鹤壁佳多科工贸股份有限公司

Hebi Jiaduo Science Industry and Trade Co., Ltd

鹤壁佳多科工贸股份有限公司创立于1986年，32年来专注于农林业植保配套技术的研究和开发。Hebi Jiaduo Science Industry and Trade Co., Ltd was founded in 1986,and mainly engaged in the researching and developing of the complete set of agriculture and forestry for 32 years.

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

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


茶　叶


蘑　菇


森　防

保护生态　减少污染

节约成本　增产增收


园　艺


药　材


蓝　莓


频振灯 + 黄色粘虫板 + 蓝色粘虫板


烟　草


园林花卉


蔬　菜


稻田养鱼


养　鸭


防虫网 + 频振灯 + 粘虫板 + 杀菌灯 + 补光灯


果　园


园　林


蚕　桑


诱虫养鸡


玉　米

佳多农林ATCSP物联网+

Jiaduo ATCSP Agriculture and Forest IOT+

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

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。

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

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

佳多农林ATCSP物联网控制平台

Jiaduo ATCSP Agriculture and Forest IOT Platform

电脑客户端

PC-end

Web网页端

Web-end

手机APP

APP

ATCSP物联网实时数据
ATCSP IOT real-time data

全国监测中
Monitoring **130/130**

100%

覆盖面积：6110万亩
今日数据：5890条
全国累计数据：
7657万条

Covering area： 61100000mu
Today's data： 5890
cumulative data：
76570000

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

系统组成 System Composition

监测系统 Monitoring System

1. 虫情信息采集系统
   Pest Information Collection System
2. 孢子培养统计分析系统
   Quantitative Airborne Spore Catcher and Cultivate System
3. 小气候信息采集系统
   Microclimate Information Gathering System
4. 生态远程监控系统
   Agro-Ecological Remote Real-time Monitoring System
5. 生态远程机械手
   Ecological remote manipulator
6. 雷达监测及雷达阻截系统
   Radar monitoring and radar interception system

防控系统Prevention and Control System

7. 频振诱控系统
   Frequency Biological Control System
8. 天敌防控系统
   Natural Enemy Control System
9. 微生物喷雾系统
   Microbial Spray System
10. 墒情监测土肥一体系统
    Soil Moisture Monitoring System
11. 设施农业智能测控系统
    Facility Agriculture Control System
12. 智能昆虫病原真菌培养设备
    Entomopathogenic fungus culture equipment

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

监测系统之一

Monitoring system I

佳多虫情信息信息采集系统

Jiaduo Pest Information Collection System

本系统对害虫、天敌种群实现了野外昆虫自动诱集、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。为人们进一步及时、准准确掌握昆虫发生规律提供了依据，为利用好生态自然循环的目标奠定了依据。

The system realizes the functions of field insect auto-trapping, infrared processing, time-interval imaging and wireless transmission of information for pest and natural enemy populations, and integrates the ecological distribution characteristics of insects, not only pays attention to pests.

It provides a basis for people to grasp the occurrence regularity of insects in time and accurately, and lays a foundation for making good use of the goal of ecological natural circulation

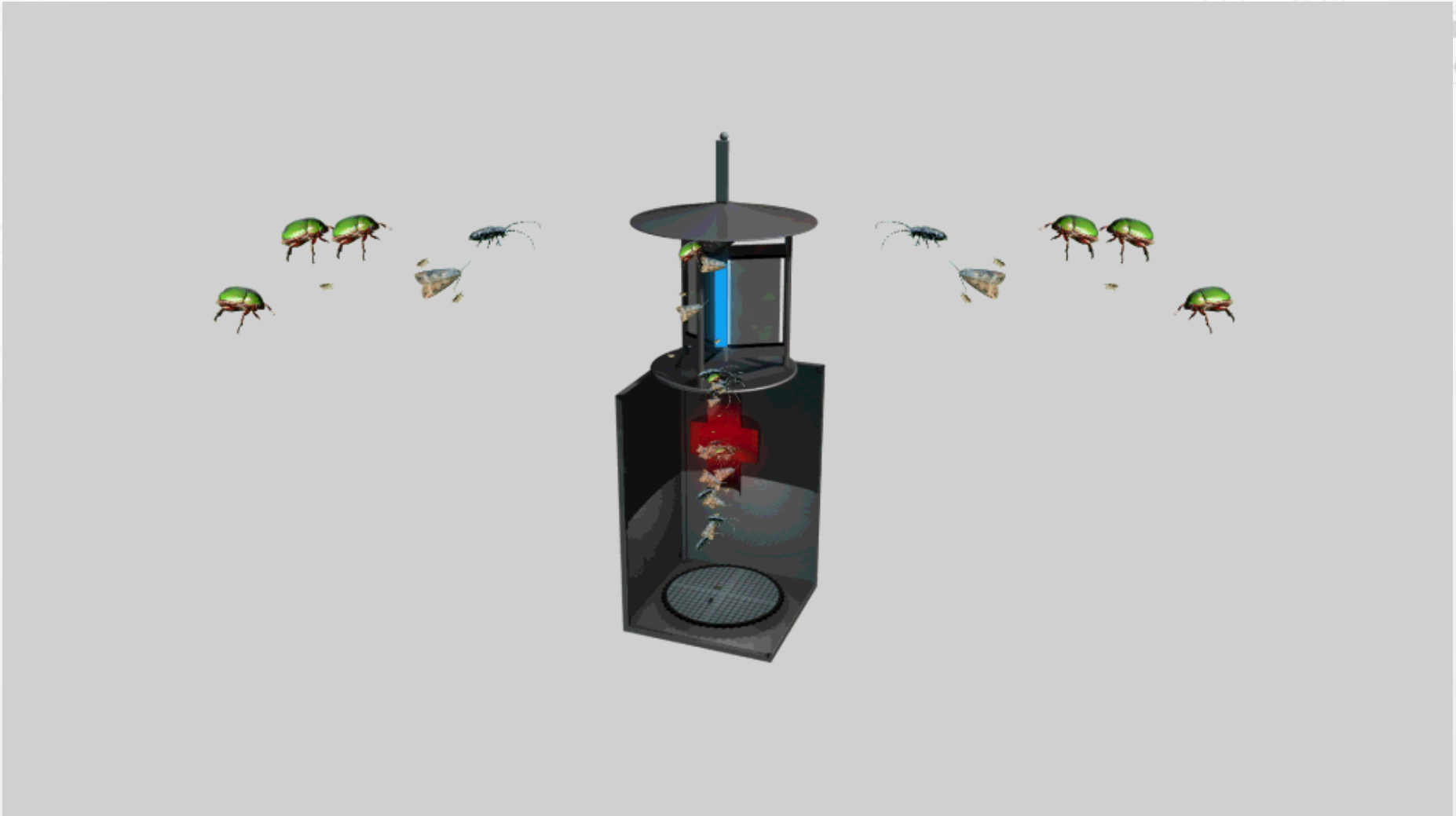
佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

