佳多股份

梦想起航 共创农业绿色梦

佳多·农林ATCSP物联网

[注] ATCSP: Automatic Test and Control System
of Plant Disease and Insect Pest

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中国佳多 绿色智慧农业

农林病虫测控物联网及绿色防控设备服务商

大数据支撑智慧农业

匠心铸就雄厚科研实力 佳多技术持续领航34年

物理控诱篇
Physical trap&Control Chapter

Jiaduo Frequoscillation Pest Control Lamp Series

PS-15II型（时段）

PS-15II型(光控、普通)

PS-15III-1型

PS-15III-2型

PS-15VI-5型

PS-15VI-2型

PS-15V型

地埋式蓄电池

PS-15VI-3型

PS-15IV-2型

PS-15IV-3型

PS-15IV-4型

PS-15IV-5型

Jiaduo Green Prevention and Control Series

Jiaduo Board Trap

Jiaduo Insect Resistant Net

Jiaduo Adhesive Tapes / Tapes

Jiaduo Pest Trap

Jiaduo Biocontrol Bacteria

Jiaduo Trematode Machine

Microbial Spray System

Microbial Spray System

Jiaduo Entomopathogenic Fungus Culture Equipment

　　佳多频振式诱控灯的广泛推广应用是以可持续发展的战略眼光,以促进节约能源,保护生物链为前提,得到全国各级农、林业部门及广大农林植保技术人员的大力推广。在国内95%以上的县得以应用，并出口到德国、英国、澳大利亚、菲律宾、乌兹别克斯坦、马来西亚等12个国家和地区。累计控害面积1.3亿亩，取得了巨大的经济效益、生态效益和社会效益。
灯的广泛推广应用是以可持续发展的战略眼光,以促进节约能源,保护生物链为前提,得到全国各级农、林业部门及广大农林植保技术人员的大力推广。

The extensive promotion and application of the Jiaduo pest trap lamp is based on the strategic vision of sustainable development, promoting energy conservation and protecting biological chain as the premise, and has been vigorously promoted by agricultural and forestry departments at all levels and the vast number of agriculture and forest plant protection technicians. More than 95% of the counties in China are applied, and exported to 12 countries and regions such as Germany, Britain, Australia, Philippines, Uzbekistan and Malaysia. Accumulative damage control area is 130 million mu, and great economic, ecological and social benefits have been achieved.

太阳能频振式杀虫灯

保护生态 减少污染
节约成本 增产增收

茶 叶

蘑 菇

森 防

园 艺

药 材

蓝 莓

烟 草

园林花卉

蔬 菜

稻田养鱼

养 鸭

果 园

园 林

蚕 桑

诱虫养鸡

玉 米

频振灯 + 黄色粘虫板 + 蓝色粘虫板

防虫网 + 频振灯 + 粘虫板 + 杀菌灯 + 补光灯

佳多产品在国外的应用情况
Pictures of products used abroad

佳多白色诱虫板诱集菜粉蝶效果
White board trap Pieris

佳多绿色诱虫板诱集蚊蝇效果
Green board trap Mosquito

佳多蓝色诱虫板诱集蓟马效果
Blue board trap Thrips

佳多十种颜色诱虫板实验田应用

Application of 10 Colors of Insect Attracting Board in Test Fields

佳多物联网4G测报灯于2019年1月24日安装在云南瑞丽市西南部玉米蔬菜种植地内
Jiaduo pest forecast lamp was installed in the corn and vegetable planting field in the southwest of Ruili City, Yunnan Province in January 24, 2019

佳多二十种诱虫光源在夜间工作情况
20 Kinds of Light Sources for Insect trapping Work at Night

6号和19号光源对草地贪夜蛾诱集效果明显,共诱集20多头。
No. 6 and No. 19 light sources were effective in fall armyworm. Trapped More than 20 insects

