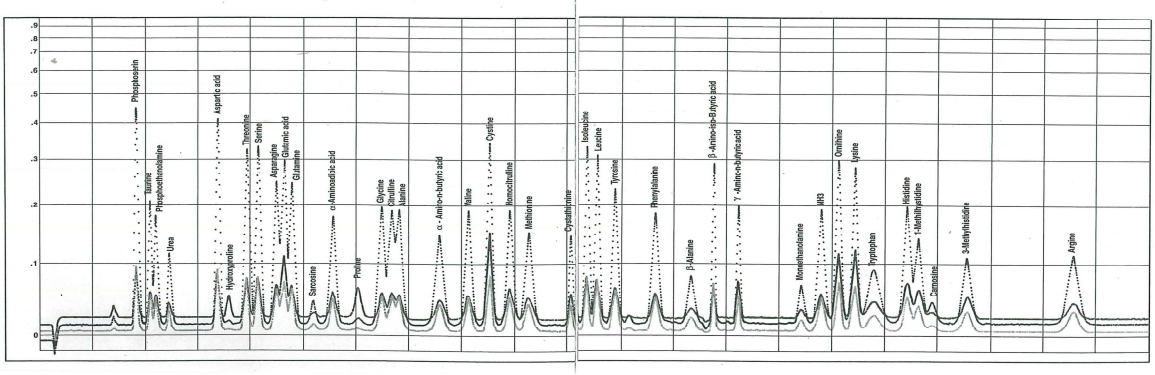
ORGAMIN, ORGAMIN-DA, ECOLOGYC are registered, repacked and distributed in the market of Brazil, Japan, Argentina, Bolivia,Taiwan, Malaysia, Vietnam, Thailand, Philippines and Korea. Our goal is to contribute to **safe, productive and profitable agriculture,** with these products.

2.1. Gráfico - Aminoácidos detectados na análise química

1. Ácido Aspártico *(Aspartic Acid)*	CH_2COOH | $CH(NH_2)COOH$	8. Alanina *(Alanine)*	$CH_3CH(NH_2)COOH$
2. Treonina *(Threonine)*	$CH_3CH(OH)CH(NH_2)COOH$	9. Valina *(Valine)*	$(CH_3)_2CHCH(NH_2)COOH$
3. Serina *(Serine)*	$HOCH_2CH(NH_2)COOH$	10. Metionina *(Methionine)*	$CH_3SCH_2CH_2CH(NH_2)COOH$
4. Asparagina *(Asparagine)*	CH_2CONH_2 | $CH(NH_2)COOH$	11. Cistationina *(Cystathyonine)*	$CO_2HCHNH_2CH_2S(CH_2)_2CHNH_2CO_2H$
5. Ácido Glutâmico *(Glutamic Acid)*	$HOOC(CH_2)_3COOH$	12. Isoleucina *(Isoleucine)*	$CH_2CH_2CH(CH_3)CH(NH_2)COOH$
6. Plorina *(Plorine)*	$C_5H_9O_2N$	13. Leucina *(Leucine)*	$(CH_3)CHCH_2CH(NH_2)COOH$
7. Glicina *(Glycine)*	H_2NCH_2COOH	14. Tirosina *(Tyrosine)*	$HO-C_6H_4-CH_2CH(NH_2)COOH$
15. Fenilomina *(Phenylomine)*	C_6H_7N		
16 Ácido γ-amino n butínico *(γ-Amino-n-butynic Acid)*	$CH_3CH_2CH(NH_2)COOH$		
17. β -Amino-Isobutyric Acid			
18. Ornitina *(Ornithine)*	$H_2NCH_2CH_2CH_2CH(NH_2)COOH$		
19. Lisina *(Lysine)*	$H_2NCH_2CH_2CH_2CH_2CH(NH_2)COOH$		
20. Triptofano *(Tryptophan)*	$C_{11}H_{12}N_2O_2$		
21. Histidina *(Histidine)*	$C_3H_3N_2-CH_2CH(NH_2)COOH$		
22. Arginina *(Arginine)*	$H_2NC(=NH)NHCH_2CH_2CH_2CH(NH_2)COOH$		



ORGAMIN series products are fertilizersto be applied to the crops mainly by foliar spray.

The left side chart shows various amino-acids contained in the series products which provide strong support for the healthy growth of crops and help to enhance their resistance from extreame temperature too high or too low humidity,drought, unbalanced nutrients, disease attacks etc.

So many kinds of amino-acids contained in ORGAMIN series products work as raw material of plant enzymes .

【TECHNICAL GUIDE & TOPICS】

Improvement of Quality and Increase of Yield of Crops With

ORGAMIN. ORGAMIN DA. ECOLOGYC

Development of roots, size, color and brix-up, long lasting ag. products with amino-acids and bacteria by-products.

Organic Liquid Foliar Fertilizer, Base Extracted from Fermentation, Rich in Natural Form Amino-acids

ORGAMIN

Series

News from India, Ctton in Indu 2014, ORGAMIN DA seems to have increased yield by 40-50% splaying ORGAMIN DA just 4 times. It also reduced population of red leaf-mite. (see at page 32)

Year through spray to apple in Aomori proved to produce good size and high colored apple.

ORGAMIN helps quick return of capital invested.

Manufactured by: Tropical Técnica Agrícola Ltda.
São Paulo-SP, BRAZIL

Distributed by: Pulsar International Corporation
Shiroyamate, 1-31-1, Hachioji, Tokyo, Japan
Phone:+81-42-666-1662, Fax:+81-42-662-5557, Email:info@pulsar.co.jp
URL: www.orgamin.com/

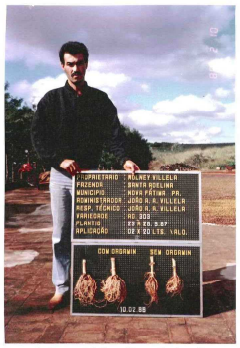
Edited and printed by Pulsar International Corporation, 2014/10/15

The Root Systems, Most Important Part Of The Plants, Effect Of ORGAMIN Appears On Roots - 1

The photo below shows the under-ground parts of the sugar-cane of the same time of above photo. At left side, you may see ORGAMIN-treated sugar-cane with well developed roots system while, at right side, untreated normal plant.

This sugarcane was treated with ORGAMIN to cut stems for plantation: Diluted with same volume of water, poured on.

Fazenda Santo Antonio, Salto Grande-Sao Paulo, Brazil
ORGAMIN dose: 20 L/2.4Ha (=8.3 L/Ha)



Fazenda Santa Adelina, Nova Fattima-Parana, Brazil
ORGAMIN dose: 20 L/2.4Ha (=8.3 L/Ha)

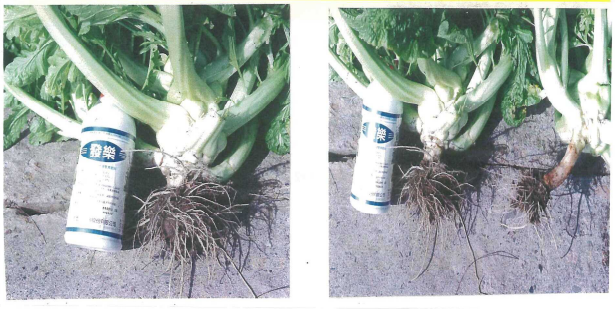
Treatment of corn with ORGAMIN. Interior of Sao Paulo, Brazil

ORGAMIN was applied to beanat dose of 4L/ha on 9th and 6L/ha on 41st day after germination. Yield increase was 11 % over untreated.(Sao Paulo, Brazil)

Early stage of direct seeded paddy rice. ORGAMIN D-A was sprayed by airplane. Rice plant at right hand is from untreated area. (Rio Grande do Sul, Brazil)

Beans are one of essential food elements in Brazilian daily life. In the back of 2 men, you see the beans field treated with ORGAMIN(left) and non-treated.

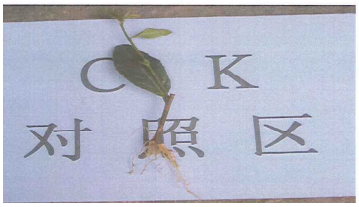
Efficacy of ORGAMIN on Tsetse



Tsetse is a important material for pickles in Chinese dish. The part of enlarged stem is as pickles. The plant with a bottle was treated

ORGAMIN was dropprd-in to the irrigation water, Niigata, Japan. Way of treatment is not common in Japan but, it is a promissing ease with ORGAMIN.

The Root Systems, Most Important Part Of The Plants, Effect Of ORGAMIN Appears On Roots - 2



- ORGAMIN-treated tea seedlings shows very good growth o: the root system.(up)
- Tea seedling of untreated control shows a poor development of the root system.(down)

Cutting of stem is commonly used agricultural practice to make seedling of various tree crops. ORGAMIN was sprayed over cut stems on the seedling bed.

3 welsh onion seedlings, at left side are ORGAMIN DA-treated ones. 3 at left are non-treated.(China)

At the left 3 ORGAMIN-treated rice seedlings are shown. Roots are long 3 seedlings on right hand are untreated. Treatment at seedling bed.(Aomc

3 left seedlings of rice are ORGAMIN-treated. Their root s are not only strong but very much ramificated.

50 Kg of soybean seeds were dressed with 0.5 Liter of ORGAMIN. It boosted initial growth of young plants, left.

Production of seedling from branch of Wax Apple. A branch was covered with soil an wrapped with plastic. In same time, the tree was treated with ORGAMIN DA, dilute with 800 times volume water. This photo was taken a week after ORGAMIN DA spra to the leaves. A strong root is already observed. 2001/09/07, Mindanao, Philippines.

Wax apple is a popular fruits among Asian countries. Their seedlings are taken from trees by using "Layering" Above photos were taken 7 days after treatment. Photo at left is from ORGAMIN DA-treated tree. Right photo is from non treated control tree.

The Root Systems, Most Important Part Of The Plants, Effect Of ORGAMIN Appears On Roots - 3

8.33L/Ha x 3 times applications of ORGAMIN resulted as shown at Left, 2.5 Kg/plant against 1.9 Kg of non-treated.

6.25L/Ha x 3 applications resulted as shown at Left.

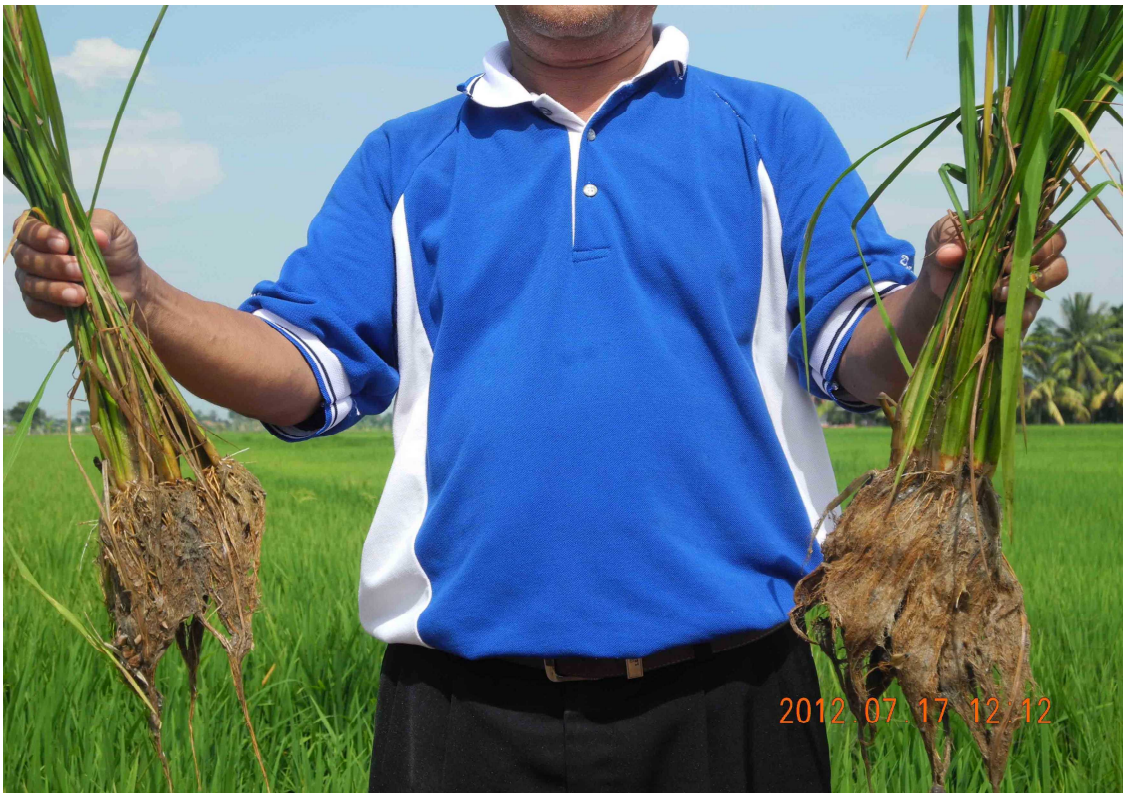
Owner of Fazenda Ribeiro vermelho, Parana, Brazil show developed root of his wheat, treated with ORGAMIN 7L per Ha x 3 times. 25 % yield increase was recoprded.