佳多虫情信息信息采集系统 工作模式

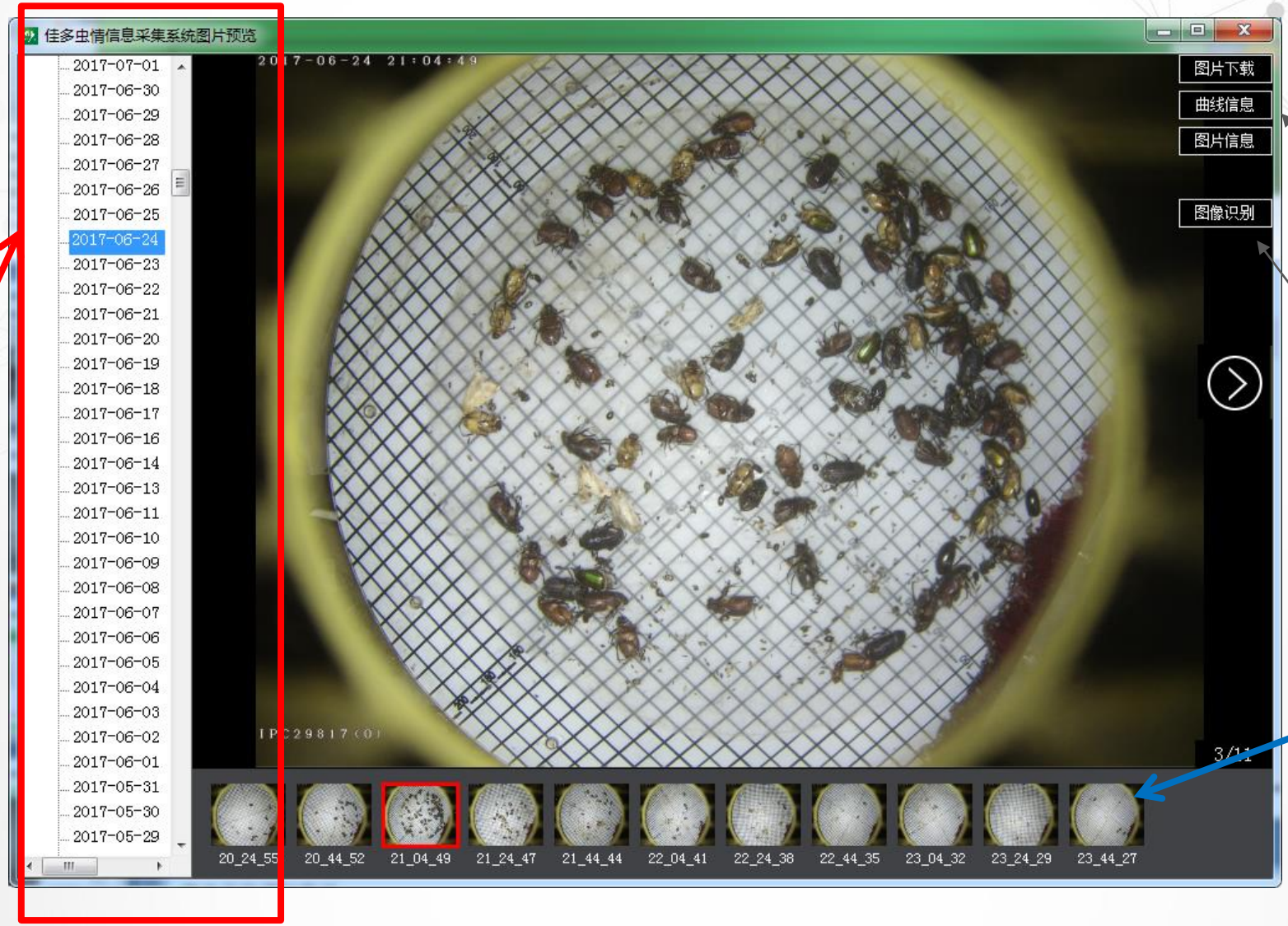
Jiaduo Pest Information Collection System Working Mode



佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★



1.1自动按天存放
Automatic storage by day

1.2数据下载
Download Data

1.3数据曲线
Data Curve

1.4图片信息
Picture Information

1.5图片识别
Image Recognition

1.6分时段自动存储
Automatic storage at different time intervals

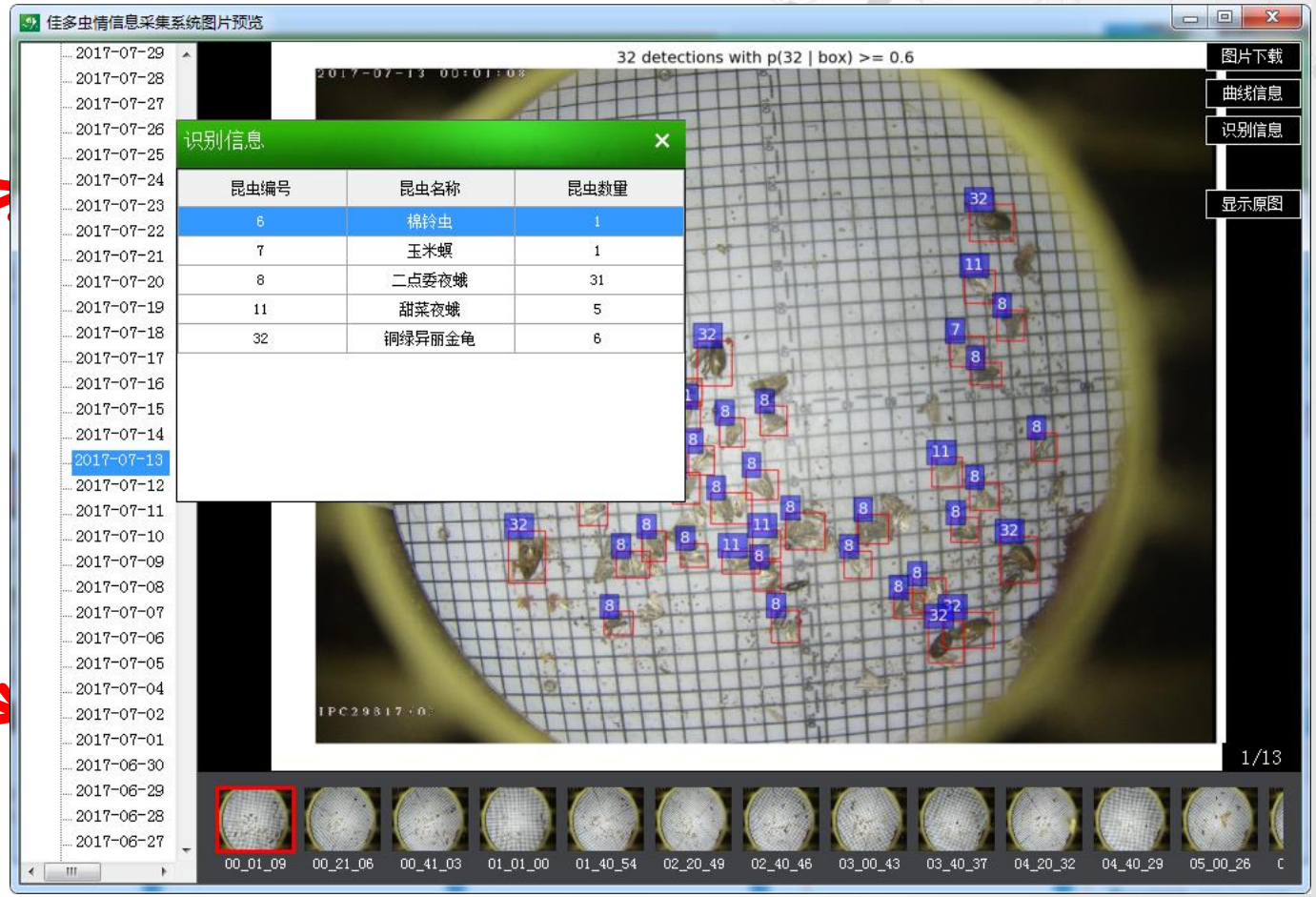
佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

1.9害虫自动识别与计数

Automatic identification and enumeration of pests



佳多虫情识别系统2.0
Jiaduo pest identification system 2.0

精准度80%
Accuracy 80%

五大系统保障识别准确率
Five systems guarantee the accuracy of recognition

测报灯下大数据 → 基础识别 → 数据模型对比二次识别 → 植保专家人工核对 → 机器识别

Big Data of Pest Forecast Lamp → Basic recognition → two-step recognition → Expert check → Machine recognition

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

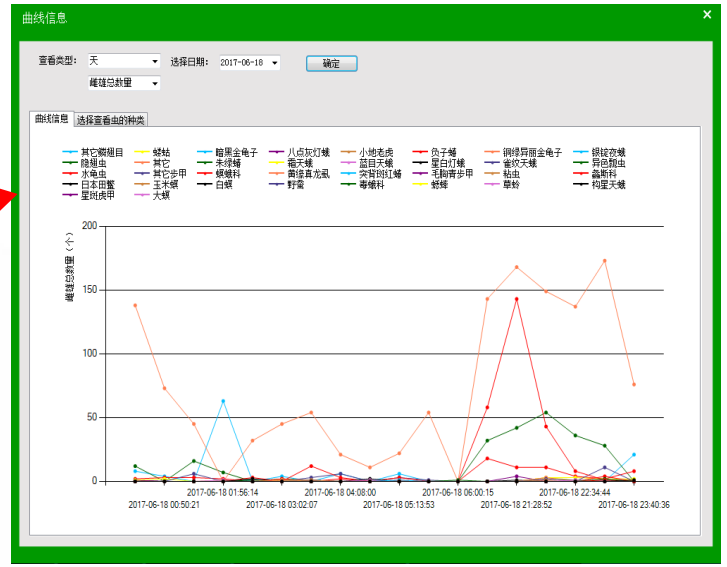
★ ★ ★ ★ ★

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

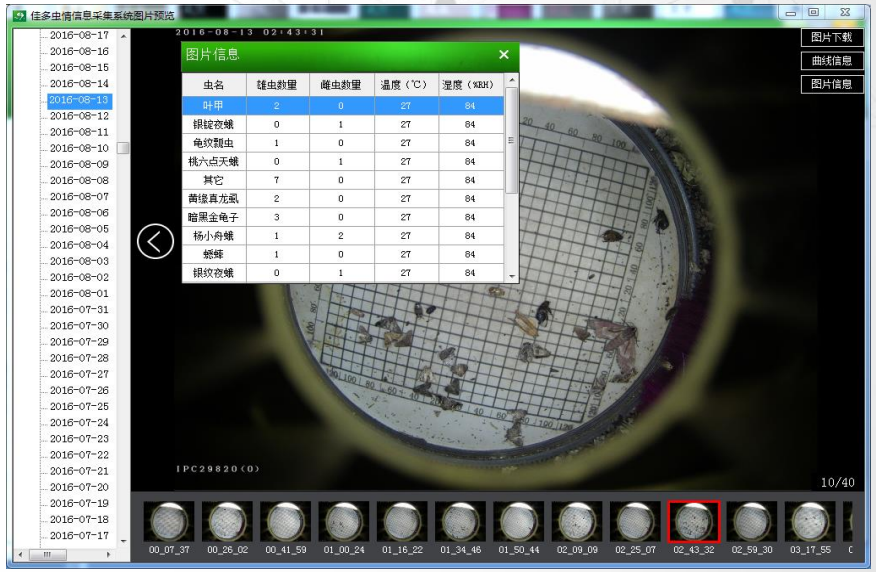
原始图片信息

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

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

监测系统之二
Monitoring system II

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。

Jiaduo Quantitative airborne spore catcher can be used to examine the dynamics and distribution of airborne fungi spore or pollen in farming or forest region. The machine is mainly used to monitor the existing amount and spreading status of the pathogen spore and provide reliable data for forecasting and controlling the crop disease though the demonstration, store, edition of the germ picture by photoelectric microscope connected with computer

