



Chico Crop Science Co., Ltd.

Company Profile:

Chico Crop Science Co., Ltd. is a high agro-tech company specialized in providing comprehensive nutrition for crops, seed treatment and systematic prevention and control of crop diseases, pests and weeds.





Biological way to control fungal Diseases

Curer™

Q: Is there a product **safe**, **fast effective**, and **no resistant** to **Powdery Mildew**?

A: There's no doubt that **Curer™** can do it.





Curer™

Biological way to control fungal Diseases

CATALOG

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Biological way to control fungal Diseases
BIOLOGICAL WAY TO CONTROL FUNGAL DISEASES

1.Introduction

Curer™ is Chinese National Invention Patent product. Aiming to prevent and control plant fungal diseases in green way, CHICO works closely with Plant Pathology and Plant Protection Scientist, after years of efforts, develop a new generation of bio fertilizer --**Curer™**.

Curer™ has a strong prevention and control effect on **Powdery Mildew, Gray Mold**, it has remarkably resistant to fungal diseases such as black spot, anthrax, downy mildew and leaf spot, it also has significant healing effect on plants which suffered from powdery mildew and has developed resistance to fungicides.





2. Know more about Powdery Mildew

- Powdery Mildew is a fungal disease that is common in many crops, such as strawberries, grapes, tomatoes, cucumbers, and roses.
- Phytopathogens: *Ascomycota higher fungal*.
- Powdery Mildew is very easy to break out when the temperature is between 22 ~ 24°C, it is highly contagious and easy to develop fungicide resistance. If the Powdery Mildew disease is very serious and can not be controlled in time, the garden will be distructed by this disease !