Above two photos show young plants of onion, treated with ORGAMIN DA. Left plants of both pictures are treated and good root development was observed. (Philippines, 2010)

Cotton treated with ORGAMIN, 5.0L/Ha x 2 applications. Left plant was treated and non-treated at Right side.

The result of ORGAMIN treatment clearly appear at the root system. Left side roots are of the treated plants.

The Root Systems, Most Important Part Of The Plants, Effect Of ORGAMIN Appears On Roots - 4



A Malaysian rice grower keeps ORGAMIN-treated rice at his left hand(right side of the picture). The grower keeps non-treated control rice at his right hand. Only two applications of ORGAMIN resulted this extraordinal effect. (Keda State, July, 2012)

East African rice grower keeps ORGAMIN-treated rice at his left hand. (1990s)

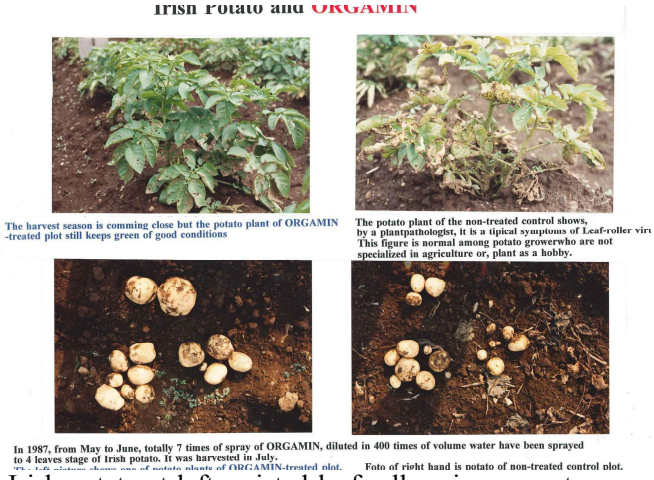
The Root Systems, Most Important Part Of The Plants, Effect Of ORGAMIN Appears On Roots - 5

Seed coating techniques with ORGAMIN DA are news from Philippines. It secure higher germination ratio and early germination of seeds. In the picture above, three young corn at right side are seed-treated with ORGAMIN DA, at the ratio about 1 liter of undiluted ORGAMIN DA mixed to 10 Kg of corn seed.

The corn grower of central Luzon takes ORGAMIN DA-seed-coated corn in his right hand. The corn plant in his left hand is corn plant of non-treated control plot.

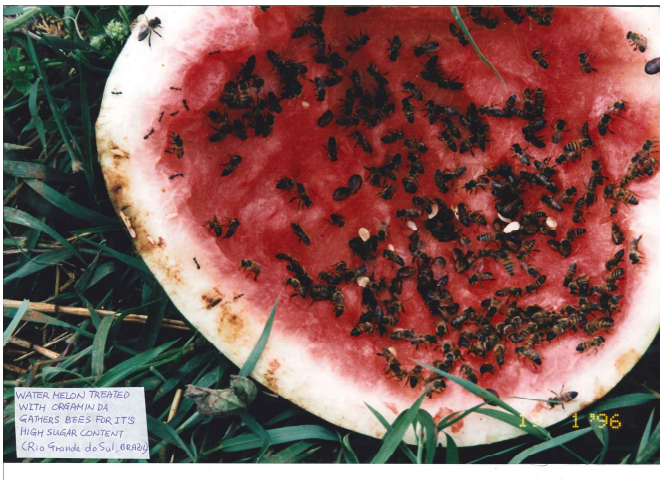
What Appear On The Upper - Ground Part Of The Crops, Physiologically Activated With ORGAMIN - 1

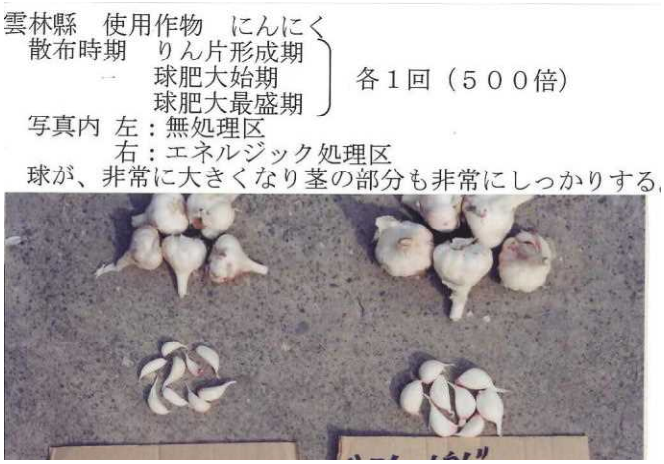
Irish Potato at left hand are treated with ORGAMIN and still keeps greer while, at right hand, plants are non-treated suffered serious damage cause by some disease. Hunan, China, Potato Field-1, November 21, 2004



Irish potato at left resisted leaf-roller virus symptoms.
ORGAMIN is not a fungicide or hormon. But physiologically strong plants resist certain diseases including virus.

The traditional way of flower inducement of mango has been to spray potassium to mango trees, twice with interval 7 days but, ORGAMIN DA mixed to one potassium spray induced flower and, growth of young fruits was much better than two sprays of potassium. The right photo show the size of young fruits, 20 days after spray of ORGAMIN DA plus potassium. The number of young fruits for a flower cluster is normally 2 or 3 but this case, 5 to 6.
（Pangasinan, Philippines, September, 2010）





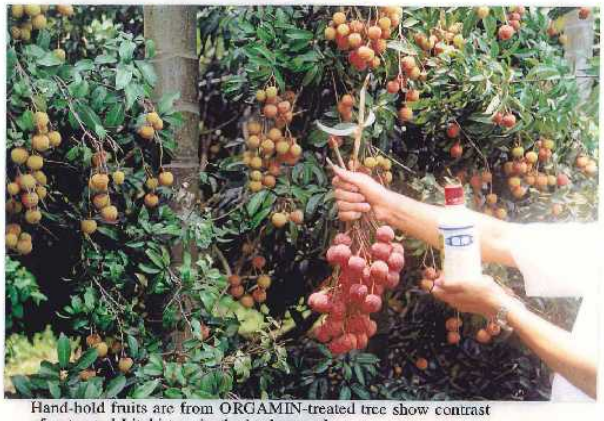
In southern Brazil, lot of honey bees gathered on the rest of watermelon farm workers have eaten inside of watermelon. So high in Brix, when you eat this watermelon, your hand and around mouth become sticky. For bee, it is attractive.

In Japan and Taiwan, much volume of ORGAMIN is used in garlic. At right, you can see well grown ORGAMIN-treated garlic.

What Appear On The Upper - Ground Part Of The Physiologically Activated Crops With ORGAMIN - 2

EFFECT OF ORGAMIN ON LITCHI (=LYCHEE) FRUITS IN TAIWAN

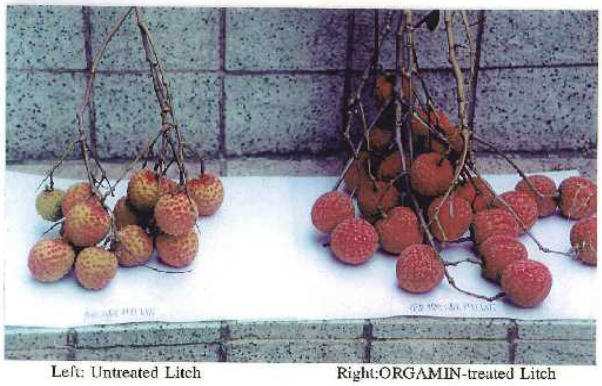
ORGAMIN was sprayed for 5 times from petal fall to 2 weeks before harvest to Litchi tree. Dose was about 2 L/Ha (=0.22 Gal/Acre). ORGAMIN has shown excellent improvement of the quality of the fruits of Litchi in fruits size, color, Brix. And the ORGAMIN-treated fruits were harvested about 2 weeks earlier than non-treated plot. (Photographed in June 25, 1999.)



Hand-hold fruits are from ORGAMIN-treated tree show contrast of untreated Litchi tree in the background

Untreated Litchi tree is shown on the left hand and beautifully large fruits of Litchi, treated with ORGAMIN on the right hand

Left: Untreated Litch Right:ORGAMIN-treated Litch



Left: Untreated Litch Right:ORGAMIN-treated Litch

Loquat in Sichuan, China

Eleocharis sp. is a plant of Family *Cyperacea* and its under ground bulbs are edible. Right side is treated with ORGAMIN and the left side is non-treated control. Crop of control side was seriously damaged by some disease. Hunan, China, 2004

In the left basket, the fruits of Loquat treated with ORGAMIN are filled. They are extraordinally larger size than the fruits in the right basket which are from non-treated plot.
The unit price that the grower of this fruits could be much more than he used to get.

A kind of food crop was treated with ORGAMIN. Left side plot was not treated and right side was Treated plot with ORGAMIN. The plants of non-treated plot dying earlier than ORGAMIN-treated plnts.

News from Philippines, pineapple, Drian and Sugar-cane, 2010

Mindanao, Pineapple treatedw ith ORGAMIN DA.

At left in photo, ORGAMIN-treated pineaple, 3 times at 1000 times dilution in water, after transplant. Right side is non-treated plant.

Above durian tree has not have flower for long time, but, soon after ORGAMIN DA was sprayed, it started have flower and fruiting. Due to corrected nutrient balance, the durian tree could carry plenty of fruits. (G.S., Mindanao)

Right side photo shows start of young roots system at nod of sugar-cane dipped in a 1000 times diluted ORGAMIN DA for 12 hours. Only for 24 hours, it stimulated to grow roots. Central Luzon)

People in the farms and ORGAMIN series Products

People in the farms and ORGAMIN Series Products-Flowers

Advantages of using ORGAMIN series products in the flower culture are:

- ★ **Long lasting durable cut flower.**
- ★ The plants resist abnormal high and low temperatures.
- ★ The plants resist some diseases like powdery mildew and rust.
- ★ The plants resist some pests like leaf mites and thrips.
- ★ Extends commercial production period.
- ★ Vigorous growth and earlier mat uration.

People in the farms and ORGAMIN Series Products-Mango

Pangasinan, Philippines, 2010

Who surprised most about the result of ORGAMIN DA spray was owner of the farm for it's flower inducing power of ORGAMIN DA in Philippines. The tree at back side is non-treated but suffered effect of drift of mist.