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

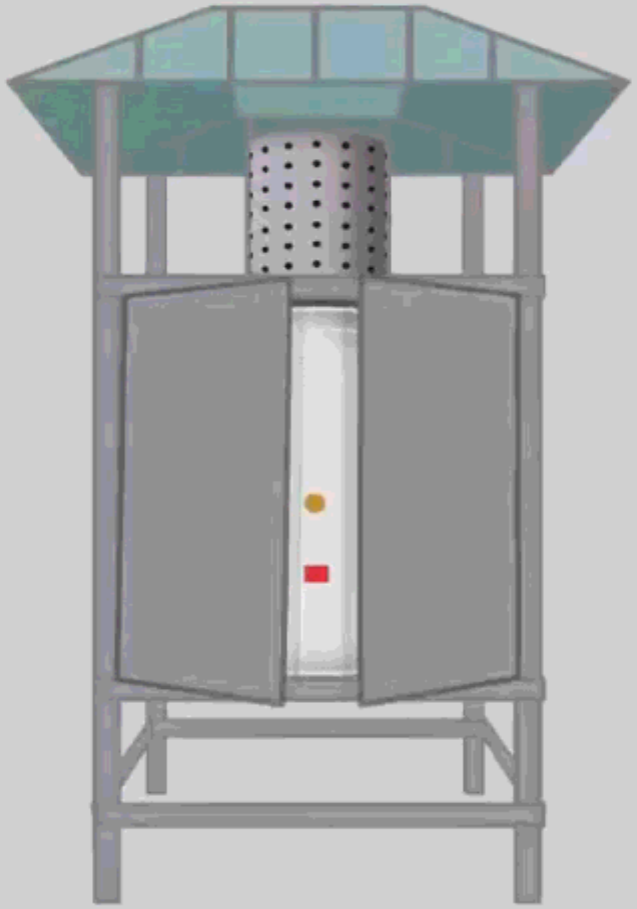
佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

佳多孢子培养统计分析系统**工作模式**

Jiaduo Spore Culture Statistical Analysis System Work Mode



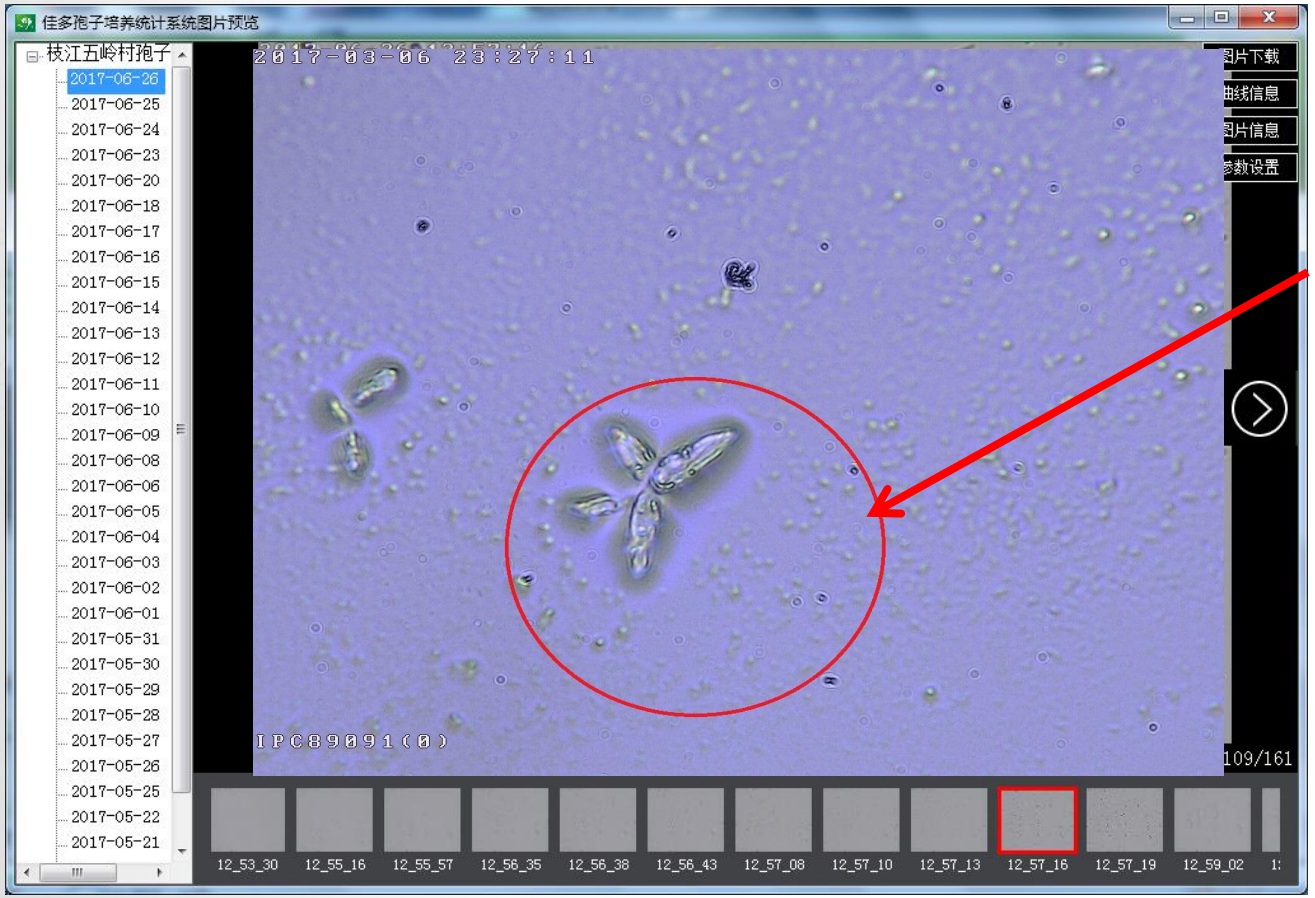
佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

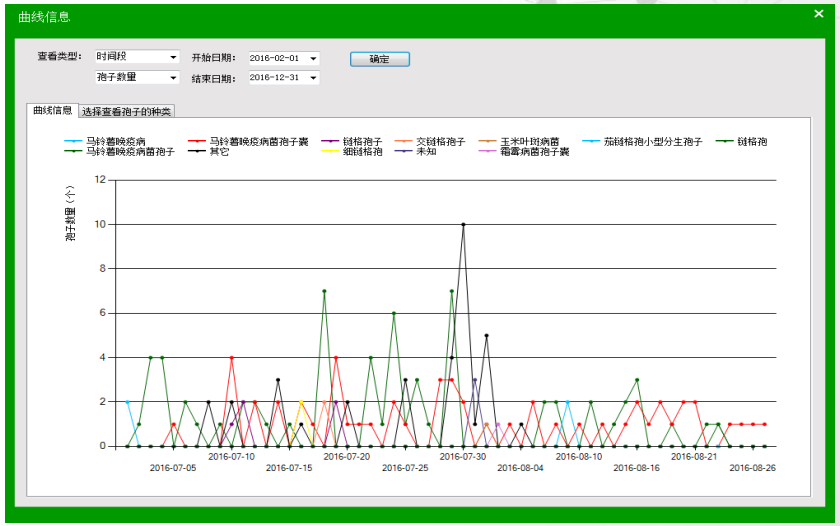
佳多孢子培养统计分析系统：病菌孢子识别统计系统

Spores Recognition Statistics System



稻瘟病菌分生孢子

Conidia of Magnapor the Grisea



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

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

监测系统之三

Monitoring system III

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 。

.