病虫害监测预报篇-
IOT
Chapter on Monitoring and
Forecasting of Pests and Diseases-
IOT

佳多农林ATCSP物联网概述
Jiaduo ATCSP Agriculture and Forest IOT Outline

佳多农林ATCSP物联网，以自主研发生物传感硬件为前端感知层，结合通过互联网与无线技术，实现<u>自动完成野外病虫实时监测、小气候数据实时采集、建立病虫发生趋势预警专用模型，通过大数据平台运算分析智能遥控指挥物理、生物手段的无害化防控工具、智能调控滴灌、水肥一体化、设施农业大棚等相关设备；实现物物相控、点点相通，让农林物联网在实际应用中更科学，更实用。</u>

Jiaduo ATCSP Agriculture and Forest IOT ,using self-developed biosensor hardware as front-end sensing layer，combining with Internet and wireless technology, complete the real time monitoring of diseases, real time data collection of microclimate and establishing a special early warning model for occurrence trend of diseases. Through big data platform operation and analysis, remote control the physical, biological control tools and Intelligent control of the drip irrigation, water and fertilizer integration, greenhouse facilities and other related equipment. Realizing interconnections and make agriculture and forestry IOT be more scientific and practical in practical application.

[注] ATCSP: Automatic Test and Control System of Plant Disease and Insect Pest

佳多农林ATCSP物联网+

太阳能
Solar Control

中国特色传统产业+通信技术+大数据平台

佳多农林ATCSP物联网+

交流电
alternating current Control

中国特色传统产业+通信技术+大数据平台

Traditional industries with Chinese characteristics + Communications technology + Big data platform

多终端支持 满足客户不同的应用场景

Web网页端
Web

+

手机APP
APP

+

电脑客户端
PC

控制平台V.2版本Control platform

佳多虫情信息信息采集系统

Jiaduo Pest Forecast system

本系统对害虫、天敌种群实现了<u>野外昆虫自动诱集、红外处理、时段取像、信息无线传输功能，综合掌握昆虫生态分布特点，而非只关注害虫。</u>为人们进一步及时、准准确掌握昆虫发生规律提供了依据，为<u>利用好生态自然循环的目标奠定了依据。</u>

This system follows requirements of the major China national standards of monitoring tools. Based on previous JIADUO technologies of light-spectrum sources, the pest trapping, infrared treatment of insect bodies, and the newly developed tools are combined into this system with a full on-line operation, such as photographing, identification and wireless network transmission, as well as uploading and storing the real-time insect data. Meanwhile, the field microclimate data is also uploaded to generate automatically a prediction trend map for the real-time field pest occurrence through combined big data analysis.

虫情发生数据原始图片数据并生成对比曲线
Original picture and contrast curve of insect pest occurrence data

原始图片信息
Original picture information

图片识别虫情发生数据及生成对比曲线
Picture recognition insect occurrence data and comparison curve

观察昆虫的活动高峰期时间段及趋势分析
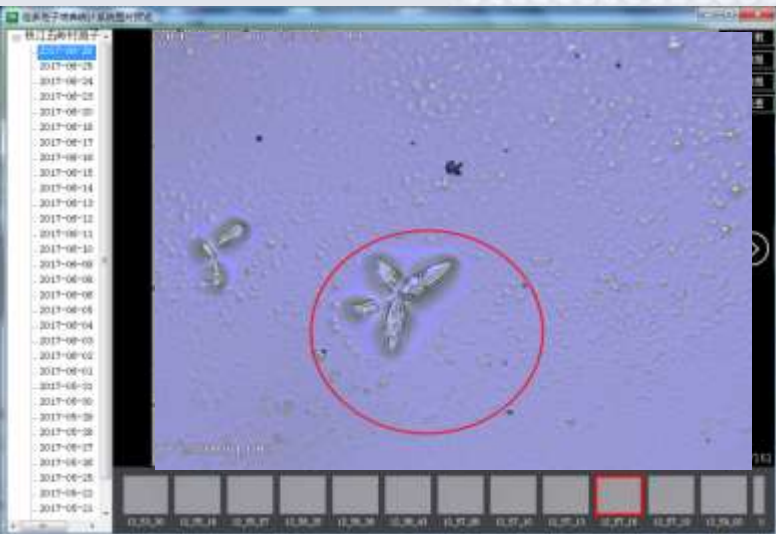**Observating peak periods and trend analysis of insect activity**

