陈明周

报告人简介:

陈明周，男，1965 年，教授级高级工程师。1988 年 6 月毕业于华南农业大学，同年进入广东省生物工程研究所（广州甘蔗糖业研究所）工作，多年来一直致力于多功能地膜产品与技术的研究开发及推广应用工作，完成了拥有自主知识产权的“可控光降解地膜”、“甘蔗除草地膜”、“花生除草地膜”、“玉米除草地膜”等成果，并将项目成果成功进行转化，推广应用于广东、广西、云南等 10 多个省以及巴基斯坦、缅甸等国家，应用单位包括广东省湛江农垦集团公司、缅甸长城集团公司、云南西双版纳英茂糖业有限公司、广西永鑫华糖集团有限公司、博罗县农业技术推广中心等 100 多家单位。近年来，带领研究团队成功开发出了完全生物降解除草地膜新产品，增产、降解效果显著，为防治农业面源污染开辟了新途径，取得巨大的经济和社会效益。

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Mingzhou Chen

Profile of the Author:

Chen Mingzhou,Male, born in 1965, professor of engineering. He graduated from South China Agricultural University in June 1988, and started his work in Guangdong Bioengineering Institute(GZSIRI)at the same time. For years, Professor Chen devoted himself to research and popularization nofmulti-functional plastic mulching film and technology, and accomplished some results with intellectual property rights, which included controllable photodegradable plastic film, herbicidal plastic film for sugarcane, herbicidal plastic film for peanutand Herbicidal plastic film for corn, etc., which were applied in Guangdong, Guangxi, Yunnan and other more than 10 provinces, as well as Pakistan, Burma and other countries. Applying units included Guangdong Zhanjiang

farm group company, Greatwall foodstuff industry company linited, Yunnan Xishuang banna mau sugar industry co., LTD. Guangxi Yongxin sugar group co., LTD, Boluo county agricultural technology promotion center and so on more than 100 units. In recent years, the research team successfully developed complete biodegradable weed mulching film, with remarkable yield promotion and degradation effect, opening up a new way for the prevention and control of agricultural non-point source pollution, which will obtain great economic and social benefits.

Published more than 30 papers of all kinds of science and technology, applied for 6 patents and was authorized 3patents, involved in developing one local standard and two enterprise standards, two results were registered, won 7 rewards of the national and provincial department of science and technology, and successively presided over more than 10 provincial department of science and technology plan projects.

生物降解地膜的应用及增产机理研究

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生物降解地膜作为近年来的研究热点之一，不仅具备普通塑料膜的增温保墒功能，而且一定时间后会在自然状态下完全降解，不影响下茬作物的生长，是解决农田白色污染的有效途径。目前，生物降解膜已在马铃薯、棉花、玉米等多种大田作物上应用，并取得了显著的效果。笔者通过 2014-2016 年在广东省冬种马铃薯上开展的田间试验发现在部分地区使用生物降解膜对马铃薯有增产的效果。为了探明使用生物降解膜的增产机理，本研究中通过大田小区试验研究了不同覆膜方式对土壤温度、养分以及马铃薯产量和品质的影响，以期为生物降解膜在马铃薯上的大规模推广提供理论依据和技术支持。

Application of biodegradable mulch film and mechanism of yield increasein potatoes

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The biodegradable mulch film is one of research focus in agriculture.The biodegradable mulch film hasessentialfunctions (increasing temperature and conserving soil moisture) of common mulch film, and has no effect on the growth of next-stubble crops,is an effective method to resolve white pollution due tothe biodegradable mulch film will be naturally degraded after using a period time later. At present, the biodegradable mulch film had been used in the variety of farmland crops (potato, cotton, corn etc.), and has a significantly impact on increasing yield of crops. This study found the biodegradable mulch film increases the potato yield,carried out a field experiment to investigate mechanisms of potatoes yield increasein Guangdong Province in 2014-2016. In this experiment, different mulching methods on soil temperature, nutrients and potato yield and quality were studied, which provides theoretic reference and technical support fora large-scale promotion of biodegradable mulch filmsin potatoes.