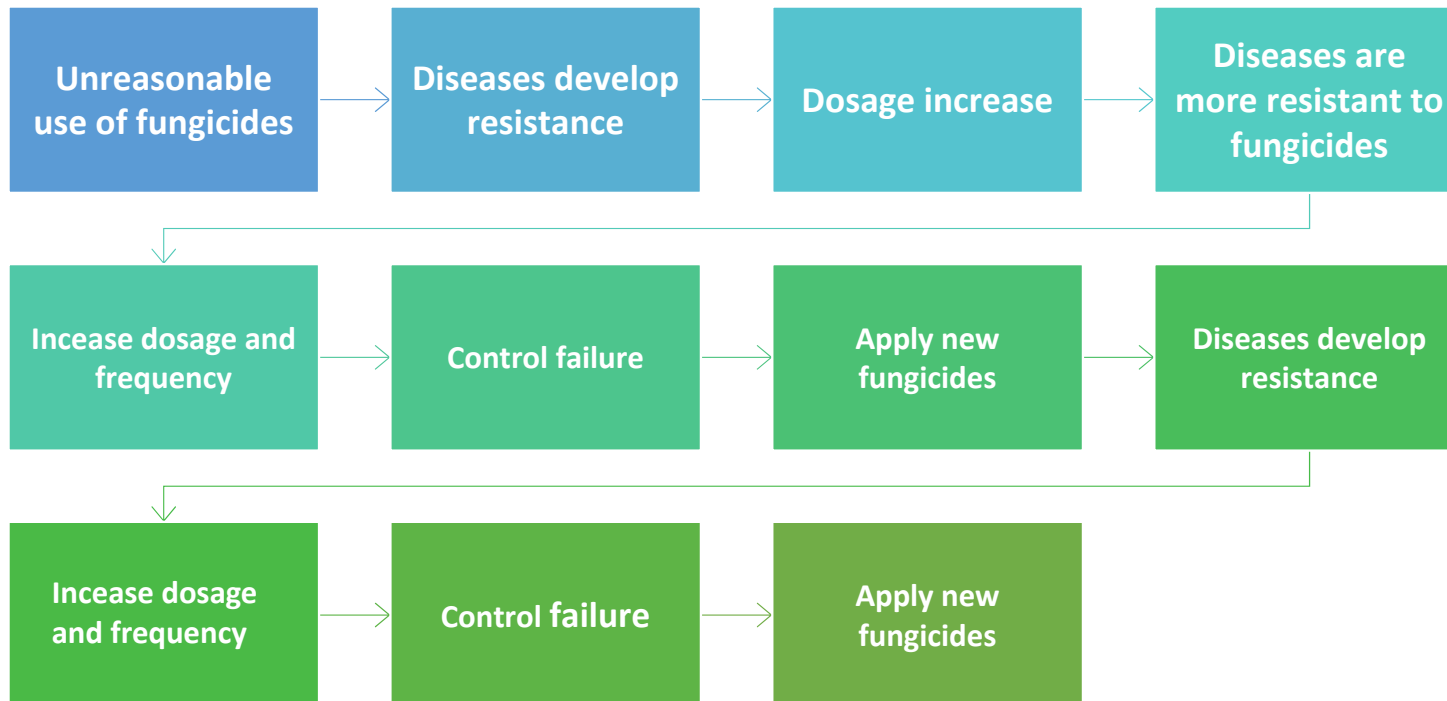


➤ *If the powdery mildew disease is very serious and cannot be controlled, the gardens will be distructed by this disease.*