佳多孢子培养统计分析系统

Jiaduo Quantitative Airborne Spore Catcher

佳多孢子培养统计分析系统: 本系统实现了自动捕获孢子、培养观察、精确聚焦成像功能，为分析野外的病原孢子数量的变化，发生程度和传播路线、实时掌控、监测病原菌孢子危害植物状况提供了科学依据，提高了病害监测和防控能力。

This system makes a timing collection of pathogen spores in surveillance area through quantitative airflow design. It completes automatically on-site field culture of pathogen spores, microscopic imaging and barrier-free remote wireless transmission, as well as uploading and storing pathogen spore images data. It can also be used for monitoring and controlling spore-forming status under real time situation and all-weather conditions to form a big data accumulation to predict and identify spores smartly in early stage.
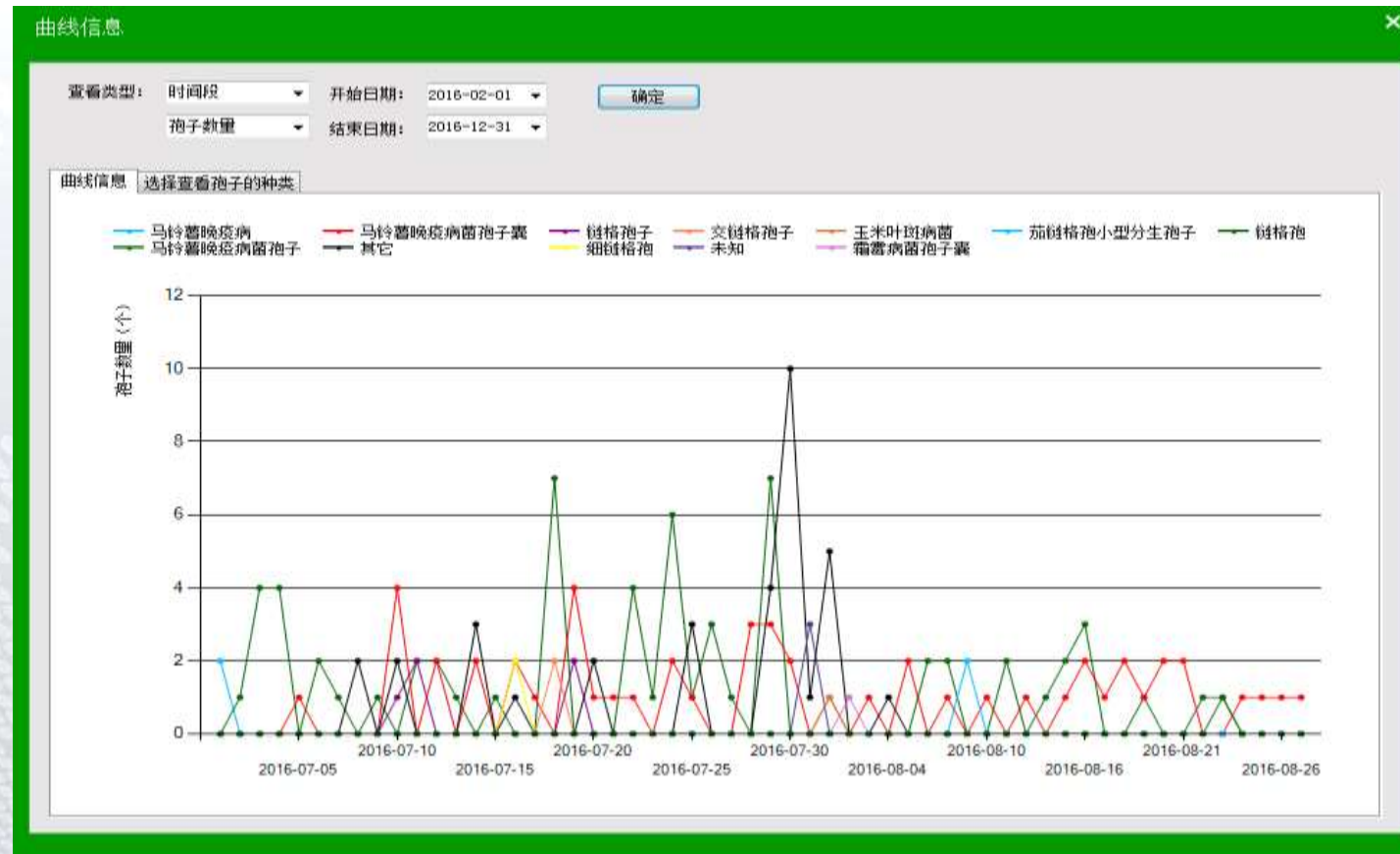
七大自动功能
Seven automatic functions