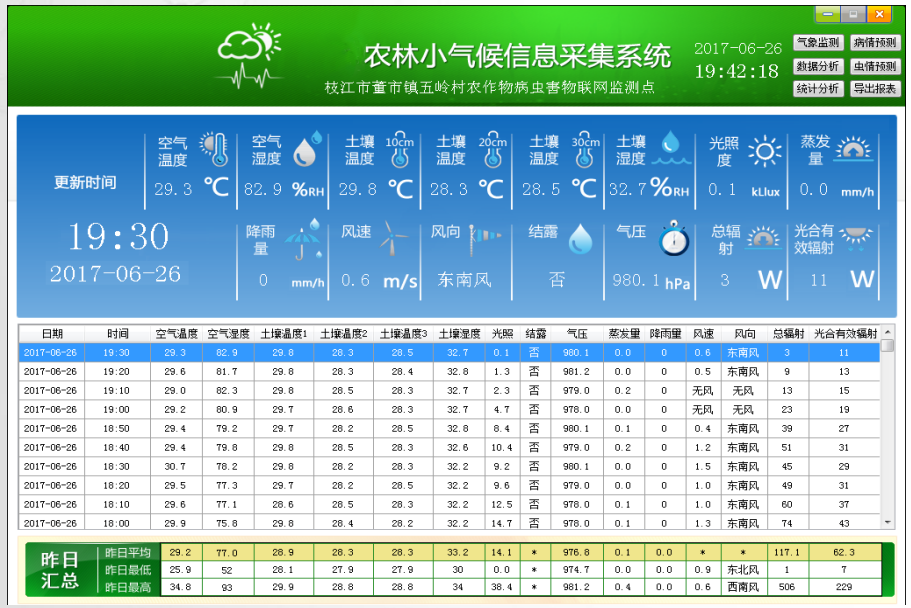
佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

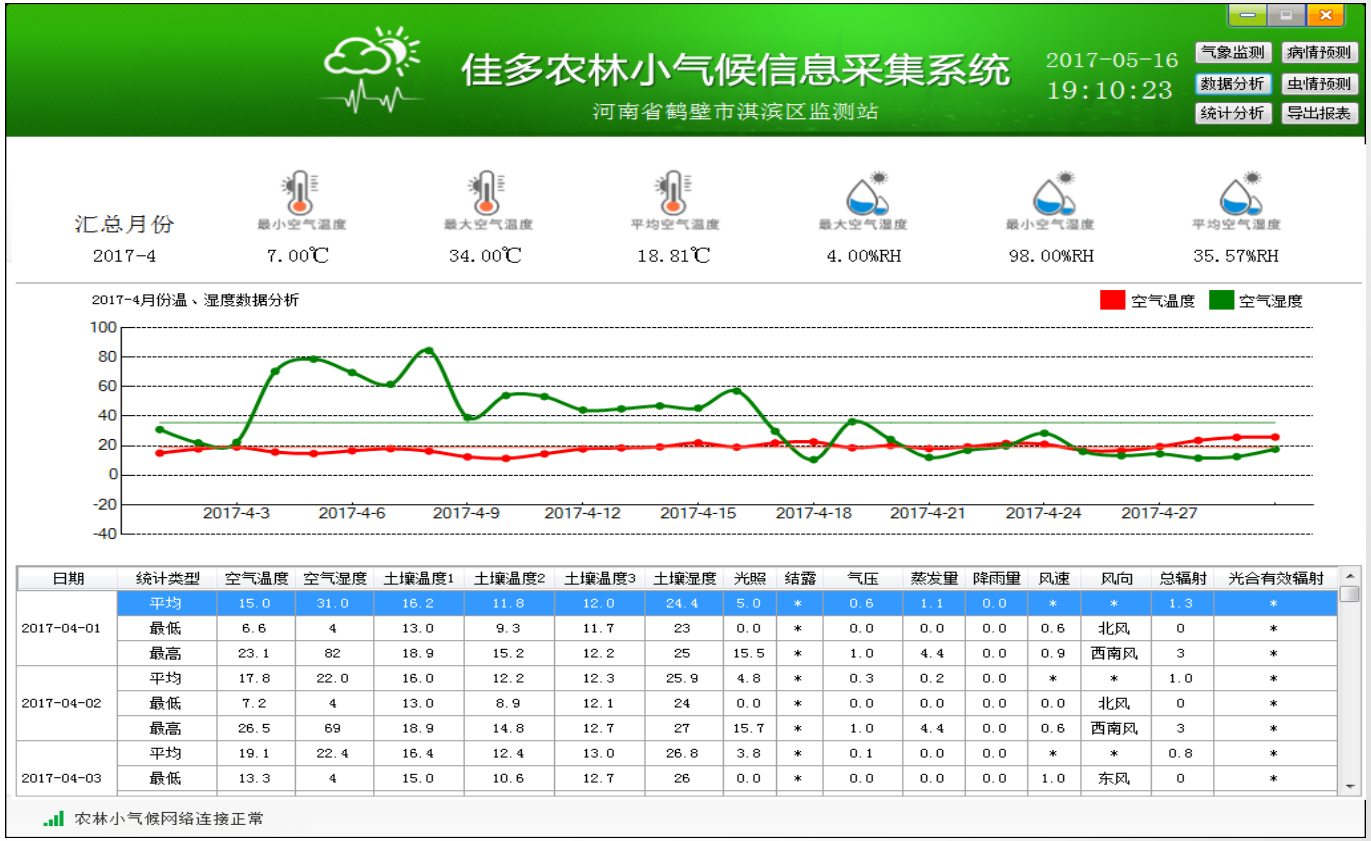
3.1具有十分钟自动采集、记录、存储，根据大数据运算分析做出趋势预警，并对防控时间给出参考依据