3. Current prevention methods

Prevent and control by **Chemical Fungicide**



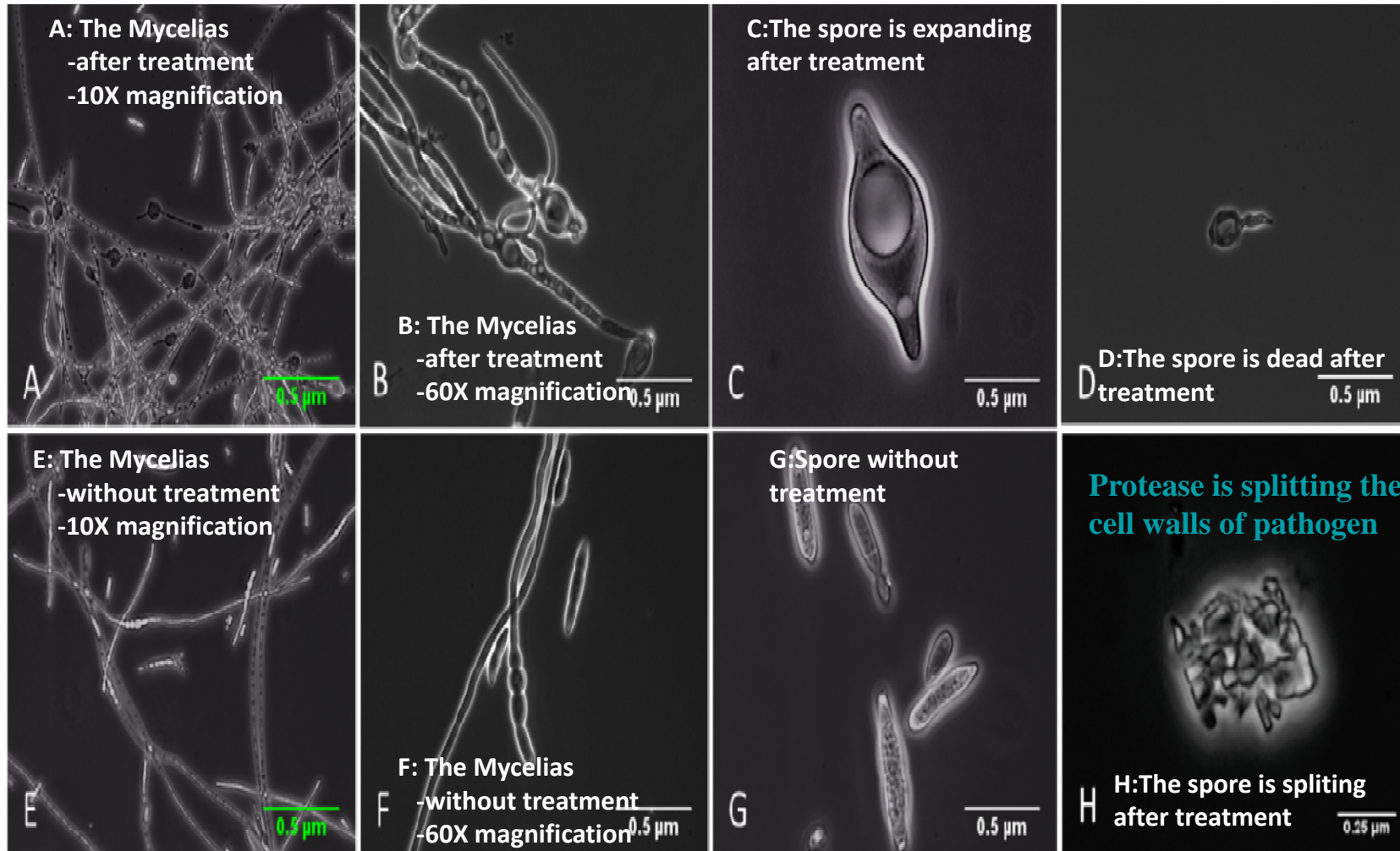


3. Current prevention methods

- *Is it possible to prevent disease in a safer way ?*
- *Is there a more effective product to prevent and control pathogenic, and not easy to produce resistance ?*
- *With these questions , we start to research and develop a new product--Curer™,after studying its unique mode of action,we start to verify the effect of the Curer™, we choose Tomato as experimental object,and conducted experiments in greenhouse and natural field, to compare the control effects of Curer™ and chemical fungicides.*



4. Mode of Action--by splitting the cell wall of pathogen





5.Application-- Tomato Powdery Mildew

Sheet 2.Prevention effect of tomato powdery mildew -- In greenhouse

Treatment	1 day after treatment		7days after treatment		14days after treatment	
	Disease index	Prevention effect(%)	Disease index	Prevention effect(%)	Disease index	Prevention effect(%)
CK	82.72		92.89		95.56	
Curer™	5.17	93.76	9.11	92.21	5.67	94.08
25% Azoxystrobin	37.44	54.71	53.56	44.73	50.28	47.46

表2 温室防效

处理	处理后 1d		处理后 7d		处理后 14d	
	病指	防效%	病指	防效%	病指	防效%
CK	82.72		92.89		95.56	
Curer	5.17	93.76	9.11	92.21	5.67	94.08
25%啞菌酯	37.44	54.71	53.56	44.73	50.28	47.46

Sheet 3.Prevention effect of tomato powdery mildew -- In field

Treatment	1 day after treatment		7days after treatment		14days after treatment	
	Disease index	Prevention effect(%)	Disease index	Prevention effect(%)	Disease index	Prevention effect(%)
CK	39.33		67.72		79.89	
Curer™	21.39	45.94	11.56	83.19	6.17	92.37
25% Azoxystrobin	30.72	21.88	34.00	49.72	32.83	58.93

表3 田间防效

处理	处理后 1d		处理后 7d		处理后 14d	
	病指	防效%	病指	防效%	病指	防效%
CK	39.33		67.72		79.89	
Curer	21.39	45.94	11.56	83.19	6.17	92.37
25%啞菌酯	30.72	21.88	34	49.72	32.83	58.93



5.Application--Comparison of Curer™ chemical fungicides

Sheet 4.Chemical fungicides control effect on Tomatos powdery mildew --Field data(Quoted from Yongchun Liu 2016)

Treatment	Dosage	Disease index before treatment	7days after treatment		14days after treatment	
			Disease index	Prevention effect(%)	Disease index	Prevention effect(%)
Tebuconazole 430g/L SC	270	1.19	1.45	84.14aA	3.89	82.62aA
Difenoconazole 10% WG	1125	1.20	1.61	82.54aA	4.11	81.79aA
Azoxystrobin 25% SC	450	1.17	1.41	84.31aA	10.22	53.57dD
Pyraclostrobin 250g/L EC	450	1.22	1.35	85.60aA	9.74	57.56dD
Isopyrazam 11.2%+ Azoxystrobin17.8% SC	270	1.19	2.67	70.80cC	8.41	62.43cC
Fluopyram 21.5%+ Trifloxystrobin 21.5% SC	180	1.21	2.35	74.72bB	7.97	64.99bcBC
Pyraclostrobin 21.2%+ Fluxapyroxad 21.2% SC	180	1.18	2.11	76.73bB	7.32	67.03bB
CK(Water)		1.23	9.45		23.14	