The mango tree, treated with ORGAMIN DA has demonstrated it's original power that can support so many fruits when the nutrients balance and good physiology are well-maintained.

For this grower in Pangasinan, Philippine, the result of using ORGAMIN DA was, no doubt, EXCELLENT.

This flower cluster with many young fruits is a result of only one single spray of ORGAMIN DA at 1000 times diluted in water.

People in the farms and ORGAMIN Series Products
Papaya and Oil Palm

This papaya farm in Mindanao, Philippines supplies their fruits to one of multinational fruits exporting companies. Already the farm has confirmed that brix level of their p apaya fruits has increased by spray of ORGAMIN DA.

Oil palm in the boom. The planted acreage of oil palm in Malaysia is estimated to be 4.8 MM ha. and, 10 MM ha in Indonesia. The oil squeezed from palm fruits is used for multi purposes as food, detergents, cosmetics and environmentally soft bio-diesel energy. World wide consumption seems to go steeply up with no limitation.

By a short field test run in Mindanao, Philippines, it is reported that ORGAMIN DA could shorten the cycle of harvest from every 15 days to every 13 days. Oil content also have increased. A young palm tree of low height, as shown at right photo, is easy to be treated by ORGAMIN solution. Monthly spray to the tree with 1000 times diluted solution of ORGAMIN DA is tentatively recommended.

Part II Summary of The Field Test Reports

Since over 30 years ago, the ORGAMIN series products have been tested in the field.
This summary includes reports from official organizations and private companies and farmers.

In the test report number, some includes abbreviation of "OF" means an official test run by the government organization, university or certified commercial laboratory. And the abbreviation "PR" means that the information came from some private organization as a pesticide or fertilizer company and or private person.

In the many cases, from the original reports written in the original area units like "Acre = 4,046.9 ㎡" of USA, "Alquere = 24,000 ㎡" of Brazil, "10 a = Tan = 1,000 ㎡" of Japan and "Mu = 666 ㎡" of China, area units are mostly calculated into "Hectare = 10,000 ㎡"

In order to simplify and to be easy to understand, all of the reports are summarized from original reports. The majority of the reports were written in the original languages of the reporters countries like Portuguese, Japanese and Chinese. Those languages were translated into English.

Most of original reports are kept under Tropical Tecnica Agricola Ltd. and Pulsar International Corporation.

Index of Test Reports on **ORGAMIN, ORGAMIN D-A** and **ECOLOGYC** **and Topics on Special Economical Performance of ORGAMIN series**

In this Section, the field test results are reported. Most of the number of reports is of ORGAMIN because the history of use of ORGAMIN is the old. But, the performances of ORGAMIN D-A and ECOLOGYC could be considered as basically same to ORGAMIN however, the organic parts of those products are richer than standard ORGAMIN. So, the dose-efficacy relations is much advantageous to D-A and ECOLOGYC. Reports are from many countries of the world. The reports include on variety of the crops as **Allium, Asparagus, Banana, Cabbage, Cassava, Chinese cabbage, Coffee, Corn, Cotton, Dragon fruits, Grapes, Irish potato, Lettuce, Longan, Peach, Pear, Peanuts, Prune, Rice, Soybean, Strawbweey, Sugar-beat, Sugar-cane, Sweet corn, Tomato, Tangerine, Turf, Vegetables and Wheat.**

Crops	Title/Country	Report Number
Allium	Test result of AMIGROW(=**ORGAMIN**) in Allium/Japan	JPNPR0008
Apple	Testresultof CANOPY(=**ORGAMIN DA**) on Apple/Japan	JPNPR0020
Asparagus	Experimental Result of **ORGAMIN DA** on Asparagus/Philippines	PHLOF2001
Broad bean	Evaluation of **ORGAMIN DA** on Broad Bean(Vicia fava)/Japan	JPNPR02001
Banana	Evaluation on Efficacy of **ORGAMIN DA** on The Yield and Quality of Banana, Cavendish/Philippines	PHILOF3001
Bell Pepper	Field Tests of Efficacies of **ORGAMIN DA** and **ECOLOGYC** on Bell Pepper/Brazil	BROF0011
Cabbage	Experimental Results of **ORGAMIN** on Cabbage/Vietnam	VIOF015
	Experimental Results of **ORGAMIN** on Cabbage/Vietnam	VIOF016
	Test result of AMIGROW(=**ORGAMIN**) on Chinese cabbage/Japan	JPNPR0010
	Test result of AMIGROW(=**ORGAMIN**) on Chinese cabbage/Japan	JPNPR0004
	Test result of **ORGAMIN** on Chinese cabbage/China	CHOF2001
Cassava	Field Test of **ORGAMIN** on Cassava/Brazil	BRPR0011
Chili pepper	Evaluation of **ORGAMIN DA** Chili Pepper/Korea	KOOF02002
Coffee	Test result of foliar application of **ORGAMIN** on Coffee/Brazil	BRPR0002
	Test result of foliar application of **ORGAMIN** on Coffee/Brazil	BRPR0003
	Test result of foliar application of **ORGAMIN** on Coffee/Brazil	BRPR0004
	Experimental Results of **ORGAMIN** on Coffee/Vietnam	VIOF014
	Progress Report on Trial for **ORGAMIN** on Coffee/Vietnam	VIOF020-1
	Progress Report on Trial for **ORGAMIN** on Coffee/Vietnam	VIOF020-2
	Progress Report on Trial for **ORGAMIN** on Coffee/Vietnam	VIOF020-3
	Experimental results of **ORGAMIN** on Coffee/Vietnam	VIOF020-1Fn1
	Experimental results of **ORGAMIN** on Coffee/Vietnam	VIOF020-1Fn2
	Experimental results of **ORGAMIN** on Coffee/Vietnam	VIOF020-2Fn
	Experimental results of **ORGAMIN** on Coffee/Vietnam	VIOF020-3Fn
Corn	Test result of foliar application of **ORGAMIN o**n Corn/Brazil	BROF0001
	Test result of AMIGROW(=**ORGAMIN**) on Corn, sweet/Japan	JPNPR0001
	Test result of foliar application of AMIGROW(=**ORGAMIN**) in Corn,sweet /Japan	JPNPR0006
Cotton	Test result of foliar application of **ORGAMIN** on Cotton/Brazil	BROF0004
	Test result of foliar application of **ORGAMIN** on Cotton/Brazil	BROF0005
	Test result of foliar application of **ORGAMIN** on Cotton/Brazil	BRPR0001
	Field tests of application of **ORGAMIN** on Cotton in Brazil 1987-1988l	BRPR0015
	Evaluation of **ECOLOGYC** on Cotton/USA	USOF0020
	Grower's Practical Field Use Report: Cotton/China	CHFPR111
	Evaluation of ORGAMIN **D-A** and **ECOLOGYC** on Cotton/USA-'98	USOF0022
	Interin Report of ORGAMIN D-A on Cotton from India	pp 32
Dragon fruits	Experimental Results of **ORGAMIN** on Dragon Fruits/Vietnam	VIOF011
Garlic	Report of Practical Use of **ORGAMIN** on Garlic/Taiwan	TWNPR005
	Report of Practical Use of **ORGAMIN** on Garlic/Taiwan	TWNPR003
	Report of Practical Use of **ORGAMIN** on Garlic/Taiwan	TWNPR004
Grapes	Evaluation of ORGAMIN **DA** on Grapes/USA	USOF0018
	Experimental Results of **ORGAMIN** on Grape/Vietnam	VIOF013
Irish potato	Test result of foliar application of AMIGROW(=**ORGAMIN**) on Irish	JPNPR0005

	Potato/Japan	
	Report of Practical Use of **ORGAMIN** on Irish Potato/Taiwan	TWNPR001
	Report of Practical Use of **ORGAMIN** on Irish Potato/Taiwan	TWNPR002
Kidney Bean	*Field Test of Efficacy of **ORGAMIN DA** and **ECOLOGYC** on Kidney Bean/Brazil	BROF0010
Lettuce	Test result of foliar application of AMIGROW(=**ORGAMIN**) on Lettuce/Japan	JPNPR0002
Longan	Experimental Results of **ORGAMIN** on Longan/Vietnam	VIOF010
Mango	Field Test of Efficacies of ORGAMIN DA and ECOLOGYC on Mango/ Brazil	BROF0007
Peach	Green house test of AMIGROW(=**ORGAMIN**) on Peach/Japan	JPNPR0012
	Reports of Practical Uses of **ORGAMIN DA** on Peach/Japan	JPNPR0014
	Reports of Practical Uses of **ORGAMIN DA** on Peach/Japan	JPNPR0015
Pear	*Field test of ORGAMIN **D-A** on Japanese Pear(Green variety)/Japan	JPNPR0013
Peanuts	Field test of application of **ORGAMIN** on Peanuts/Brazil	BRPR0012
	Test result of foliar application of **ORGAMIN o**n Peanuts/Brazil	BROF0002
	Test result of foliar application of **ORGAMIN** on Peanuts seeded in dry season/Brazil	BROF0003
Prunes	Evaluation of ORGAMIN **DA** on Prunes/USA-'98	USOF0023
Rice	Test result of foliar application of **ORGAMIN** on Rice/Brazil	BROF0006
	Efficacy of **ORGAMIN** on grain yield of Rice (84/85)/Brazil	BROF0008
	Efficacy of **ORGAMIN** on grain yield of Rice (85/86)/Brazil	BROF0009
	Test result of AMIGROW(=**ORGAMIN**) with Rice in field/Japan	JPNPR0007
	Trial Results of **ORGAMIN** on Rice Plant(Transplanted)/Vietnam	VIOF002
	Trial Results of O**RGAMIN** on Rice Plant(Direct sawn)/Vietnam	VIOF003
	Experimental Results of **ORGAMIN** on Rice Plant(Direct sawn)/Vietnam	VIOF005
	Experimental Results of **ORGAMIN** on Rice Plant(Direct sawn)/Vietnam	VIOF006
	Experimental Results of **ORGAMIN** on Rice Plant(Direct sawn)/Vietnam	VIOF007
	Experimental Results of **ORGAMIN** on Rice Plant(Direct sawn)/Vietnam	VIOF008
	The Test Result of ORGAMIN on Rice Nursary Bed/Taiwan	TWNPR007
	The Test Result of ORGAMIN on Rice Nursary Bed/Taiwan	TWNPR008
	*CANOPY(=ORGAMIN DA) on Rice, Sprayed by Radio-Controlled Helicopter/Japan	JPNOF02007H
Soybean	Field tests of application of **ORGAMIN** on Soybean in Brazil 86/88(7 works)/Brazil	BRPR0013
	Result of demonstration application of **ORGAMIN** on Soybean/Brazil	BRPR0005
	Evaluation of **ORGAMIN** on Soybean/USA	USOF0008
	Report of Practical Use of **ECOLOGYC** on Soybean/Brazil	BRPR0018
	Evaluation of ORGAMIN DA on Soybean/Japan	JPNPR02007
	***ORGAMIN** Economy on Soybean Plantation Soybean/Japan	JPNPR02008
Straw berry	*Green house test of AMIGROW(=**ORGAMIN**) with Strawbwerry/Japan	JPNPR0011
Sugarbeet	Evaluation of **ORGAMIN** on Sugarbeet/USA	USOF0006
	Evaluation of **ORGAMIN** on Sugarbeet/USA	USOF0007
	Evaluation of **ECOLOGYC** on Sugarbeet/Japan	JPNPR0017
	Evaluation of **ECOLOGYC** on Sugarbeet/Japan	JPNPR0018
Sugar-cane	Evaluation of **ORGAMIN** on Sugar-cane/Brazil	BRPR0017
	Evaluation of ORGAMIN **D-A**on Sugarcane/Cuba	CUOF001
Tangerine	Report of Practical Use of ORGAMIN **DA** on Tangerine Orange/Jpn	JPNPR0016
Tea	Experimental Results of CANOPY(=**ORGAMIN DA**) on Tea/Japan	JPNPR02002
	Experimental Results of CANOPY(=**ORGAMIN DA**) on Tea/Japan	JPNPR02003
	Experimental Results of CANOPY(=**ORGAMIN DA**) on Tea/Japan	JPNPR02004
	Experimental Results of CANOPY(=**ORGAMIN DA**) on Tea/Japan	JPNPR02005
	Experimental Results of CANOPY(=**ORGAMIN DA**) on Tea/Japan	JPNPR02006
Tomato	Evaluation of ORGAMIN **D-A** on Tomato/USA	USOF0019
	Result of demonstrative test of **ORGAMIN** on Tomato/Brazil	BRPR0007
	Result of demonstrative test of **ORGAMIN** on Tomato/Brazil	BRPR0008
	Experimental Results of **ORGAMIN** on Tomato/Vietnam	VIOF017
	Report of Practical Use of **ORGAMIN** on Tomato/Taiwan	TWNPR006
Turf	Energyc(=**ORGAMIN**) Field Trial on The Turf of Golf Course Turf/Japan	JPNPR501
Vegetables	Test Result of AMIGROW(=**ORGAMIN**) on Vegetable/PakchoiJapan	JPNPR0003