Ten minutes automatic acquisition, recording, storage, according to the analysis of large data operations to make a trend warning, and control time to provide a reference



3.2 历史环境因子自动生成曲线，方便多维度数据分析

Historical environmental factors automatically generate curves to facilitate multidimensional data analysis



佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

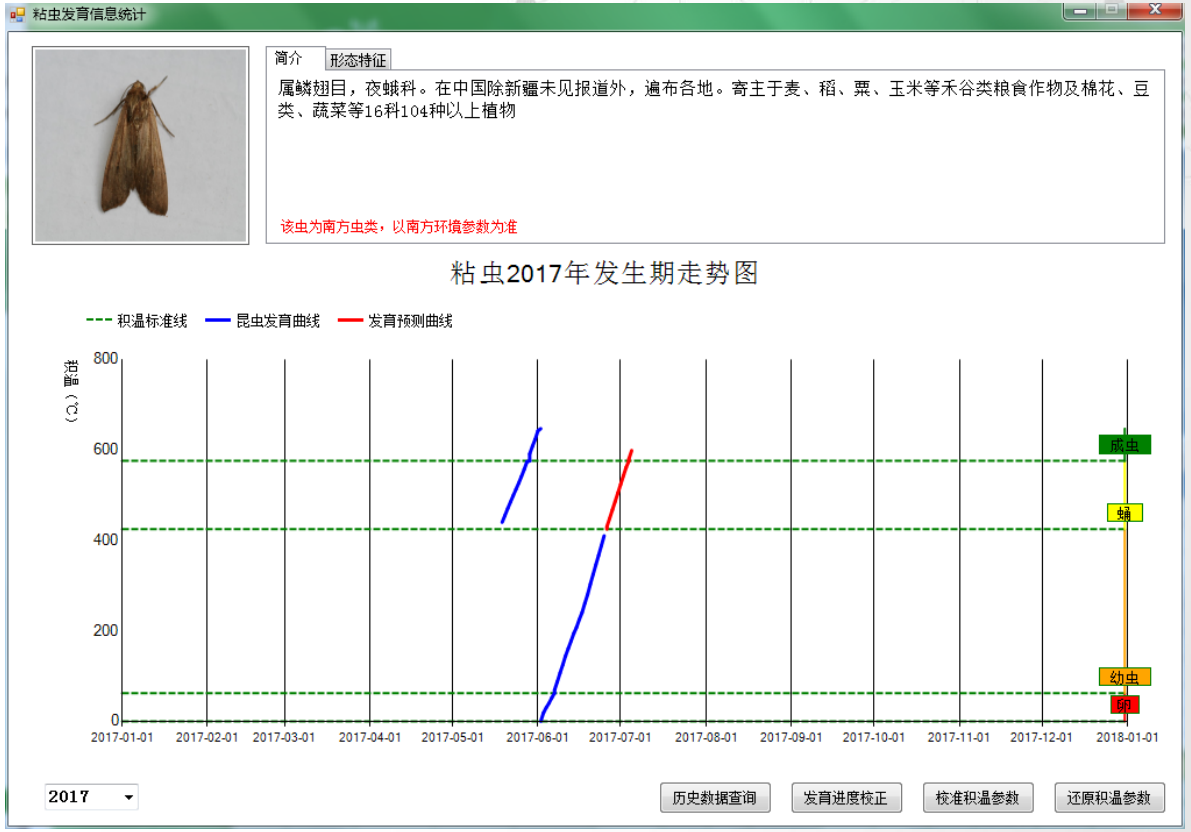
★ ★ ★ ★ ★

3.3农林小气候信息采集系统的功能中可选配地方病情、虫情预测专用模型软件通过数据分析形成的病害预测

The agroforestry microclimate information gathering system has the function of choosing special model software to match with local disease and insect situation prediction，and analyze the existed plant diseases and insect pests with data

3.4 农林小气候信息采集系统(虫情预测模块)

The agroforestry microclimate information gathering system (predictive module)



佳多农林小气候信息采集系统的功能中可选配地方虫情预测专用模型软件

The agroforestry microclimate information gathering system has the function of choosing special model software to match with local disease and insect situation prediction

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

监测系统之四

Monitoring system IV

佳多生态远程监控系统

Jiaduo Agro-Ecological Remote Real-time Monitoring System

本系统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，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 compatibility Jiaduo ATCSP system and realized the wireless transmission between national, Province, City and Village. Remote controlling and Information technology sharing

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

4.1 生态远程监控系统多窗口调用

Multi window call for ecological remote monitoring system

4.2 录制视频定时抓取本地保存

Recording video regularly local preservation


2017-05-12 10:39:41
IPC82645(I)

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

监测系统之五

Monitoring system V

佳多生态远程机械手

Jiaduo remote manipulator

在远程控制条件下，可进行360°全方位移动观察，对于恶劣环境地区或人员难以到达的调查区域或植物背面的细微观测

under the condition of remote control, 360 degree omni-directional mobile observation can be carried out. Fine and microscopic measurements of the investigation area or the back surface of plants are difficult to reach in harsh environments or by people

通过监测数据，预警发生趋势及时间，智能遥控指挥绿色、生物防控设备开展实际防控工作。

Through the monitoring data, warning trend and time, it can command green and biological controlling equipment to carry out actual prevention and control work.