Biological way to control fungal Diseases

Curer™ Treatment result



➤ *The treatments effect on Tomatos powdery mildew is more than 95%, and the efficacy reaches more than 20 days.*



Biological way to control fungal Diseases

Curer™ Treatment result



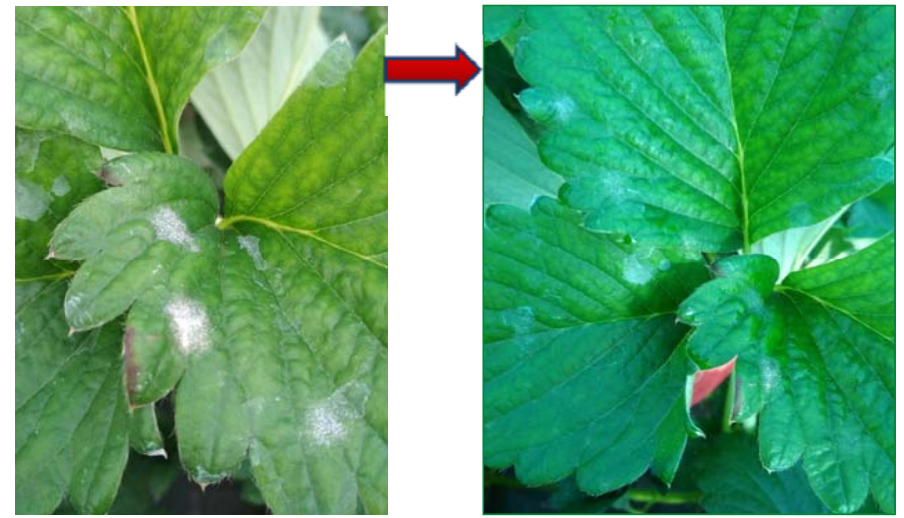
➤ *The effect after treatment -Tomatos in greenhouse*

➤ *Without treatment--Tomatos in greenhouse*



Biological way to control fungal Diseases

Curer™ Treatment result



- *The treatment effect on Tomatos powdery mildew*
- *---after 48 hours.*

- *The treatment effect on*
- Strawberries powdery mildew*



Curer™ Treatment result

Biological way to control fungal Diseases
BIOLOGICAL WAY TO CONTROL FUNGAL DISEASES

- *The treatment effect on
Grapes powdery mildew
--After 24hours*





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6. Benefit of Curer™

- **Curer™ has both preventive and therapeutic effects, it has significant cure effect on plants which has developed resistance to fungicides.**
- **Curer™ is a pure organic bio fertilizer which is widely used in crops, fruits and vegetables, flower seedlings and other organic planting. Curer™ is free of any chemical ingredients and hormones, it is friendly to environment, humans, crops.**
- **Curer™ significantly increase the number of nitrogen-fixing bacteria and photosynthetic bacteria in crop leaves, improve the photosynthetic efficiency, promote plant growth and root development, thicken the stems and leaves, improve fruit setting rate and increase yield .**





7. Usage and recommendation

Target	Target Disease	Dosage	Method
Prevention	Powdery mildew, Gray mold	Diluted 200~600 times (use the secondary dilution method)	Foliar Spraying
Treatment	Powdery mildew, Gray mold	Diluted 50~200 times (use the secondary dilution method)	
Special disease	Leaf mold, Black spot, Anthracnose	Diluted 200 times (use the secondary dilution method)	



8. Cautions

- Curer™ is a beneficial functional bio bacterium, it must be avoid contact with chemical fungicides when during application. The interval between using Curer™ and chemical fungicides is 7 days before & after application.
- Curer™ works by splitting fungus ,when during application, it must be sprayed evenly on infected parts of crops to ensure a better biological effect. Continuous spraying can induce disease resistance in crops.
- It must be used in the early morning, evenfall or cloudy day, make sure the application part will not dry out within 2-3 hours after spraying. Keep high air humidity for a long time after application, the effect will be better.
- Avoid using Curer™ in high temperature, direct sunlight, strong wind and rainy days.
- It is recommended to use Curer™ twice within three days for the first time, then use it continuously with intervals of 7-10 days.
- It should be stored in dry, cool, low temperature, ventilated and rainproof place. Keep away from fire and heat source and avoid direct sunlight.