	Test result of foliar application of AMIGROW(=**ORGAMIN**) on Nozawana/Japan	JPNPR0009
Water Melon	*Field Test of Efficaies of ORGAMIN DA and ECOLOGYC on Water Melon/Brazil	BRPR0021
Wheat	Result of demonstration application of **ORGAMIN** in Wheat/Brazil	BRPR0006
	Field tests of application of **ORGAMIN** on Wheat in Brazil '87/Brazil(22 works)	BRPR0010

Test Result of AMIGROW(=**ORGAMIN**) on **Allium** /Japan JPNPR0008

1. Reporter: Iwao Honda, Japan Carlit Co., Ltd.
2. Period of the test: March '86 to March '87
3. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) in commercial cultivation of Allium tuberosum in green house.
4. Location: Farm of Mr. M. Tsumaru, Shibukawa, Gunnma
5. Crop/Variety: Allium tuberosum, Date of seeding: March '86 and transplanted in July '86
6. ORGAMIN applications:10 times of applications, diluted in water by 400 times(=0.25 %) at solution volume of 20 L/200 ㎡ (=1000 L/ha) on Dec. 12, Dec. 29, '86, Jan. 9, Jan. 19, Jan. 30, Feb. 9, Feb. 22, March 4, March 15 and March 25 '87.
7. Treatments and plot design: 1. ORGAMIN plot: 200 ㎡, 1 replication
   2. Control plot: 200 ㎡, 1 replication
8. Result:

Tri No	Treatment Name	Yield									
		1st		2nd		3rd		4th		5th	
		Jan. 4		Jan. 30		Feb. 22		March 10		March 31	
		No. packs/Cla		No. packs/Class		No. packs/Cla		No. packs/Cla		No. packs/Class	
1	ORGAMIN 0.25 %x10 times	95	AL*	72	AL*	70	AL	51	AL	39	AL
2	Control	94	-- AL*	71	AL*	66	BL	47	BL	34	BM

Obs.: * 1) The crop classified as same at ORGAMIN-treated and control in the 1st and 2nd harvest however, thickness and width of ORGAMIN-treated crop was much better than that of control plot.

2) The ORGAMIN-treated plants turned it's leaves' color to brighter than non treated, after 2 days of application.

3) At the 3rd through 5th harvest, classification of the crop was superior in the ORGAMIN-treated plot than control plot. Between AL and BL, price difference is 15 % and between AL and BM, 27.8 %. Together with the differences of harvested volume, ORGAMIN-treated plot of 200 ㎡ gave the farmer additional gain of ¥ 80,000.-

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Apple**/Japan JPNPR0020

1. Reporter: Sankei Chemical Co., Ltd.
2. Cooperator: Unno Fermaceutical Co., Ltd., Nagano
3. Period of the test:2000/09/20(1st application) to 2000/12/11(Evaluation)
4. Purpose: Evaluation of the efficacies of ORGAMIN DA on quality of Apple at farm land
5. Location: Akanuma, Nagano, Nagano
6. Crop and Variety: Apple, Fuji without paper back cover
7. Treatments:
   Treatment 1:Untreated control of Fuji apple plantation, about 1,000 ㎡
   Treatment 2:Sprays at dose of 0.1 %: 1st: September 20, mixed to Daipower(surface activator) at 1,000 times dilution
   (Consumption of water:5,000 L/Ha) 2nd:September 30
   3rd:October 10, mixed to Orthocide
8. Formula of fertilizer:
9. Plot design:ORGAMIN DA 0.1 % plot 1,000 ㎡ and untreated control 1,000 ㎡, each treatment 1 replication
10. Results:

	Fruits Weight		Quality of Fruits				No. of Persons
Treatment	No. of Fruits weighed	Av. Weight (g)	No. of Fruits Rated	Brix by part checked(Ref. fig.) A	B	A&B Mixed	Judged that taste is GOOD
ORGAMIN DA	14	350.49	4	**18.85**	**17.80**	**18.33**	**8**
Control	14	366.15	4	14.95	13.70	14.33	2

11. Observations: ORGAMIN DA was sprayed to apple trees at late growing cycle of apple. Probably because ORGAMIN DA was sprayed later part of season, it did not influence to size of the fruits however, application of ORGAMIN DA to apple increased Brix concentration 4 points higher than untreated contraol. 8 persons among 10 persons who tasted apples judged that ORGAMIN DA treated apples were GOOD.

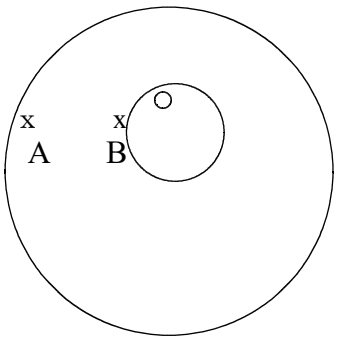


Fig. Sampling positiones at apple fruits for Brix concentration

1. Reporter: Ruperto Alag Jr, LADECO-Lapandai Development Corporation
2. Cooperator: Pulsar International Corp./Chempro Sales
3. Period of the test: January 2002 - September 2002
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Asparagus, compared to currently used fertilizers
1. Location: Tampakan, South Cotabato, Philippines: **a.** Topography and Elevation:Flat; 200 meter above sealevel, **b.** Soil type:Sandy loam, **c.** Climate type: Type 4, Railfall: evenly distributed of 900 mm per year. **d.** Soil analysis: pH 6.0; %OM 1.73; K, meq/100g 0.29; Na, meq/100g 0.70; Ca, meq/100g 1.22; Mg, meq/100g 0.18; P, meq/100g 5; S, meq/100g 17; Fe, ppm 20; Mn, ppm 5; Zn, ppm1
6. Crop: Asparagus, Variety: UC 157
7. Treatments:
   Treatment 1: Control (o-o-o): No fertilizer applied
   2: Full Current Fertilizer Rate: NPK(250-150-200)
   3: 1/2 Current Fertilizer Rate: NPK(125-75-100)
   4: 1/2 Current Fertilizer Rate:NPK(125-75-100) + ORGAMIN DA(3 liter/ha/application at every 14 days)
   5: ORGAMIN DA(3 liter/ha/application at every 14 days)
   6: Full Current Fertilizer Rate: NPK(250-150-200) + ORGAMIN DA(3 liter/ha/application at every 14 days)
   Obs.: In the treatments, ORGAMIN DA solution was sprayed by knap-sack sprayer while commercial fertilizers were ground applied. Timing of treatment application was during the crop's grow out period of 4-6 months. Other cultural management employed on asparagus was uniformly done to all experimental plots. Moisture regime: Drip irrigated.
8. Formula of fertilizer:(See above)
9. Plot design: RCB in 3 replications sized 5 raws spaced 1.3 m x 10 m long = 52 ㎡/plot
10. Evaluation: ♧ The yield parameters were taken from twelve(12) week harvest period, which is about 1/2 of the annual harvest duration. Age of the plants(fern) was 1 year or on its 1st crop harvest.
11. Results : **Table 1. Evaluation of ORGAMIN DA on Yield and Yield Quality of Asparagus var. UC157**

Treatment	No. of Spears/plot	Spear weight (g)	Spear length (inches)	Spear diameter (mm)	Gross spear weight (g)	Marketable spear weight (g) (%)
T1 Control	156.93c	6.88c	5.30c	4.05e	1073.1d	486.08e (25.3)
T2 Full Current Fert. Rate	324.24a	9.11b	7.83 a	10.03b	2951.42b	1921.20b (100)
T3 1/2 Current Fert. Rate	258.30b	8.29b	6.52b	7.97c	2129.62c	1076.18d (56.0)
T4 1/2 Current Fert. Rate + ORGAMIN DA	253.63b	10.46a	7.73a	8.77c	2650.79b	1465.08c (76.3)
T5 ORGAMIN DA Alone	125.15c	8.86b	6.62b	6.39d	1104.48d	615.49e (32.0)
T6 Full Current Fert. Rate + ORGAMIN DA	332.94a	10.99a	8.56a	11.55a	3615.78a	2408.61a (**125.4**)
% CV	12.87	7.86	7.98	7.04	8.07	8.19

(cont'd)

Table 2. Computed Annual Yield

Treatment	**Yield, Tons/Ha**		
	Gross	Marketable (%)	Marketable, Recovery Ratio
T1 Control(0-0-0)	2.1	0.97 (25.5)	46 %
T2 Full Current Fertilizer Rate	5.9	3.8 (100)	64 %
T3 1/2 Current Fertilizer Rate	4.25	2.15 (56.6)	50 %
T4 1/2 Current Fertilizer Rate + ORGAMIN DA	5.3	2.93 (77.1)	55 %
T5 ORGAMIN DA Alone	2.21	1.23 (32.4)	56 %
T6 Full Current Fertilizer Rate + ORGAMIN DA	7.23	4.82 (**126.8**)	**67** %

12. Discussion: 1) ORGAMIN DA significantly increased weight, length and diameter of spears, gross and marketable yield(Table 1). On the other hand, no effect on the number of spears was noted when two counterpart treatment levels are compared.
2) Spear weight improvement ranged from 20-28 % in ORGAMIN DA amended treatment. Likewise, length and diameter of spears significantly increased in plots with no application of commercial fertilizer. This seems to suggest that ORGAMIN DA can even exert its beneficial effects at low fertilizer levels. These positive effects on the aforementioned yield parameters resulted to the increase in productivity despite the spear number between two plots receiving the same fertilizer level remained statistically similar.
3) The effects of ORGAMIN DA in spear yield were remarkable when combined at higher fertilizer levels(1/2 and full rate). Gross spear production was 22 to 24 % higher in ORGAMIN DA amended plots.
4) Similar plots receiving 1/2 to full recommended fertilizer plus ORGAMIN DA have significantly higher volume of marketable spears than their counterpart treatment without ORGAMIN DA. Improvement in net yield recovery in ORGAMIN DA applied treatments ranged from 25 to 36 %. Highest gross and marketable yield were obtained when ORGAMIN DA was combined full rate of recommended fertilizer(Table 2).

13. Conclusion: 1) ORGAMIN DA significantly increased the yield parameters of Asparagus i.e. spear weight, spear length and spear diameter.
2) The test product significantly enhanced gross and marketable yield when combined with 1/2 to full rate of recommended commercial fertilizer.