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

防控系统

Prevention and Control System

佳多频振生物诱控系统

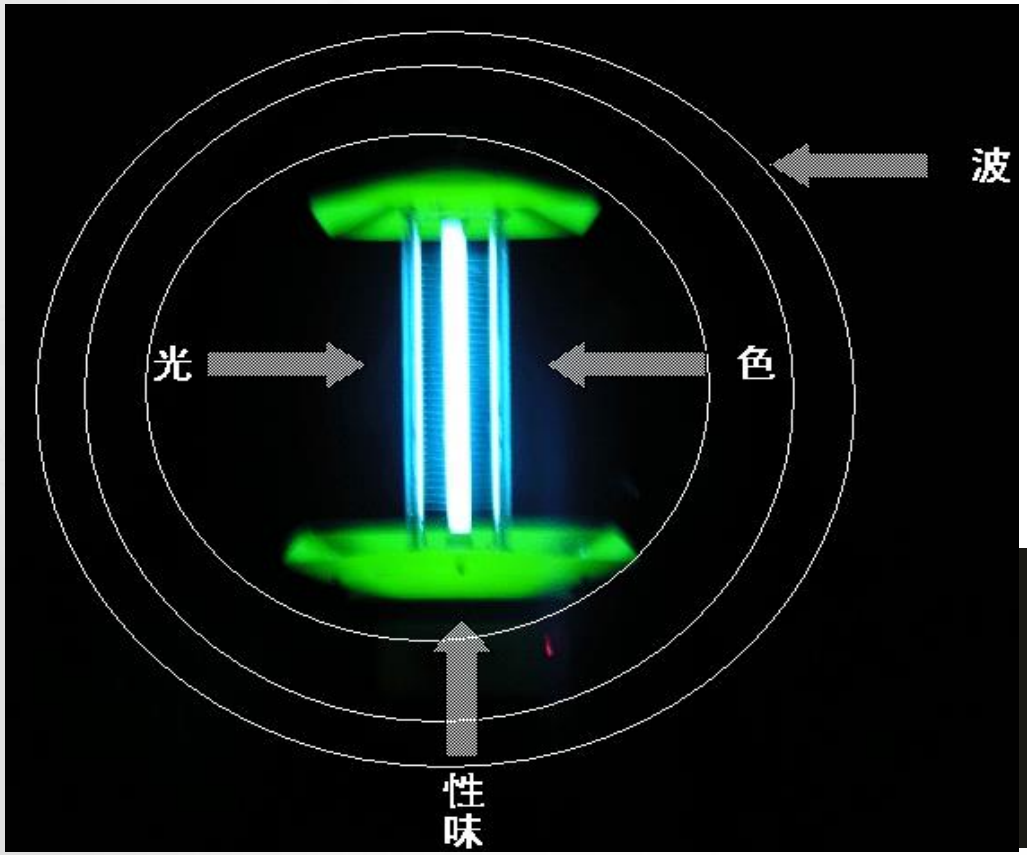
Jiaduo Frequency Biological Control System

如佳多频振物理诱控系统: 根据物联网大数据中采集的虫情活动高峰期运算分析，在 “避免误伤昆虫天敌“的前提下，以互联网技术为平台通过无线传输技术实现起始防治时间点更精确、开灯时间段更吻合（害虫活动时间）的防控目标。 “一键开灯”让大面积的物理绿色防控变得更加轻松。

Frequency Vibration Physical Attraction and Control System: Based on the operation analysis of insect activity peak period collected from large data of IOT, the Internet technology is used as a platform under the premise of "avoiding the mistake of injuring insect natural enemies. Through wireless transmission technology to achieve more accurate initial control time point, turn on the light period more consistent (pest activity time) control objectives. "One button turn on the lights" makes the physical prevention and control of large areas more relaxed.

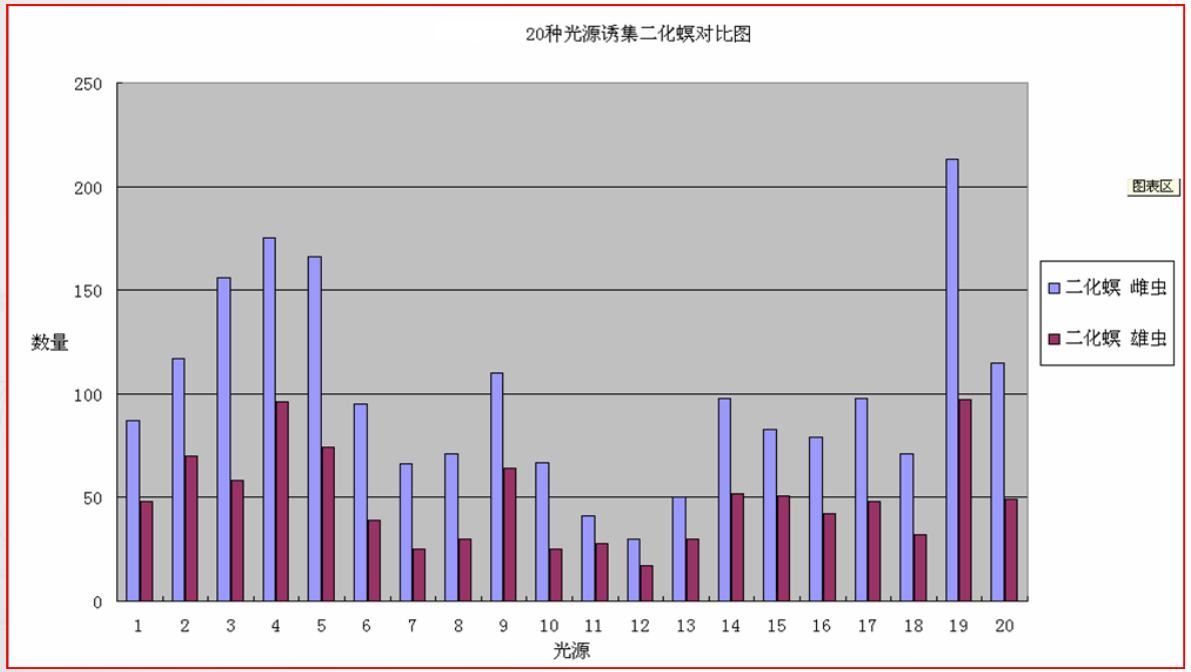
◎根据害虫对不同波段光源趋性，研制出多种波段光源

According to the tendency of insects to different light sources, a variety of light sources have been developed



