

## Characteristics of the spatio-temporal changes of soil organic matter of sugarcane field in red soil hill areas

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**Abstract:** Temporal and spatial changes of soil organic matter(SOM) content in the sugarcane field after 19-year interval(from 1980 to 1999) were evaluated using geostatistics and geographic information system(GIS). Results show that there are negatively significant correlation between the slopes of terrain and SOM content in 1980, as a result of soil erosion and land use pattern changes. The slopes of terrain do not have obvious impact on the spatial distribution of SOM content in 1999 under long-term sugarcane monoculture. There are significant correlations among the elevation, latitude, longitude and SOM contents due to the stress direction when applying organic manures. The spatio-temporal changes of SOM content are related to the degree of intensive cultivation. The SOM content of the higher yield fields with high degree of intensive cultivation decreases 11% on average, while the SOM content of lower yield fields increases 50% on average under low degree of intensive cultivation. Lots of sugarcane-derived organic matter has already caused soil nutrition imbalance.

**Key words:** soil organic matter; sugarcane field; terrain; spatio-temporal change

## 科技部发布科研不端行为处理办法, 科研不端行为将受查处

为了加强国家科技计划实施中的科研诚信建设, 防治科研不端行为, 净化科研环境, 根据《中华人民共和国科学技术进步法》的有关规定, 科学技术部部长徐冠华签署部长令, 于 11 月 9 日发布了《国家科技计划实施中科研不端行为处理办法(试行)》(以下简称《处理办法》), 把对国家科技计划中科研不端行为的调查和处理纳入法制化轨道。《处理办法》的内容包括六章共三十四条, 将从 2007 年 1 月 1 日起施行。按照这一办法, 抄袭、剽窃他人科研成果等科研不端行为将受到查处和惩罚。

科技部副部长尚勇表示, 对学术诚信问题的判定, 涉及复杂艰深的学术问题, 必须通过健全的组织、规范的程序进行调查和处理。《处理办法》的颁布施行, 将把对科研不端行为的调查和处理纳入法制化轨道, 也充分表明政府进一步端正学风的基本态度。

据介绍, 《处理办法》目前阶段, 仅对科学技术部归口管理的国家科技计划项目的申请者、推荐者、承担者在科技计划项目申请、评估评审、检查、项目执行、验收等过程中发生的科研不端行为进行查处。

科研不端行为的种类具体包括 6 个方面: 在有关人员职称、简历以及研究基础等方面提供虚假信息; 抄袭、剽窃他人科研成果; 捏造或篡改科研数据; 在涉

及人体的研究中, 违反知情同意、保护隐私等规定; 违反实验动物保护规范; 其他科研不端行为。

《处理办法》还规定了对科研不端行为人的处罚措施, 分别规定了项目承担单位、项目主持机关和科技部对科研不端行为人的处罚规定, 包括: 警告; 在一定范围内通报批评; 责令其接受项目承担单位的定期审查; 记过; 降职; 解职; 解聘; 辞退或开除等; 禁止其一定期限内参与项目承担单位承担或组织的科研活动; 中止项目, 并责令限期改正; 终止项目, 收缴剩余项目经费, 追缴已拨付项目经费; 在一定期限内, 不接受其国家科技计划项目的申请等。

根据《处理办法》规定, 科学技术部、行业科技主管部门和省级科技行政部门、国家科技计划项目承担单位是科研不端行为的调查机构, 根据其职责和权限对科研不端行为进行查处。任何单位和个人都可以向科学技术部、项目主持机关、项目承担单位举报在国家科技计划项目实施过程中发生的科研不端行为。鼓励举报人以实名举报。科学技术部负责查处影响重大的科研不端行为。必要时, 科学技术部会同其他部门联合进行查处。为此, 科学技术部还专门成立了“科研诚信建设办公室”, 负责科研诚信建设的日常工作。

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## Experimental research on the soil moisture regulation of seabuckthorn plant flexible dams

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**Abstract:** Seabuckthorn plant flexible dam plays an important role in controlling soil sediment. In order to explore the soil moisture regulation of seabuckthorn dams, field experiments were carried out for five seabuckthorn dams and a small valley without seabuckthorn plant flexible dams in Xizhao watershed, Inner Mongolia. Along the seabuckthorn dams and the small valley, several sections were set, two to three sample points for each section were selected. Soil samples were vertically selected from nine layers within 1 m depth to measure soil moisture content respectively. Results show that after a rainfall event, in the seabuckthorn dam body, the vertical distribution of soil moisture content exhibits decreasing type (soil moisture content decreases with the increase of soil depth). While in the small valley without flexible dams, increasing or fluctuating types are observed. The seabuckthorn dam plays a positive role in the enhancement of rainfall infiltration, the maintenance of soil moisture, water and soil conservation and vegetation growth. From the midst of flexible dam to the upstream silt layer, there exists a trend of longitudinal increase of average soil moisture content. Relationships between average soil moisture content and vertical distance were discussed based on the Darcy's law.

**Key words:** soft rock region; seabuckthorn plant flexible dam; soil moisture content; soil reservoir

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《处理办法》同时规定,项目主持机关对举报的科研不端行为不开展调查、无故拖延调查的,科学技术部可以停止该机关在一定期限内主持、管理相关项目的资格。被调查人有藏匿、伪造、销毁证据的,干扰、妨碍调查工作的,打击、报复举报人的,同时涉及多种科研不端行为的,将从重处罚。科研不端行为涉嫌违纪、违法的,移交有关机关处理。

由于这次出台的办法仅针对国家科技计划实施中的不端行为,科技部此前会同有关部门出台过《科学技术评价办法(试行)》等系列法规,同时国家自然科学基金委员会、教育部、中国科学院等针对科研不端行为也都有各自的处理办法。对于其他科研活动中出现的不端行为,原则上由相关机构和部门做出处理,也可向科技部举报。《处理办法》还规定国家科技奖励中发生的不端行为的调查和处理参照这一办

法。

据悉,为保证《处理办法》的贯彻实施,科技部将与教育部、国家自然科学基金委员会、中国科学院、中国工程院、中国科学技术协会协商,成立国家科学道德与学风建设委员会,协调推进科研诚信建设工程。

近年来,针对科技评价和计划管理制度不健全、评价体系不完善、评价方法不规范等问题,以及科技界反映的提供虚假信息、抄袭剽窃他人论文、捏造篡改科研数据等科研不端行为、学术浮躁、学术腐败等现象,科技部从多个方面加强制度建设,标本兼治,有助于铲除滋生腐败的土壤,治理学术浮躁等不正之风,优化创新环境。

有关详情可参阅《办法》具体条款([http://www.most.gov.cn/kjbgz/200611/t20061109\\_37931.htm](http://www.most.gov.cn/kjbgz/200611/t20061109_37931.htm))。

(王应宽 摘编)