（1）自动控温 automatic temperature control

（2）自动采集孢子 Automatic collection of spores

（3）自动加液培养 Automatic liquid culture

（4）自动拍照 self-timer

（5）自动传输 Automatic transmission

（6）自动换片 Automatic film changing

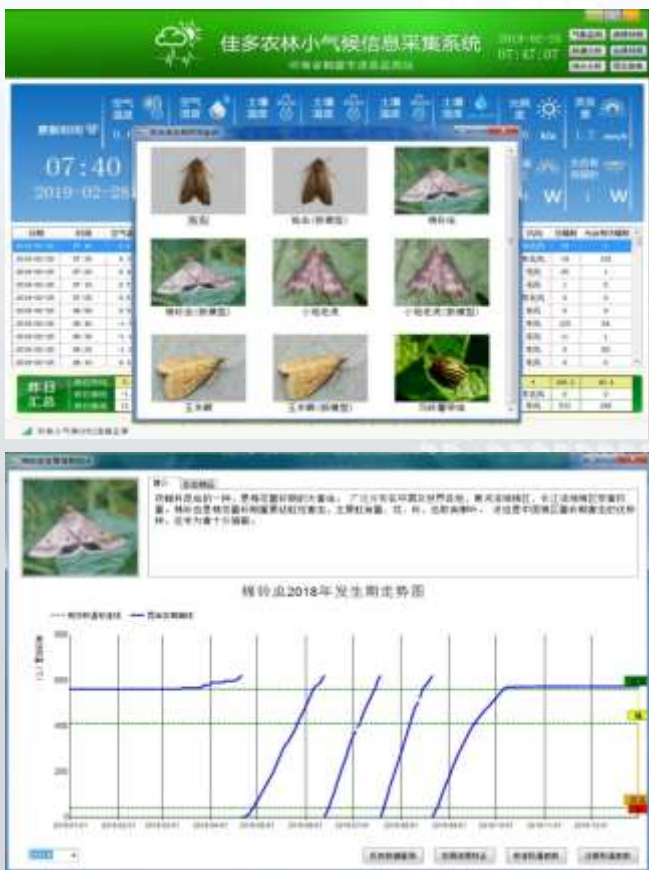（7）自动优选照片 Automatic photo optimization

佳多孢子培养统计分析系统：病菌孢子识别统计系统
Spores Recognition Statistics System

目前已有模型：马铃薯晚疫病、马铃薯晚疫病孢子囊、链格孢子、交链格孢子、玉米叶斑病菌、茄链格孢小型分生孢子、链格孢、细链格孢、霜霉病菌孢子囊
Existing model：The sporangia of Potato Late Blight, Potato Late Blight, Streptospore, Alternaria alternata, Corn Leaf Spot, Alternaria solanacearum, Alternaria solanacearum, Alternaria tenuifolia and Downy mildew