Evaluation of Efficacy of **ORGAMIN D-A** on The Yield and Quality of **Banana, Cavendish**/Philippines

PHILOF3001 (1/2)

1. Reporter: Marsman Drysdale Philippines Corp.
2. Cooperator: Dennis Regalado
3. Period of the test: 2002 to 2003
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on Cavendish Banana
4. Location: Marsman Drysdale Banana Research Center, Mindanao, Philippines
5. Crop and Variety: Banana, Cavendish
6. Date of applications of ORGAMIN D-A and ordinary product: 3 times in January to February, 2003
7. Water consumption: 1 lier water per 10 trees(=200 to 250 liter water per ha);
8. Treatments: T1 ORGAMIN DA, 2.0 ml/L(=0.2 % or 500 times dilution in water)
   T2 ORGAMIN DA, 1.7 ml/L(= 0.17 % or 588 times dilution in water)
   T3 ORGAMIN DA, 1.5 ml/L(=0.15 % or 666 times dilution in water)
   T4 Algafer, 10 ml/L(=1.0 % or 100 times dilution in water)
   T5 Control(Untreated)
9. Yielding date:
10. Plot design: 3 replicates x 10 samples(Bunches) per replicate for each treatment: Total of bunches: 150
11. Results:

Table 1-1

Treatment: Rate per liter water	Average of 10 Bunches					
	Hand Class *	No. of Bunches Harvested		Hand Calibration**		Age (wks)
		10 Th	11Th	10Th	11Th	
ORGAMIN DA 2.0 ml	8.0	5	4	45.00	45.66	10.4
ORGAMIN DA 1.7 ml	8.0	5	4	46.25	46.40	10.4
ORGAMIN DA 1.5 ml	7.6	6	3	46.66	47.16	10.3
Algafer 10.0 ml	7.4	3	6	46.60	46.83	10.7
Control	7.4	2	7	45.00	47.00	10.8

Table 1-2

Treatment: Rate per liter water	Average of 10 Bunches				
	Finger L'th(cm)	Bunch Wt.(kg)	Stalk Wt.(kg)	Net Fruits Wt.(kg)	Brix Content
ORGAMIN DA 2.0 ml	23.84	26.6	2.94	23.69 (**116.4**%)	**22.07**
ORGAMIN DA 1.7 ml	24.54	27.3	3.46	23.85 (**117.2**%)	**22.06**
ORGAMIN DA 1.5 ml	24.11	27.6	3.20	24.40 (**119.9** %)	**22.00**
Algafer 10.0 ml	23.86	25.7	3.80	21.90 (107.6%)	21.10
Control	23.38	24.6	4.20	20.35 (100 %)	20.30

Obs.: * An index of quality of fruits in cluster; ** Size of fruits in cluster

11. Results and Discussion:

Randomly selected bunches were treated with ORGAMIN DA at different rates: 2.0 ml, 1.7 ml and 1.5 ml/liter of water respectively alongside Algafer as standard check @ 10.0 ml/liter water. Untreated samples/control were also included for comparison purposes. The trial was conducted in Farm 1, 3A which have a Class C soil type.

As regards to Net Fruit Weight, bunches treated with ORGAMIN DA @ 1.5 ml/l water were found to be the heaviest at 24.40 Kgs. This was followed by ORGAMIN DA @ 1.7 ml and 2.0 ml/l water at 23.85 Kgs and 23.69 Kgs. respectively. Algafer @ 10.0 ml/l water yielded a Net Fruit Weight of 21.90 Kgs while untreated plant samples have a yield average of 20.35 Kgs.

moreover, bunches treated with ORGAMIN DA @ 1.5 ml/l water have the biggest calibration at 46.50(11.4% increase

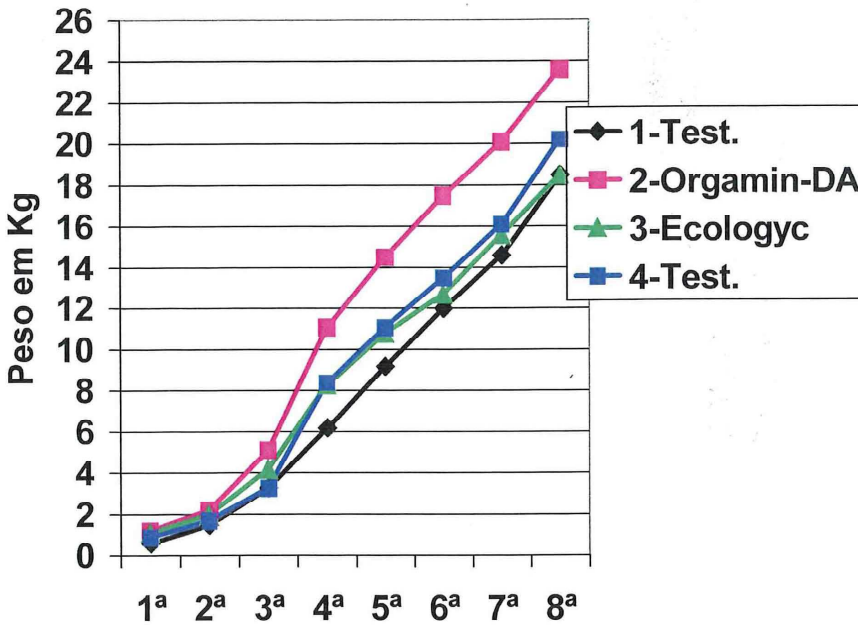
in bunch weight) and highest number of bunches harvested at 10th week totaling to 6 bunches since the passing calibration during that specific date was 45 as compared to the other treatments. untreated bunches yielded lowest Net Fruit Weight averaging to 20.35 Kgs only.

Table 1 showed that bunches treated with ORGAMIN DA have yielded very promising results at harvest. During harvest, there was no chemical burn on sample bunches. The results indicated that ORGAMIN DA @ 1.5 ml/l water have significant effect on the yield and quality of Cavendish Banana though these were planted on poor soil conditions/Class C.

Field Tests of Efficacies of **ORGAMIN DA** and **ECOLOGYC** on Bell Pepper/Brazil BROF0011

1. Reporter: I. Kon-AGRO COSMOS (Cosmos Agrícola Produção e Serviços Ltda.)
2. Cooperator: Estaçã Shokucho Do Brasil Agríicola Ltda.
3. Purpose of the test:Evaluation of performance of ORGAMIN DA & ECOLOGYC on Bell Pepper
4. Location:Engenheiro Coelho-State of São Paulo, Brazil
5. Period of the test: November, 2002 to 2003
6. Crop/Variety: Bell Pepper (Capsicum anmuum), Var. Magali R
7. Applications: 1st application: 2002/11/27
   2nd application: 2002/12/06
   3rd application: 2002/12/17
   4th application: 2002/12/27
   5th application: 2003/01/06
   6th: application 2003/01/16

   ORGAMIN DA & ECOLOGYC were diluted by 500 times in water (200 ml product/100 L water) for whole tree spray.
8. Treatments: 1. Untreated control **with half of the basic soil fertilizer recommended.**
   2. ORGAMIN DA: 200 ml/100 Liter water and **with half of the basic soil fertilizer recommended.**
   3. ECOLOGYC 200 ml/100 Liter water and **with half of the basic soil fertilizer recommended.**
   4. Untreated control with normal(recommended) soil fertilizer
9. Results: Weight of fruits harvested from 16 m^2 of each treatment are shown in the Table below.
   Total 8 times harvest were effected and shown in Kg/16 m^2.



10. Discussion: 1. Even with the half dose of soil fertilizer recommended from the soil analysis, ORGAMIN DA has shown 49.60 % superior yield over normal-dosed soil fertilizer treatment plot.
    2. Use of ECOLOGYC has shown equivalent productivity of the half-dosed fertilizer plot of control.
    3. Application times of ORGAMIN DA could be reduced by prolonging intervals between sprays.

Evaluation of **ORGAMIN D-A** on **Broad bean/**(Vicia faba)/Japan JPNPR02001

1. Reporter: Agricultural Development Center of Kagoshima
2. Cooperator: Sankei Chemical Co. Ltd.
3. Period of the test: Seeded on September 16, transplanted on October16, and harvested during April 16 to May 1st, 1999 to May, 2000.
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on Broad bean, compared to conventional product;
4. Location: Takaono, Izumi, Kagoshima Pref.
5. Crop and Variety: Broad bean(Vicia faba), Ryouseiissunn
6. Treatments:
   1) ORGAMIN DA: Foliar, diluted in 1000 times volume water;
   2) Control(=Merit Blue, conventional): Foliar, diluted in 400 times volume water;
7. Timings of applications: Same to Treatment 1 and Treatment 2
   1st: 7 days after transplant
   2nd: 7 days after flower
   3rd to 6th: After 2nd application, with 10 days intervals until harvest started.
8. Yielding date: From April to May, 2000;
9. Plot design: 1000 ㎡ x 1 plot/treatment;
   For ORGAMIN DA plot, N:14.81 Kg, P2O3:18.0 Kg, K2O:17.41 and for Merit Blue plot, N:15.15, P2O3: 18.2 Kg and K2O: 17.55 Kg all prt 1000 ㎡ wer dosed in soil.
10. Sampling: From all tested area of each treatment of 1000 ㎡, beans were harvested from limitted period of April 16 to May 1st.
11. Results:

Yield of Broad Beans(with theath) by Different Size (Kg/1000 ㎡)
And Grower's Sales Value

Treatment	L	M	S	Total production and yen value(¥)
ORGAMIN DA x 1000	**966.1** (**46.8 % of total**) ¥ 1,217,286	904.6 (43.8 % of total) ¥ 868,416	192.3 (**9.3 % of total**) ¥ 115,380	**2,063.0** (**117.1**%) ¥ **2,201,082** (**123.5**%)
Control(Merit blue) x 400	667.8 (37.9 % of total) ¥ 841,428	790.9 (44.9 % of total) ¥ 759,264	303.1 (17.2 % of total) ¥ 181,860	1,761.8 (100 %) ¥ 1,782,552 (100%)

12. Discussion
   a. Under normal weather conditions, conventional agricultural practice using "Merit Blue" have produced 2,000 Kg/1000 ㎡ of Broad beans in this area tested. However, in this season, low temperature ocurred in February and drought in April have caused decrease of yield of the broad beans. The test plot of Merit Blue produced 1,761.8 Kg/1000 ㎡ while the plot of ORGAMIN DA has produced 2,063 Kg/1000 ㎡, equivalent **117.1 %** of the plot of Merit blue.
   b. The cost of the foliar fertilizers for the farmers are as follows: RGAMIN DA 1,000 times solution: ¥ 370/L
      Merit Blue 400 times solution: ¥ 300/L
      So, the difference of the cost of foliar fertilizer means little when the increased yield and the profit increased by total yield increased and the percentage of L size, the unit selling price of which is much higher than M or S size beans, are considered. From this field test, the economical effect of ORGAMIN DA to the crop of Broad bean seems to be considerablly high.
   c. The prices per Kg of broad bean at the farmer level are as follows(As of 2003/02/04): L: ¥ 1,260, M: ¥ 960 and S: ¥ 600. Based on those prices, ORGAMIN DA plot produced 966.1 x 1,260 + 904.6 x 960 + 192.3 x 600 = **¥ 2,201,082/1,000 ㎡** and the plot of Merit Blue produced ¥ 1,782,552/1,000 ㎡. ORGAMIN DA showed economically high advantageous characteristics.

