods dependent upon the tea landscape has received limited multi-level stakeholder qualification. Consequently, this paper goes towards addressing this knowledge deficit through adopting a sustainable livelihoods approach for investigating the tea landscape of Assam. Mixed social survey methods were used to document responses from multiple stakeholder groups representing managers of commercial plantations, smallholders and tea workers. Results provide a comprehensive insight into the livelihoods of those reliant upon tea production activities across the four major tea growing regions of Assam. Outputs indicate that varying production practices are in place to optimise yield, increase livelihood resilience and manage the landscape effectively under a changing climate, with tea workers possessing varying diversity in assets to support their livelihoods. Outcomes from this research highlight the need for adaptable and climate-smart landscape activities, with active support from expert tea advisory agencies, to promote long-term socio-environmental sustainable cultivation of tea under changing climatic conditions.

来源: Environmental Science and Policy 期刊

发布日期: 2018-04-20

全文链接:http://agri.ckcest.cn/file1/M00/0E/CB/Csgk0F2cLn-ADBmFAA_EQIs_NZQ091.pdf

3. Identification of novel QTL for black tea quality traits and drought tolerance in tea plants (*Camellia sinensis*) (红茶品质性状与抗旱性的新型QTL鉴定)

简介: Tea (*Camellia sinensis*) contains polyphenols and caffeine which have been found to be of popular interest in tea quality. Tea production relies on well-distributed rainfall which influence tea quality. Phenotypic data for two segregating tea populations TRFK St 504 and TRFK St 524 were collected and used to identify the quantitative trait loci (QTL) influencing tea biochemical and drought stress traits based on a consensus genetic map constructed using the DArTseq platform. The populations comprised 261 F1 clonal progeny. The map consisted of 15 linkage groups which corresponds to chromosome haploid number of tea plant ($2n = 2 \times = 30$) and spanned 1260.1 cM with a mean interval of 1.1 cM between markers. A total of 16 phenotypic traits were assessed in the two populations. Both interval and multiple QTL mapping revealed a total of 47 putative QTL in the 15 LGs associated with tea quality and percent relative water content at a significant genome-wide threshold of 5%. In total, six caffeine QTL, 25 catechins

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QTL, three theaflavins QTL, nine QTL for tea taster score, and three QTL for percent relative water contents were detected. Out of these 47 QTL, 19 QTL were identified for ten traits in three main regions on LG01, LG02, LG04, LG12, LG13, and LG14. The QTL associated with caffeine, individual catechins, and theaflavins were clustered mostly in LG02 and LG04 but in different regions on the map. The explained variance by each QTL in the population ranged from 5.5 to 56.6%, with an average of 9.9%. Identification of QTL that are tightly linked to markers associated with black tea quality coupled with UPLC assay may greatly accelerate development of novel tea cultivars owing to its amenability at seedling stage. In addition, validated molecular markers will contribute greatly to adoption of marker-assisted selection (MAS) for drought tolerance and tea quality improvement.

来源: Tree Genetics & Genomes 期刊

发布日期:2018-02-10

全文链接:<http://agri.ckcest.cn/file1/M00/00/02/Csgk0V2cO5yAGqhHAA0zyQBoyYc456.pdf>

4 . Chemoprevention of Human Prostate Cancer by Oral Administration of Green Tea Catechins in Volunteers with High-Grade Prostate Intraepithelial Neoplasia: A Preliminary Report from a One-Year Proof-of-Principle Study (口服绿茶儿茶素对志愿者高级别前列腺上皮内瘤变前列腺癌的化学预防: 一项为期一年的机理验证研究的初步报告)

简介: Green tea catechins (GTCs) proved to be effective in inhibiting cancer growth in several experimental models. Recent studies showed that 30% of men with high-grade prostate intraepithelial neoplasia (HG-PIN) would develop prostate cancer (CaP) within 1 year after repeated biopsy. This prompted us to do a proof-of-principle clinical trial to assess the safety and efficacy of GTCs for the chemoprevention of Cap in HG-PIN volunteers. The purity and content of GTCs preparations were assessed by high-performance liquid chromatography [(-)-epigallocatechin, 5.5%; (-)-epicatechin, 12.24%; (-)-epigallocatechin-3-gallate, 51.88%; (-)-epicatechin-3-gallate, 6.12%; total GTCs, 75.7%; caffeine, < 1%]. Sixty volunteers with HG-PIN, who were made aware of the study details, agreed to sign an informed consent form and were enrolled in this double-blind, placebo-controlled study. Daily treatment consisted of three GTCs capsules, 200 mg each (total 600 mg/d). After 1 year, only one tumor was diagnosed among the 30 GTCs-treated men (incidence, similar to 3%), whereas nine cancers were found among the 30 placebo-treated men (incidence, 30%). Total prostate-specific antigen did not change significantly between the two arms, but GTCs-treated men showed values constantly lower with respect to placebo-treated ones. International Prostate Symptom Score and quality of life scores of GTCs-treated men with coexistent benign prostate hyperplasia improved, reaching statistical significance in the case of International Prostate Symptom Scores. No significant side effects or adverse effects were documented. To our knowledge, this is the first study showing that GTCs are safe and very effective for treating premalignant lesions before Cap develops. As a secondary observation, administration of GTCs also reduced lower urinary tract symptoms, suggesting that these compounds might also be of help for treating the symptoms of benign prostate hyperplasia.

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来源: Cancer Research 期刊

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全文链接:http://agri.ckcest.cn/file1/M00/0E/CB/Csgk0F2cNiiANMsRAAI_GZL6yxw211.pdf

➤ 相关专利

1. 动物用持久性体外寄生虫控制剂 (PROLONGED ECTOPARASITE-CONTROLLING AGENT FOR ANIMAL)

简介: 由式(1)表示的化合物可作为动物体外寄生虫的长期控制剂。本发明涉及一种用于在动物体内长期控制外寄生虫的系统应用的制剂,包括该化合物。一种延长对动物体外寄生虫控制的方法,包括系统地应用该化合物。该化合物可用于制备一种药物,用于延长对动物体外寄生虫的控制。还提供了一种含有该化合物的园艺或农业杀虫剂,以及一种保护作物不受有害生物体侵害的方法。

来源: 中国台湾专利

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全文链接:<http://agri.ckcest.cn/file1/M00/0E/C8/Csgk0F14uwMASz0qAGd3qzPjde8498.pdf>