佳多小气候信息采集系统

Jiaduo Microclimate Information Gathering System

主要功能：采集检测空间的环境因子。物联网小气候采集数据有**15项**，**13类**

分别为：空气温度、空气湿度、土壤温度（3层）、土壤湿度、气压、结露、光照、太阳总辐射、光合有效辐射、蒸发量、 降雨量、风速、风向。此数据结合虫情、病情的大田实际采集数据相结合，对病虫监测、预警、测报趋势分析具有高度应用、分析的价值。

Major Function： Environmental factors of collecting detection space 。 There are 15 items and 13 categories microclimate data collected by the IOT.
Respectively： Air temperature, air humidity, soil temperature (3 layers), soil humidity, air pressure, condensation, light, total solar radiation, photosynthetic active radiation, evaporation, rainfall, wind speed, wind direction 。

佳多生态远程监控系统

Jiaduo Agro-Ecological Remote Real-time Monitoring System

本系统集成网络、视频技术、利用自主研发的信息转换器和专用软件，在国内首次实现对害虫发生实况的远程实时监测，为农林业测控、专家研究、自然探索提供依据，全天候无人值守连续自动工作，可以看清半径25米内1cm*1cm的物体,本系统可与佳多ATCSP农林物联网系统联网，达到国家、省、市、县、乡、各级信息采集站无线传输，远程控制，信息技术共享

Several advanced technology, including network, video, self-developed information transfer device and special software. can see the objects with a radius of 1 cm*1 cm within 25 meters. Can compatibility Jiaduo ATCSP system and realized the wireless transmission between national, Province, City and Village. Remote controlling and Information technology sharing
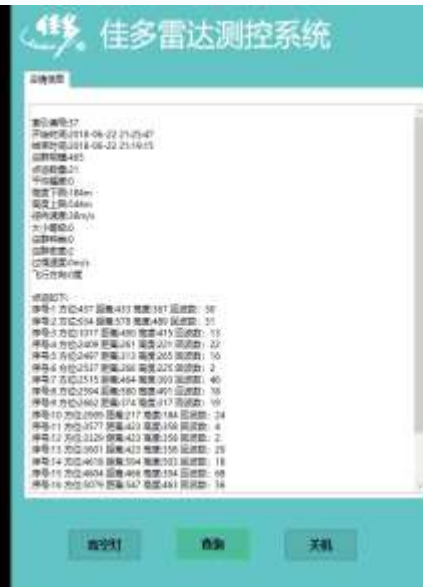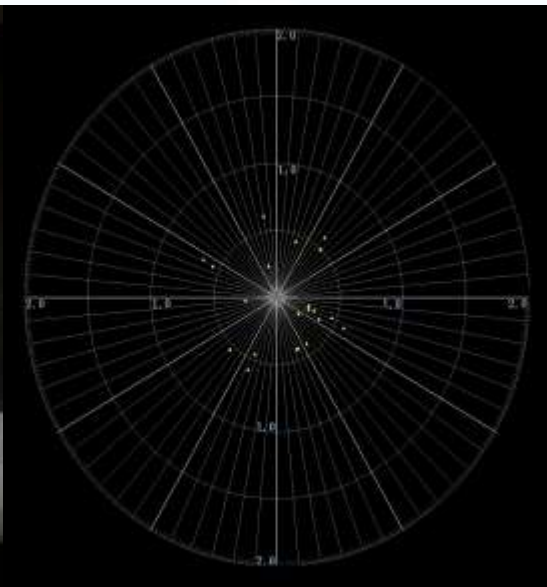
佳多高空监测设备
Jiaduo Upper Air Monitoring Equipment