Experimental Results of **ORGAMIN** on **Cabbage**/Vietnam VIOF015

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Sub-PPD, Lam Dong Province)
2. Cooperator: Engineer Nguyen Duc Cu and farmer Nguyen Phan Tuan
3. Period of the test:Transplant on July 15 to harvest on October 8, '95.
4. Purpose: Evaluation of the efficacies of ORGAMIN on Cabbage at farm land
5. Location: No. 8 Village, Da Lat City, Lam Dong Province
6. Crop: Cabbage, variety Shogun, planted density:3000 plants/1,000 ㎡
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Spray at dose of 0.3 % solution 400 L/Ha:1st at 15 days after transplant
   2nd at 30 days after transplant
   3rd at 45 days after transplant
8. Formula of fertilizer:Urea 60 Kg, KCl 50 Kg, NPK 30 Kg and Straw manure 2000 Kh per 1,000 plants
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:

Yield(Av weight of 10 plants):	ORGAMIN 0.3 % Plot: 3.32 Kg/plant (**119.42**%)
	Untreated control Plot : 2.78 Kg/plant (100 %)

11. Observation: * Leaves of cabbage of ORGAMIN-treated plot were dark blue.

Experimental Result of **ORGAMIN** on **Cabbage**/Vietnam VIOF016

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with National Plant protection Institute)
2. Cooperator: Engineer Nguyen Huu Vinh
3. Period of the test:Transplant on October 4 to harvest.
4. Purpose: Evaluation of the efficacies of ORGAMIN on Cabbage
5. Location: Van Quan Village, Me Linh District, Vinh Phu Province
6. Crop: Cabbage, planted density:1200 plants/360 ㎡
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:ORGAMIN spray at dose of 0.3 % solution 240-400 L/Ha: 1st at 15 days after transplant
   2nd at 30 days after transplant
   3rd at 45 days after transplant
   Treatment 3:Libspray spray at dose of 0.5 % solution 240-400 L/Ha: 1st at 15 days after transplant
   2nd at 30 days after transplant
   3rd at 45 days after transplant
8. Formula of fertilizer:
9. Plot design:ORGAMIN, Libspray and untreated control each plot 360 ㎡and 1 replication
10. Results:

Treatment	Growth and Pests factors		Yield(Kg)		
	Leaf color	Number of dead leaf*	Av. 10 plants	Kg/360 ㎡	%
ORGAMIN 0.3 %	dark blue	1.8	2.06 Kg/plant	2,460 Kg	(**117.14**)
Libspray 0.5 %	dark blue	2.5	1.98	2.376	(113.14)
Control**	dark blue	3.3	1.75	2.100	(100.00)

11. Observation:*Numbers of dead leaves were counted at head rolling stage(45 days after transplant).
**Cabbage plants of control plot were seriously attacked by aphids and Diamond-back moth.

Test Result of AMIGROW(=**ORGAMIN**) on **Cabbage, chinese**/Japan JPNPR0010

1. Reporter: Japan Carlit Co. Ltd.
2. Cooperator:
3. Period of the test:January 8 to March 25, '88
4. Purpose: Evaluation of performance of AMIGROW(=ORGAMIN) in commercial cultivation of Chinese cabbage
5. Location: Farm of Mr. S. Goto, Yoshioka, Kita-Gunnma
6. Crop: Chinese cabbage, Variety:Bando, Seeding on Aug. 21(Paper pot was used.), transplanted on Sept. 10 with density of 400 plants/100 ㎡.
7. Treatments:
   Treatment 1:ORGAMIN spray at dose of 0.25 % solution 10 L/150 ㎡(=670 L/Ha)
   1st: On September 19... Mixed spray with fungicide and insecticide
   2nd:On September 30....Mixed spray with pesticides
   Treatment 2:Untreated control
8. Formula of fertilizer: Ordinary
9. Plot design:ORGAMIN plot 1 replication of 150 ㎡ and untreated control 1 replication of 50 ㎡
10. Results:

	Yield	
Treatment	Av. /plant	%
ORGAMIN 0.25% x 2 times	2,850 gr(2,150 - 3,740)	(**122.8**)
Control	2,320 gr(1,940 - 2,560)	(100)

11.Obs.:1) Crops of ORGAMIN-treated plot showed obviously better color and blightness of the leaves and vigourous growth than untreated control.
2) Ball forming of ORGAMIN-treated crop was good and uniform than untreated crop.
3) Resistance to disease:Partial occurrence of Leaf black Spot was observed at untreated plot but ORGAMIN-treated crops were totally free of this disease.
4) Simple comparison of average weight/plant shows ORGAMIN-treated plot increased by 22.8 % over control however, this does not count higher percentage of commercialized plant of ORGAMIN- treated plot.

Test Result of AMIGROW(=**ORGAMIN**) on **Chinese Cabbage**/Japan JPNPR0004

1. Reporter:R. Inoue-Pulsar International Corporation
2. Cooperator:Makio Sasaki
3. Period of the test:August to November, '86
4. Purpose: Evaluation of performance of AMIGROW(=ORGAMIN) in commercial cultivation of Chinese cabbage
5. Location: Farm of Mr. Makio Sasaki, Minamimaki Mura, Nagano
6. Crop: Chinese cabbage, Variety:Syunjyu, transplanted on August 6, '86.
7. Treatments:
   Treatment 1:ORGAMIN spray at dose of 5.0 L/ha x 9 times on August 20 and 28, September 6, 13, 20, 23 and 28, October 1 and 4, '86
   Treatment 2:Untreated control
8. Formula of fertilizer:
9. Plot design:ORGAMIN and Control plots, 1 replication of 750 ㎡ to each treatment.
10. Results:

	Yield, Size/Number of plants			*Total box	**Price factor and
Treatment	Size L	Size M	L+M	M+S	income increase
ORGAMIN 5.0 L/ha x 9 times	1,452(62%)	896(38%)	2,348(100)	242+112=354	242x1.15+112x1.0=390.3(**109.3**%)
Control	726(29%)	1,744(71%)	2,470(100)	121+218=339	121x1.15+218x1.0=357.2 (100%)

11. Observation: *Size L:6 heads/box, Size M:8heads/box
    **Price per box changes depend on the market price however, difference of prices between sizes L and M, constantly shows 15 % at minimum.

    It was observed that the crop of ORGAMIN-treated plot could harvest over 90 percent of total production in one time but, in the control plot, 1st day harvest was only 65 percent of total heads. It shows that one of efficacies of ORGAMIN is uniform maturation of crop.

Experimental Results of **ORGAMIN** on **Chinese Cabbage**/China CHOF2001

1. Reporter: Koyo Bio Science Technology Co., Ltd.
2. Cooperator:
3. Period of the test: 2002
4. Purpose: Evaluation of the efficacy of ORGAMIN on Chinese cabbage in the term of yield increase;
5. Location: 肇蔬菜基地
6. Crop and Variety: 矮脚黑白菜
7. Seeding: August 20, 2002
8. Spray Dates: First spray of Foliar fertilizers: September 9, 2002
   Second spray of Foliar fertilizers: September 18
   Third spray of Foliar fertilizers: September 26
   Fourth spray of Foliar fertilizers: October 2
9. Harvest and Evaluation Date: October 9, 2002
10. Treatments:
    Treatment 1: ORGAMIN treatment, 1st at 7-10 days after transplant and 4 sprays with 7-10 days intervals, dose of 500 times dilution in water;
    Treatment 2: Usual foliar fertilizer namely "Leaf Power" liquid fertilizer diluted by 300 times volume water with same timings of the Treatment 1.;
    Treatment 3: Foliar spray only of water in the same timings of above treatments.
11. Formula of fertilizer: In 3 times, totally mixed fertilizer 15 Kg and Urea 10 Kg per 667 ㎡(=225 Kg and 150 Kg per ha respectively)by usual local agricultural practices.
12. Plot design: Random Block, 4 Replications: 845 seedlings were transplanted per plot.
13. Result: Production

	Yield								
Treatments	I	II	III	IV	Total	Average/ Plot	DMS 5%	DMS 1%	Yielf/ 666 ㎡
1. ORGAMIN	38.00	40.55	40.25	40.50	159.30	39.83	a	A	**1327.50 (129%)**
2. Usual Product	38.40	35.60	34.65	31.80	140.45	35.11	b	AB	1170.33 (114 %)
3. Control	32.70	32.95	30.50	27.25	123.40	30.85	c	B	1028.33 (100 %)

14. Observations: 1) Yield: ORGAMIN-treated field recorded 129.1 % over untreated control in the final yield. Against this, commonly used product "Leaf Power" yielded 113.8 % over control.
    2) Quality of Chinese cabbage: Compared to other plots' cabbages, the taste of ORGAMIN-treated cabbage was more fresh. And sweeter. Also the **leaves of the cabbage was shinning green which was considered as it should have higher market price than of the other treatments.**
    3) Disease: Due to the typhoon attacked the test site during the testing period, the cabbages suffered rot in all over the testing field. However, the cabbages treated with ORGAMIN have shown less danages than other plots' cabbages. **This shows ORGAMIN has significant effect on preventing this kind of disease.**

Field test of **ORGAMIN** on **Cassava**/Brazil BRPR0011

1. Reporter: Edio Feller, Technical Manager, Lorenz Company
2. Cooperator:
3. Period of the test:November 15, '87(Planting) to '88
4. Purpose: Evaluation of the efficacies of ORGAMIN Cassava
5. Location: Umuarama, Parana
6. Crop: Cassava, variety:
7. Treatments:
   Treatment 1:ORGAMIN 5.6 L/ha x 3 times
   Treatment 2:ORGAMIN 6.25 L/ha x 3 times
   Treatment 3: ORGAMIN 6.94 L/ha x 3 times
   Treatment 4: Untreated control

   Application timings:
   1st: November 15, '87
   2nd: March 20, '88
   3rd: May 20, '88
8. Formula of fertilizer:No fertilizer was used.
9. Plot design:
10. Results:

Treatment	Yield Kg			
	Total	/plant	%	Amide content %
1:ORGAMIN, 602 plant 5.6 L/ha x 3	1,400	2.32	**122.1**	23.0
2:ORGAMIN, 635plants 6.25L/ha x 3	2,000	3.15	**165.8**	22.5
3:ORGAMIN, 676plants 6.94L/ha x 3	1,580	2.34	**123.2**	21.5
4: Control, 676 plants	950	1.90	100.0	23.0

Evaluation of **ORGAMIN D-A** on **Chili Pepper**/Korea KOOF02002

1. Reporter: Sankei Chemical Co., Ltd/Hakko Trading
2. Cooperator: Vegetable Culture Dept., Institute of Horticulture
3. Period of the test: March to November, 2002
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on Chili Pepper
4. Location: Suwong, Korea
5. Crop and Variety: Chili Pepper, Manita
6. Applications of ORGAMIN D-A, 3 applications, foliar
   1st: Early June, 1 month after transplant
   2nd: Early July, 1 month after 1st application
   3rd: Early August, 1 month after 2nd application
7. Treatments: 1. ORGAMIN DA diluted in 1000 times volume of water
   2. ORGAMIN DA diluted in 500 times volume of water
   3. Non-treated control
8. Yielding date: November, 2003;
9. Plot design: 3 replications by random block method. Each plot had 30 m2. Distance between rowand plants: 100 x 25 cm.
10. Results:

Table-1

Treatment	Plant Growth Parameters				
	Plant Hight(cm)	Diameter of Stems(mm)	Number of Fruits, No./Plant	Leaf Spread (cm2/leaf)	Dried Weight (g/plant)
1. ORGAMIN DA Diluted in 1000 x water	129.8	12.07	119.4	15,091	2,410.9
2. ORGAMIN DA Diluted in 500 x water	131.8	10.99	113.5	14,882	2,280.7
3. Non-treated Control	123.5	10.79	117.2	11,981	2,026.3

Table-2

Treatment	Yield Parameters			
	Total No. of Fruits harvested (No./Plant)	Weight of a fruit (g/Fruitt)	Weight of Fruits per Plant (g/Plant)	Yield ofPepper (Kg/1000 m2) (%)
1. ORGAMIN DA Diluted in 1000 x water	76.9	9.04	694.5	555.6 (**105**)
2. ORGAMIN DA Diluted in 500 x wate	80.5	8.93	718.5	574.8 (**109**)
3. Non-treated Control	77.7	8.49	659.1	527.3 (100)