9. The analysis report of Curer™

CHICO CROP SCIENCE CO.,LTD



Curer™

Certificate of Analysis

Report No.:20200110-SN-20

Product name	Bio fertilizer		Test date
Dosage form	SC	Inspection basis	Aug 20 th ,2020 GB 20287-2006
Test Item(s)	Unit	Specification	Test Result
Viable count (cfu)	a hundred million /g or a hundred million /ml	2.0min	125.36
Number of mycobacteria	pcs/g or pcs/ml	3×10 ⁶ max	0
Rate of mixed bacteria	%	10max	0
Rate of spore	%	90min	95
pH	—	5.0~8.0	7.67
expiration date	Month	3min	6
Conclusion	Qualified		

Chief Analyzer: Xia Lang

Examiner: Wang Jiajia

Inspector: Xie Min

Chico Crop Science Co., Ltd

Signature:

For and on behalf of
CHICO CROP SCIENCE CO., LIMITED
Date: Aug 20th, 2020

Xie Min

Authorized Signature(s)



10. Organic certification

Biological way to control fungal Diseases

Patent certification

Local Taxation Bureau of Beijing Haidian District
Stamp Duty
Withholding Special Seal
State Intellectual Property Office

Certificate No. 244411

Certificate of Patent for Invention

Title of Invention: A kind of *Bacillus subtilis* strain
Inventor: He Qiuyue, Ma Ping
Patent Number: ZL 2003 1 0104195.6
Patent Application Date: 2003.12.28
Patentee: He Qiuyue
Date of Authorization Proclamation: 2006.1.11

This patent right is granted by State Intellectual Property Office of the People's Republic of China upon examination in accordance with the Patent Law of the People's Republic of China. This certificate of patent is issued to the patentee and the patent is registered on the patent register. The patent right shall come into force from the date of authorization proclamation.

The duration of this patent right shall be twenty years from the date of application. The patentee shall pay the annual fee in accordance with the Patent Law and the Detailed Rules for the Implementation. The patent fee shall be paid 1 month before Dec.28th annually. The patent right shall be terminated from the date of the expiration of the annual fee.

The patent certificate records the legal status of the patent at the time when the patent was registered. The transfer, pledge, invalidation, cessation, recovery of the patent right and the changes of name, nationality, address of the patentee are recorded in the patent register.

Commissioner
Tian Lips

State Intellectual Property Office of the People's Republic of China
Jan 11, 2016

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Organic certification



ORGANIC FOOD DEVELOPMENT AND CERTIFICATION CENTER OF CHINA
Certification No:IP0109-953-3***

Certificate of Evaluation of Production Materials of Organic Agriculture
Certify that

This evaluation certificate is used to confirm that the following organic agricultural production materials meet the requirements in Appendix A.1 of GB/T 19630-2019 《Requirements for the Production, Processing, Labeling and Management System of Organic Products》, and can be used for organic agricultural production certified in accordance with the above standards.

Product Name	Product Form	Registration No.	Classification
Microbial agent	Liquid	Microbial Fertilizer (2018) Approved No (3098)	Soil fertilizer and improvement materials

Date of initial issue: Feb 21, 2019
Date of issue: Feb 21, 2020
Period of validity: From Feb 21, 2020 to Feb 20, 2022

The organic agricultural production material evaluation certificate is not an organic product certification certificate. This certificate confirms that the product can be used in organic agricultural production that meets the above-mentioned standard certification based on the on-site evaluation and evaluation report, and is not a guarantee of the product quality itself. The quality of the product should be the responsibility of the manufacturer.

(Seal)ORGANIC FOOD DEVELOPMENT AND CERTIFICATION CENTER OF CHINA
Special seal for certificate

8 Jiangwangmiao Street, Nanjing, 210042 China TEL: 025-85287246

The copy or fax of this certificate is invalid

Thank you !

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