监测昆虫飞行路线 Monitoring insect flight routes

田间移动采集数据可与固定物联网点数据同步共享
Insect Survey and Statistical System

测报类其他产品
Other products of forecasting

佳多植保工具箱
Jiaduo Plant Protection Toolbox

佳多昆虫飞行信息系统
Jiaduo Insect Flight Information System

佳多标本盒
Jiaduo brand specimen boxes

佳多培养箱
Jiaduo Incubator

佳多地下害虫自动调查成像系统
Automatic Survey and Imaging System of Underground Pests

佳多有害生物自控处理设备
Pest Control Equipment

生物控诱篇
Biological pest trap&control
Chapter

佳多天敌培养车间
Natural Enemy Cultivation Workshop

螳螂捕食玉带凤蝶
Mantis preys on Phoenix butterflies

瓢虫捕食蚜虫
Ladybugs are eating aphids

寄生蜂探测是否能向寄主体内产卵
Parasitic wasps detect whether they can lay eggs in the host
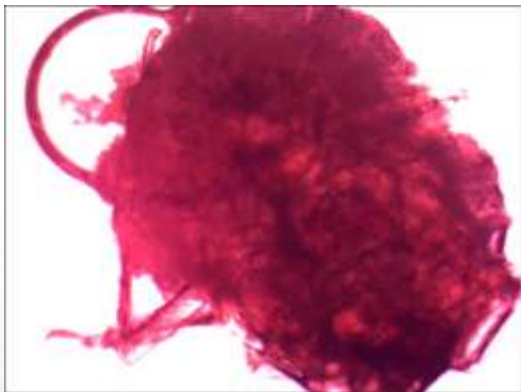

瓢虫产卵区
Ladybug oviposition

饲喂草蛉
Raising Lacewing

育控篇
Reproduction Control Chapter

佳多控诱真菌培养设备

本设备是一款智能化生产真菌菌液制剂的培养设备，设备包括空气灭菌系统、水蒸馏灭菌系统、温度智能调控系统、菌液智能培养器、自动接种补料系统及菌液收集系统等智能电气化控制系统，采用基料预处理方法，保证可在安全压力和温度范围内培养出昆虫病原真菌，达到量产的目的控制有害生物.

This equipment is an intelligent cultivation equipment for producing fungus liquid preparations. The equipment includes air sterilization system, water distillation sterilization system, temperature intelligent control system, fungus liquid intelligent incubator, automatic inoculation and supplement system and fungus liquid collection system. The method of base material pretreatment ensures that insect pathogenic fungi can be cultured in the range of safe pressure and temperature to control pests in mass production.