Test Result of Foliar Application of **ORGAMIN** on **Coffee**/Brazil BRPR0002

1. Reporter: Katsuhiko Nagata, - Fazenda Nomurabraz
2. Cooperator:
3. Period of the test:September '84 to April '85
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farm land
5. Location: Fazenda of Nomurabraz, Araxa, 693 Km point, Rout BR262, Minas Gerais, Brazil
6. Crop: Coffee,
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2-Area I:ORGAMIN 5-10 L/1,000 trees x 5 times
   Treatment 2-Area II:ORGAMIN 5-10 L/1,000 trees x 5 times

   Application Timings:
   Setember(5 L), November(5 L),
   January(10 L), March(10 L),
   April(10 L)
8. Formula of fertilizer:
9. Plot design:ORGAMIN Area I: 3.8 ha, ORGAMIN Area II:5.5 ha, Untreated control:3.7 ha, each plot 1 replication
10. Results:

Treatment	Yield		
	Practical in '84, Sacks/ha	Test year '85 Sacks/ha	(%)
Control	162	78	(100)
ORGAMIN 5-10 L/ha x 5 Area I	147	126	**(162)**
ORGAMIN 5-10 L/ha x 5 Area II	156	129	**(166)**

11. Observation:
Under normal Brazilian condition, untreated coffee field suffer strong production bi-anual osciliations. In this test, **ORGAMIN-treated fields did not suffer strong bi-anual reduction of coffee.**

Test Result of Foliar Application of **ORGAMIN** on **Coffee**/Brazil BRPR0003

1. Reporter: Engenheiro Agr. T. Ueda, Tropical tecnica Agricola Ltd.
2. Cooperator:J. Hattori
3. Period of the test:Agricultural year 1984/85
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farm land
5. Location: Fazenda Palmeira, Tatui, Brazil
6. Crop: Coffee,
7. Treatments:
   Treatment 1:ORGAMIN 5.0 L/1,000 trees x 3 times
   Treatment 2:Foliar fertilizer product A 5.0 L/1,000 trees x 3 times
   Treatment 3:Foliar fertilizer product B 5.0 L/1,000 trees x 3 times
   Treatment 4:Foliar fertilizer product C 5.0 L/1,000 trees x 3 times
   Treatment 5:Untreated control

   Application Timings:
   1st:March 25
   2nd:April 25
   3rd:May 25
8. Formula of fertilizer:
9. Plot design:10 trees per block
10. Results:

Treatment	Yield	
	Kg/10 trees	(%)
ORGAMIN 5 L x 3	22.0	**(119)**
Product A 5 L x 3	20.1	(109)
Product B 5 L x 3	19.6	(106)
Product C 5 L x 3	18.7	(101)
Control	18.5	(100)

Test Result of Foliar Application of **ORGAMIN** on **Coffee**/Brazil BRPR0004

1. Reporter: Engenheiro Agr. Milton Nakamura, Tropical tecnica Agricola Ltd.
2. Cooperator:J. Hattori
3. Period of the test:Agricultural year 1985/86
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee a farm land
5. Location: Fazenda Palmeira, Tatui, Brazil
6. Crop: Coffee,
7. Treatments:
   - Treatment 1:ORGAMIN 3.0 L/1,000 trees x 5 times
   - Treatment 2:ORGAMIN 5.0 L/1,000 trees x 5 times
   - Treatment 3:ORGAMIN-ZB 3.0 L/1,000 trees x 5 times
   - Treatment 4:ORGAMIN-ZB 5.0 L/1,000 trees x 5 times
   - Treatment 5:Untreated control

Application Timings:
1st:January
2nd:February
3rd:March
4th:April
5th:May

8. Formula of fertilizer:
9. Plot design:2 replications with each 1 10 trees per plot
10. Results:

Treatment	Yield	
	Av Kg/ 10 trees	(%)
ORGAMIN 3 L x 5	5.5	**(122)**
ORGAMIN 5 L x 5	8.2	**(182)**
ORGAMIN-ZB 3 L x 5	6.9	**(153)**
ORGAMIN-ZB 5 L x 5	7.5	**(167)**
Control	4.5	(100)

Photos show ORGAMIN-treated coffee tree can extend vigorous new shoots while carrying fruits on the 2nd year branches. For this tree, the same production of the coffee beans could be expected in the next year(**Fazenda Snata Terezinha, Minas Gerais, Brazil. The owner of fthe farm Mr. Paulo Sergio Almeida was winner of Gold Cup of Brazilian Special Coffee Cup Taste Competition in 2001 and 2002**). Without ORGAMIN treatment, normally, a coffee tree carrying fruits this year, does not extend the vigourous new shoots so, the next year's production will be limitted.

Experimental Result of **ORGAMIN** on **Coffee**/Vietnam VIOF014

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Sub-PPD, Lam Dong Province)
2. Cooperator: Engineer Nguyen Duc Cu and farmer Tran Thi Tuyet
3. Period of the test:From 1st spray at sprouting stage to last harvest, Oct. 25, '95.
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farm land
5. Location: No. 8 Village, Da Lat City, Lam Dong Province
6. Crop: Coffee, Catura, planted density:250 plants/1,000 ㎡
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Spray at dose of 0.3 %: 1st at sprouting to bloom
   2nd after bloom
   3rd to fruits mixed young and mature stages
8. Formula of fertilizer:Urea 5 Kg and NPK 0.5 Kg/plant
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:

Fruits yield(1 time fresh):	ORGAMIN 0.3 % Plot: Av. 3.5 Kg/plant (**116.66**%)
	Untreated control Plot : Av. 3.0 Kg/plant (100 %)

11. Observation: * Leaves of coffee trees of ORGAMIN-treated plot were dark blue.
    * Fruits ripening at ORGAMIN-treated plot were earler and more uniform than untreated control plot.

Progress Report on Trial for **ORGAMIN** on **Coffee**/Vietnam VIOF020-1
(See final reports No. VIOF020-1 Fn1 & VIOF020-1Fn2)

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator: Itochu Corporation
3. Period of the test:January 1997 to ---
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farm land
5. Location: Highland Region, Central Vietnam
6. Crop: Coffee, Robusta(Planted in '90 at 3x3 m, 2 seeds/hole without shade
   and Arabica(Planted in '91 at 1.5x1 m, 1 seed/hole without shade
7. Treatments: Application Timings:
   Treatment 1:ORGAMIN 2.5 L/ha x 1st January, before coffee flowering
   Treatment 2:ORGAMIN 5.0 L/ha x 2nd February, 15 days after flowering
   Treatment 3:Untreated control 3rd scheduled for June-July, to young coffee fruits
   4th-5th August to September, close to maturity
8. Formula of fertilizer: a. Robusta:350 N-100 O2O5-350 K2O Kg/ha, Organic manure 20 cubic meter/ha/3-4 years
   b.Arabica:400 N-120 P2O5-400 K2O Kg/ha
9. Plot design:a. Robusta:Total test area:1.2 ha, ORGAMIN treatment:675 ㎡/75 trees
   b.Arabica:Total test area:0.6 ha, ORGAMIN treatment:405 ㎡/270 trees
10. Results: Percentage of berry drop after 2 months of flowering(1 month after 2nd application)

Variety	Control	2.5 L/ha x 2	5.0 L/ha x 2
Robusta	9.1(100%)	4.3(47.3%)	4.7(51.6%)
Arabica	23.9(100%)	16.5(69.3%)	15.3(64.0%)

Progress Report on Trial for **ORGAMIN** on Coffee/Vietnam VIOF020-2
(See final report No. VIOF020-2Fn)

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator:Doan Ket Coffee Company Ltd., & Itochu Corporation
3. Period of the test:January 1997 to ---
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farmers' land
5. Location: Highland Region, Central Vietnam
6. Crop: Coffee, Robusta
7. Treatments:
   Treatment 1:ORGAMIN 2.5 L/ha x
   Treatment 2:ORGAMIN 5.0 L/ha x
   Treatment 3:Untreated control

   Application Timings:
   1st January, before coffee flowering
   2nd February, 15 days after flowering
   3rd scheduled for June-July, to young coffee fruits
   4th-5th August to September, close to maturity
8. Formula of fertilizer: a. Best farming conditions:400 N-100P2O5-400 K2O Kg/ha, Organic manure(decomposed coffee husk) 50 cubic meter/ha/2 years
   b.Good farming conditions:300 N-85 P2O5-300 K2O Kg/ha
   c.Normal farming conditions:300 N-85 P2O5-300 K2O
9. Plot design:a. Best farm:Total ORGAMIN application area:1.2 ha
   b. Good farm:Total ORGAMIN application area:1.2 ha
   c. Normal farm:Total ORGAMIN application area:1.2 ha
10. Results: Percentage of berry drop after 2 months of flowering(1 month after 2nd application)

Variety	Control	2.5 L/ha x 2	5.0 L/ha x 2	Record green bean prod./year
Best	8.3(100%)	4.0(48.2%)	3.8(45.8%)	3.5-4.0 MT/ha
Good	10.8(100%)	4.2(38.9%)	4.2(38.9%)	2.2-2.5
Normal	11.9(100%)	4.8(40.3%)	5.2(43.7%)	2.0

Progress Report on Trial for **ORGAMIN** on Coffee/Vietnam VIOF020-3
(See final report No. VIOF020-3Fn)

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator:Itochu Corporation
3. Period of the test:January 1997 to ---
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee at farmers' land
5. Location: Thang 10(October) Coffee State Farm, two farms
6. Crop: Coffee, Robusta
7. Treatments:
   Treatment 1:ORGAMIN 2.5 L/ha x
   Treatment 2:ORGAMIN 5.0 L/ha x
   Treatment 3:Untreated control

   Application Timings:
   1st January, before coffee flowering
   2nd February, 15 days after flowering
   3rd scheduled for June-July, to young coffee fruits
   4th-5th August to September, close to maturity
8. Formula of fertilizer: a. Good management farm:350 N-100P2O5-350 K2O Kg/ha, Organic manure 20 cubic meter/ha/3-4 years
   b.Fairly good managing farm:350 N-100 P2O5-350 K2O Kg/ha, Organic manure 20 cubic meter/3-4 years
9. Plot design:a. Good management farm:Total ORGAMIN application area:1-1.5 ha
   b. Fairly good management farm:Total ORGAMIN application area:1-1.5 ha
10. Results:Percentage of berry drop after 2 months of flowering(1month after 2nd application)

Variety	Control	2.5 L/ha x 2	5.0 L/ha x 2	Record green bean prod./year
Good	8.8(100%)	3.9(44.3%)	4.1(46.6%)	2.2-2.8 MT/ha
F. good	10.7(100%)	5.5(51.4%)	4.6(43.0%)	2.2-2.8

Experimental Result of **ORGAMIN** on **Coffee**/Vietnam VIOF020-1Fn.1

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator: Itochu Corporation
3. Period of the test:January to December, 1997
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee(Robusta)
5. Location:Dak Lak Province, Coffee Region, Central Vietnam
6. Crop: Coffee, Robusta(Planted in '90 at 3x3 m, 2 seeds/hole without shade
7. Treatments: Application Timings:
   Treatment 1:ORGAMIN 2.5 L/ha x — 1st January, before coffee flowering
   Treatment 2:ORGAMIN 5.0 L/ha x — 2nd February, 15 days after flowering
   Treatment 3:Untreated control — 3rd June-July, to young coffee fruits in development
   4th August, young fruits hardening
   5th September, fruits start maturing
8. Formula of fertilizer: 350 N-100 P2O5-350 K2O Kg/ha,
   Organic manure 20 cubic meter/ha/3-4 years
9. Plot design: Robusta:Total test area:1.2 ha, ORGAMIN treatment:675 ㎡/75 trees
10. Results: Percentage of berry drop, 2 months and total of 10 months after flowering and yield