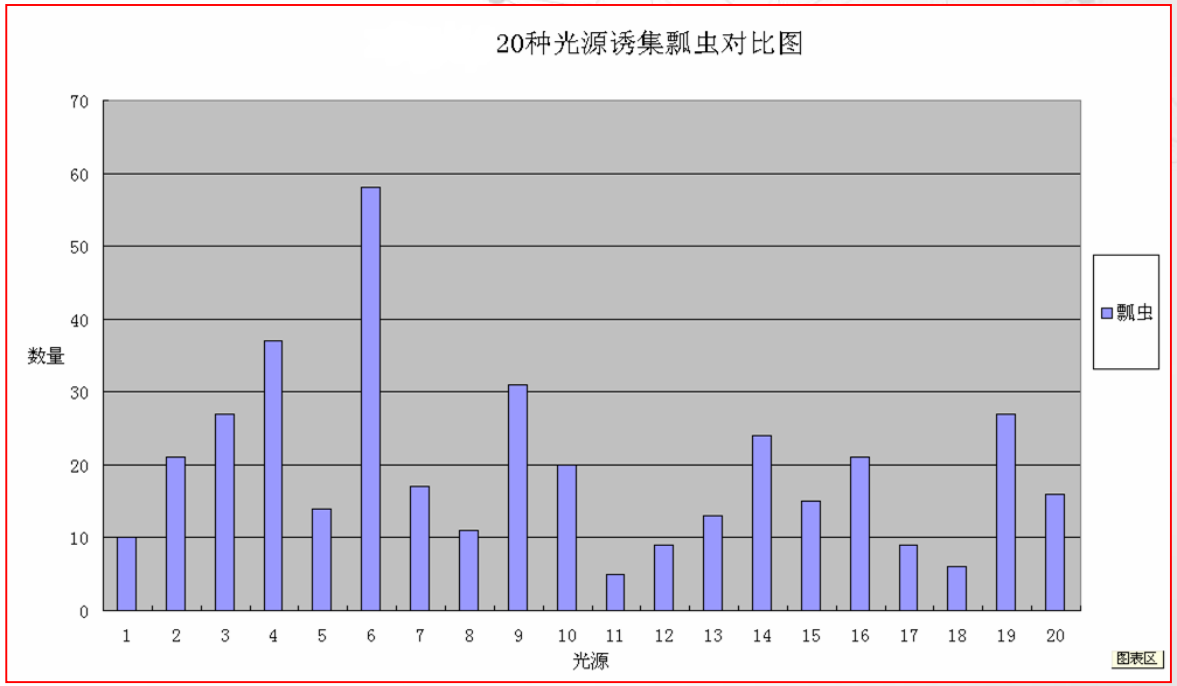
完成8大系列20种光源的开发，已获国家八项发明专利 8 series of 20 light sources has been completed, and 8 patents have been awarded.

20种频振光源测试和试验示范Demonstration of 20 kinds of frequency vibration light sources



选择频振19#光源诱集二化螟雌虫

Choose 19# Trap the female Chilo suppressalis

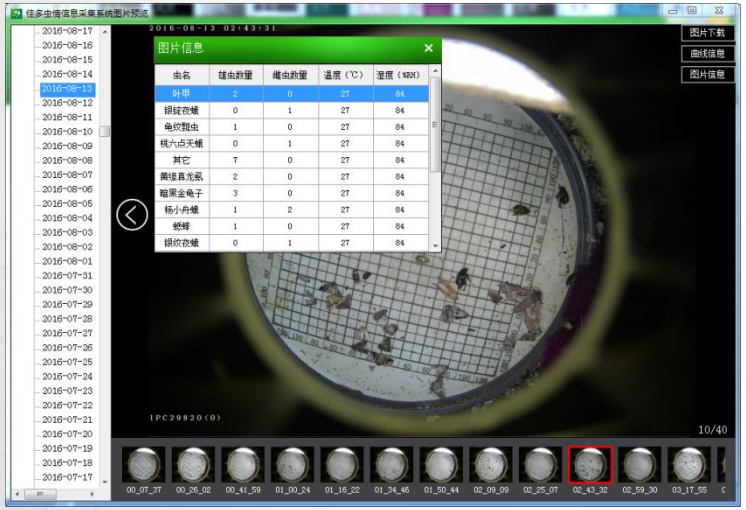


选择频振6#光源诱瓢虫放生

Choose 6# Releasing ladybug

诱集标靶害虫，保护生物链完整

Trap target pests, protect the integrity of the biological chain



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

佳多频振式杀虫灯分时段诱杀控制模块
Time interval trap control module

“姓名 Name”	“活动时间” time
小菜蛾 Plutella xylostella	19：00～23：00 04：00～06：00
棉铃虫 Bollworm	19：00 ～22：00 00：00 ～02：00 04：00 ～06：00

根据活动高峰期和益害比例定时、单选批次、批量操作开启关闭设备Turn and off the equipment according to the activity peak period and the proportion of benefits and hazards

使中性昆虫、不能造成危害的所谓害虫和应该留下的害虫，维持和确保生态因子的长期稳定性，达到田间生态的自然调控能力，实现害虫的生态管理，促进生态和谐。Leave the neutral insects, insects that can not cause harm, maintain and ensure the long-term stability of ecological factors, to achieve the natural regulation of field ecology, ecological management of pests, and promote ecological harmony.

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

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，是否自动喷施微生物进入防控

Intelligent Analysis: According to the spore data which collect 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ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

防控系统

Prevention and Control System

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。

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

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

防控系统

Prevention and Control System

佳多天敌防控系统

Jiaduo Natural Enemy Control System

根据虫情自动采集系统运算分析的相关数据及趋势，智能启动佳多天敌防控系统将天敌饲养放在田地头，每2.3万亩/套。研发专业的集装箱式培养设备，将天敌适时释放变成“一键启动“，更及时提高使用效率。

According to the data and trend of the automatic collection system, Jiaduo Natural Enemy Control and Control System was started intelligently, and the natural enemies were reared on the field, every 23,000 mu / set. Develop professional containerized cultivation equipment to change timely release of natural enemies into "one-button start-up" to improve the efficiency of use in a timely manner

佳多农林ATCSP物联网

Jiaduo ATCSP Agriculture and Forest IOT

★ ★ ★ ★ ★

众多客户信任并选择佳多选择农业现代化

Many customers trust and choose Jiaduo choose agricultural modernization

佳多股份32年风华激情迸发

Please replace the written content

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

佳多股份32年风华激情迸发

Please replace the written content

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 patnets

小结
Concluding Remarks

1、测报历史数据与短期数据相结合，是精准测报模型的基础条件。

Combining forecasting historical data with short-term data is the basic condition for accurate forecasting model.

2、充分了解天敌和害虫的分布，才能够利用到自然界资源，进行生态防控。

Natural enemies and insect pests can be forecast together to predict the use of natural resources。

3、智能灌溉可以调解病虫发生环境，抑制病虫发生程度。

Intelligent irrigation can adjust the occurrence environment of pests and diseases, restrain the occurrence degree of pests and disease。

4、从种植方法、病虫害的监测、到物理、生物的病虫害防控方法实施，紧紧围绕和谐、生态去开展。

From planting methods, pest monitoring, to physical and biological pest prevention and control methods, closely around harmony and ecology to carry out

谢谢大家
请多指教
Thank you!

佳多股份
JIADUO CO.LTD

赵慧媛
HUI YUAN ZHAO

鹤壁佳多科工贸股份有限公司
Hebi Jiaduo Science Industry And Trade Co., Ltd.

No 135, Haihe Road. Economic and Technological Development Zone,
Hebi City Henan Province, P.R. China(458030)

+86-13939206182 +86-392-3386117

http://www.jiaduo.com 594367275@qq.com

Scan QR Code