蚜虫感染情况Aphids Infected by Fungi

佳多频振控诱真菌释放设备
Jiaduo frequency vibration trapping control fungi release equipment

诱集
Trap

培养
culture

真菌携带
Fungi carrying

释放
Release

病原真菌种源取于当地，避免外来菌种"水土不服"，保证了菌丝和孢子的活性
The sources of pathogenic fungi cultivated come from the local place to avoid the "non-acclimatization" of strains affect the prevention and control effect
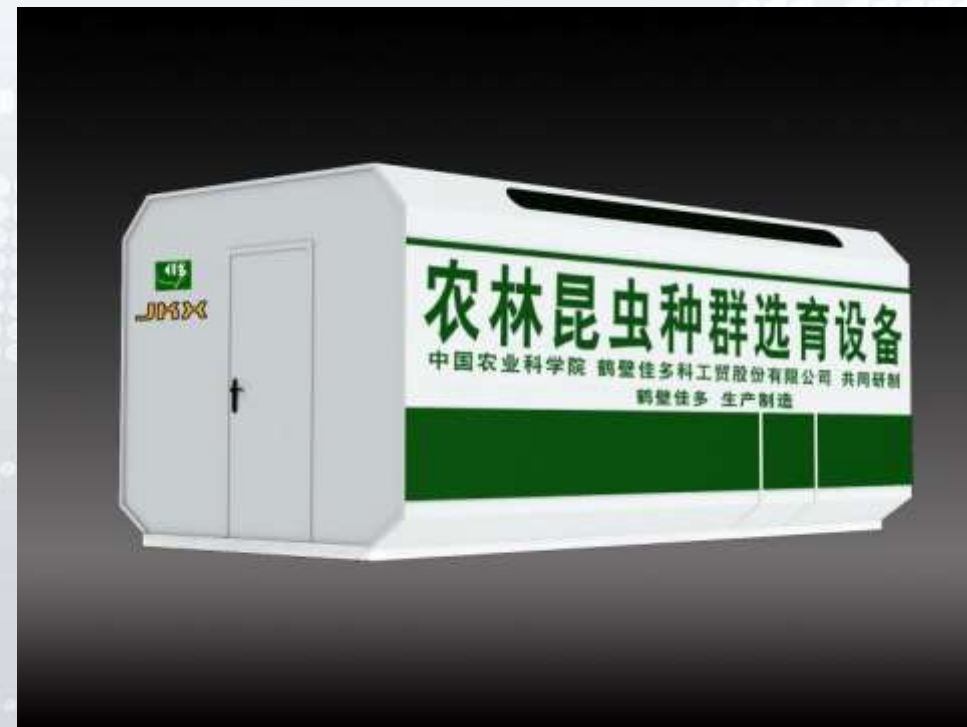
农林昆虫种群选育设备
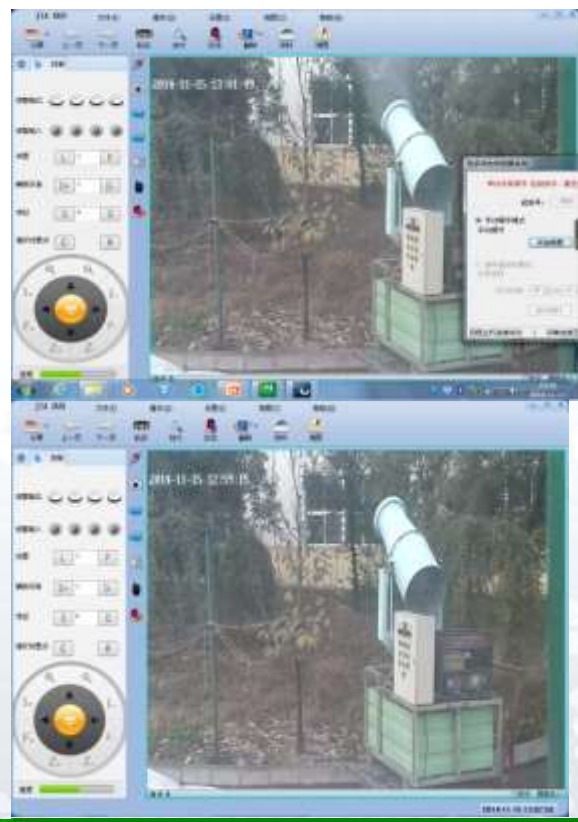## Selected and Bred Equipment for Insect Population in agr-forestry

1、操作室进户门
2、空调
3、椅子
4、专用配置柜
5、资料柜
6、设备操作电脑
7、显示屏
8、辐照传送带
9、辐照设备
10、设备维修口
11、冷循环设备
12、配电柜
13、发电机
14、工具存放柜
15、配备仓入户门

调控篇
regulate& control Chapter

佳多微生物喷雾系统

Jiaduo Microbial Spray System

根据佳多农林ATCSP物联网孢子信息自动捕捉培养系统采集的病原孢子捕捉数据，微生物模块智能运算分析结果，远程接受指令，即可自动喷施微生物进入防控
Intelligent Analysis: According to the spore data which collect ed by the catching spores instrument of Jiaduo ATCSP system, intelligent computing analysis, accept remote instruct and automatic spraying microbes begin prevention and control

佳多农林墒情监测系统

Jiaduo Soil moisture monitoring System

依据孢子监测大数据、小气候信息采集的气象大数据、结合墒情、作物的生长规律和不同生长期需求，通过智能运算分析智能调整水肥一体化、智能节水、精准施肥，智能生产技术装备的启闭，这样就可以使其互相起到良性循环，减少病虫的繁殖环境和机率。也就是"食疗。"

According to the large meteorological data collected by spore monitoring and microclimate information, combined with moisture content, crop growth law and different growth period requirements, intelligent operation and analysis are used to adjust the integration of water and fertilizer, intelligent water saving and precise fertilization, and the opening and closing of intelligent production technology and equipment, so that they can play a positive role in each other. Ring to reduce the breeding environment and probability of diseases and insects

佳多墒情
监测土肥一体

佳多农林病虫害在线诊断系统
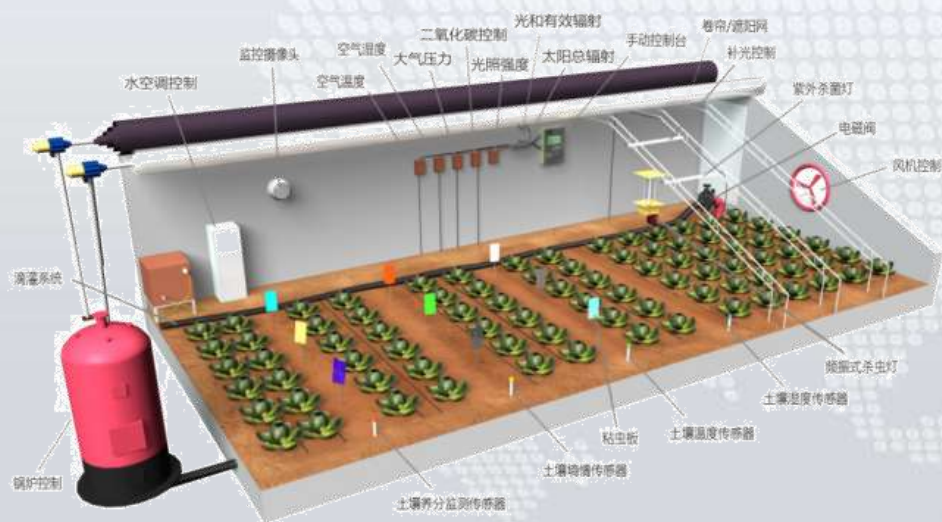On-line diagnostic system of Jiaduo agro-forestry insect disease

佳多设施
农业测控系统

佳多设施农业测控系统
Facility Agriculture Measurement and Control System

用户可全天候实时监控、无线远程监测、环境监测、智能控制等设施农业系统设备。也可进行参数设置，历史数据查询、广域网的远程控制等功能。系统分析对比运算后，可智能化对棚内滴灌、风机、频振灯、杀菌灯等诸多设施农业实用设备实施调控，达到适宜棚内植物生长的环境及条件。

The users can perform all-weather real-time monitoring, wireless remote monitoring, environment monitoring, intelligent control and other farming system equipment. They can also carry out parameter setting, historical data inquiry, remote control by wide area network and other functions. After the system performs analysis, comparison and operation, they can control facility farming practical equipment in an intelligent manner such as shed drop irrigation, fans, frequency vibration lights, bacterial killer lights to reach the environment and conditions for the growth of plants in the sheds.

水空调控制
监控摄像头
空气湿度
大气压力
二氧化碳控制
空气温度
光照强度
光和有效辐射
太阳总辐射
手动控制台
卷帘/遮阳网
补光控制
紫外杀菌灯
电磁阀
风机控制
滴灌系统
频振式杀虫灯
土壤湿度传感器
粘虫板
土壤温度传感器
锅炉控制
土壤养分监测传感器
土壤墒情传感器

佳多技术得到国家级、省部级奖项50余项
Jiaduo Technology has won over 50 national and provincial awards

佳多荣获专利180余项、参与起草国家标准7项
Jiaduo Company has won over 180 patents

佳多服务农林植保始于1986年

Service for Agri-Forestry and Plant Protection Since1986

THANK YOU FOR YOUR GUIDANCE.

谢谢观看

每一个产品的研发，都凝集着业界的心血和智慧；

The research and development of every product is a gathering of the painstaking efforts and wisdom of the industry

每一项技术的进步，都离不开大家的支持和鼓励；

Every technological progress can not be separated from your support and encouragement

每一个成功，带给佳多人的是更多的植保梦……

Every success brings more plant protection dreams to many people