Treatment	Young Fruits Drop(%)		Yield,MT/ha
	2 monts AF	10 months AF	
ORGAMIN 2.5 L/ha	4.3	40.1	3.35 (**113** %)
ORGAMIN 5.0 L/ha	4.7	41.3	3.24 (**110** %)
Control	9.1	46.6	2.97 (100 %)

Experimental Result of **ORGAMIN** on **Coffee**/Vietnam VIOF020-1Fn.2

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator: Itochu Corporation
3. Period of the test:January to December, 1997
4. Purpose: Evaluation of the efficacies of ORGAMIN on CoffeeArabica)
5. Location:Dak Lak Province, Coffee Region, Central Vietnam
6. Crop: Coffee, Arabica(Planted in '91 at 1.5x1.0 m, 1 seeds/hole without shade
7. Treatments: Application Timings:
   Treatment 1:ORGAMIN 2.5 L/ha x — 1st January, before coffee flowering
   Treatment 2:ORGAMIN 5.0 L/ha x — 2nd February, 15 days after flowering
   Treatment 3:Untreated control — 3rd June-July, to young coffee fruits in development
   4th August, young fruits hardening
   5th September, fruits start maturing
8. Formula of fertilizer:400 N-120 P2O5-400 K2O Kg/ha,
9. Plot design: Robusta:Total test area:0.6 ha, ORGAMIN treatment:405 ㎡/270 trees
10. Results: Percentage of berry drop, 2 months and total of 10 months after flowering and yield

Treatment	Young Fruits Drop(%)		Yield,MT/ha
	2 monts AF	10 months AF	
ORGAMIN 2.5 L/ha	16.5	38.5	4.04 (**108 %**)
ORGAMIN 5.0 L/ha	15.3	37.6	4.16 (**111** %)
Control	23.9	45.2	3.75 (100 %)

Experimental Result of **ORGAMIN** on **Coffee**/Vietnam VIOF020-2Fn.

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator: Itochu Corporation
3. Period of the test:January to December, 1997
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee by different level of management
5. Location:Doan Ket Coffee Company, Dak Lak Province
6. Crop: Coffee, Robusta
7. Treatments at each of "Best", "Good" and "Fairly Good", level farming management:

	Application Timings:
Treatment 1:ORGAMIN 2.5 L/ha x	1st January, before coffee flowering
Treatment 2:ORGAMIN 5.0 L/ha x	2nd February, 15 days after flowering
Treatment 3:Untreated control	3rd June-July, to young coffee fruits in development
	4th August, young fruits hardening
	5th September, fruits start maturing

8. Formula of fertilizer:
   "Best":400 N-100 P2O5-100 K2O Kg/ha, +Organic manuare(decomposed coffee husk)50 cubic meter/2 years
   "Good":300 N-85 P2O5-300 K2O Kg/ha,
   "Fairly Good":300 N-85 P2O5-300 K2O Kg/ha,
9. Plot design:Total test area:1.2 ha per each "Best", "Good" and "Fairly Good"
10. Results: Percentage of berry drop, 2 months and total of 10 months after flowering and yield

Treatment	Young Fruits Drop(%)						Yield,MT/ha Green bean		
	2 monts AF			10 months AF					
	Best	Good	F. G	Best	Good	F. G	Best	Good	F. G.
ORGAMIN 2.5 L/ha	4.0	4.2	4.8	37.4	41.2	43.6	4.43(**113**%)	2.87(**120**%)	1.74(**110**%)
ORGAMIN 5.0 L/ha	3.8	4.2	5.2	36.9	44.3	45.1	4.35(**111**)	2.83(**118**)	1.69(**107**)
Control	8.3	10.8	11.9	43.8	46.7	47.5	3.91(100)	2.39(100)	1.58(100)

Experimental Result of **ORGAMIN** on **Coffee**/Vietnam VIOF020-3Fn.

1. Reporter: Vietnam Coffee Reserch Institute
2. Cooperator: Itochu Corporation
3. Period of the test:January to December, 1997
4. Purpose: Evaluation of the efficacies of ORGAMIN on Coffee by different level of management
5. Location:Thang 10(October) Coffee State Farm, Dak Lak Province
6. Crop: Coffee, Robusta
7. Treatments at each of "Good" and "Fairly Good", level farming management:

	Application Timings:
Treatment 1:ORGAMIN 2.5 L/ha x	1st January, before coffee flowering
Treatment 2:ORGAMIN 5.0 L/ha x	2nd February, 15 days after flowering
Treatment 3:Untreated control	3rd June-July, to young coffee fruits in development
	4th August, young fruits hardening
	5th September, fruits start maturing

8. Formula of fertilizer:
   Both "Good" and "Fairly Good":350 N-100 P2O5-300 K2O Kg/ha + 20cubic meter organic manure/ha/3-4 years
9. Plot design:Total test area:1.0-1.5 ha per both "Good" and "Fairly Good" managed farm.
10. Results: Percentage of berry drop, 2 months and total of 10 months after flowering and yield

Treatment	Young Fruits Drop(%)				Yield,MT/ha Green bean	
	2 monts AF		10 months AF			
	Good	F. G	Good	F. G	Good	F. G.
ORGAMIN 2.5 L/ha	3.9	5.5	39.8	42.6	3.54(**110**%)	3.38(**120**%)
ORGAMIN 5.0 L/ha	4.1	4.6	39.2	40.5	3.62(**112**)	3.25(**119**)
Control	8.8	10.7	45.4	47.1	3.23(100)	2.81(100)

Observations:Based on the all field tests, report number VIOF020-1Fn.1, VIOF020-1Fn.2, VIOF020-2Fn. and VIOF20-3Fn., the auther had observations and conclusion as follows:

1) ORGAMIN applications had effect to improve size and color of coffee beans. 2) ORGAMIN had good effect to reduce berry drop and significantly increased yield by about 15 % in average. 3) ORGAMIN application could improve color and size of coffee beans. 4) A dose of ORGAMIN considered adequate is 2.5 L/ha.

Test Results of AMIGROW(=**ORGAMIN)** on **Corn, sweet**/Japan JPPR0001

1. Reporter: Hokko Chemical Corporation
2. Cooperator:
3. Period of the test: August to October, '86
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) on Sweet corn in laboratory scale
5. Location: Farm of Hokko Chemical Research Center, Atsugi, Kanagawa
6. Crop: Corn, Variety:Astrobandam, Date of transplant:August 4, '86, cultivated in plastic green house.
7. Treatments:
   Treatment 1: ORGAMIN sprays at dose of 8.0 L/ha, x 4 times
   1st September 16, 2nd Sept. 26, 3rd October 6 and 4th Oct. 15, '86
   Treatment 2: Untreated control
8. Formula of fertilizer:
9. Plot design:2 replications, 1 block with 24 plants
10. Results:

reatment	No. of plants checked	No. of ears total	No. of ears qualified	Percent(%)
ORGAMI	46	60	35	**130**
Control	46	50	27	100

Test Results of Foliar Application of **ORGAMIN** on **Corn**/Brazil BROF0001

1. Reporter: Dr. G. Aparecido de Aquino Guedes-Escola Superior Agricola de Lavras
2. Cooperator:
3. Period of the test:August '85 to July '86
4. Purpose: Evaluation of the efficacies of ORGAMIN on Corn
5. Location: ESAL, Lavras, Minas Gerais, Brazil
6. Crop:Corn, Variety:AG-401, seeded Nov. 20, '85
7. Treatments: Application timings:
   Treatment 1:ORGAMIN 8.0 Kg/Ha x 3 times 1st January 7, '85
   Treatment 2:Product A 8.0 Kg/Ha x 3 times 2nd January 30, '85
   Treatment 3:Product B 8.0 Kg/Ha x 3 times 3rd Feb. 23, '86
   Treatment 4:Untreated control
8. Formula of fertilizer:Basic:NPK 4-16-8 500 Kg/Ha, Anmonium sulfate 500 Kg/Ha, 45 days after seeding.
9. Plot design:Random blocks with 4 replications, each plot sized 40 m^2(10 m x 4 m)
10. Results:

Treatment	Yield	
	Kg/Ha	%
ORGAMIN 8.0 Kg x 3	6,445	**111**
Product B 8.0 Kg x 3	5,867	101
Product A 8.0 Kg x 3	5,945	102
Control	5,807	100

11. Discussion:1) Fruits weight(greater than 350 g) and brix degree were increasing by twice applications of ORGAMIN.
    2) Fruits color of ORGAMIN-treated plot was carmin and lustrous.

Test Result of AMIGROW(=**ORGAMIN**) on **Corn, sweet**/Japan JPNPR0006

1. Reporter: R. Inoue-Pulsar International Corporation
2. Cooperator:
3. Period of the test:June to August '87
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) in sweet corn in field
5. Location: Farm of Mr. Banba, Ongata, Hachioji, Tokyo
6. Crop:Sweet Corn, seeded June 10, '86
7. Treatments:
   Treatment 1:ORGAMIN 400 times diluted in water, at dose of 1.5 to 2.0 L/200 plants x 5 applications on June 18 and 26, July 7, 12 and 21
   Treatment 2:Untreated control
8. Formula of fertilizer:
9. Plot design:1 replication of 1 block, each plot has 200 plants.
10. Results:

Treatment	Number of usable ear/plant				Total number of ear	Av. No. ear/plant	
	0	1	2	3			%
1. ORGAMIN (400 times dilution x3)	2	25	162	3	358/192 plants	1.86	**108.8**
2. Control	3	50	135	1	323/189 plants	1.71	100

Test Result of Foliar Application of **ORGAMIN** on **Cotton/Brazil** BROF0004

1.Reporter:Dr. G. A. de Aquino Guedes, E. S. Agricultura de Lavras
2.Cooperator:
3.Period of the test: August '85 to July '86
4.Purpose of test: To observe performance of mixed foliar fertilizers ORGAMIN
5.Location: ESAL-Lavras, Minas Gerais, Brazil
6.Crop:Cotton, Variety:EPAMIG-3, Seeded on October 31, '86
7.Treatments:
Treatment 1:ORGAMIN at 8.0 L/ha x 3 times.
Treatment 2:Product A at 8.0 L/ha x 3 times
Treatment 3:Product B at 8.0 L/ha x 3 times.
Treatment 4:Urea at 3.0 % x 3 times
Treatment 5:Urea at 3.0 % x 6 times
Treatment 6: Untreated control

Application timing:
1st:30 DAS
2nd to 3rd/5th:to end at beginning of bloom

8.Formula of fertilizer: 4-16-8, 500 Kg/ha
9. Plot design:4 replications of complete random blocks. Each plot measured 40 ㎡(=10 m x 4 m)
10. Results:

Treatment No.	Yield	
	* Arroba/ha	%
1	187.6	**114**
2	168.9	103
3	164.9	100
4	165.1	100
5	145.2	88
6	164.6	100

Bos.: @ arroba = 15 Kg

Test Result of Foliar Application of **ORGAMIN** on **Cotton/Brazil** BROF0005

1.Reporter:ACARPA, Campo Mourã, Parana
2.Cooperator:
3.Period of the test: August '83 to March '84
4.Purpose of test: To observe performance of mixed foliar fertilizers ORGAMIN
5.Location: Sitio of Mr. Jose Alvarenga Ferreira, Pinhalzinho, Campo Mourao, Parana, Brazil
6.Crop:Cotton, Variety:IAC-17, Seeded on August 6, '86
7.Treatments:
Treatment 1:ORGAMIN at 6.0 L/ha x 6 times.
Treatment 2:Untreated control

Application timings:
1st:Immediately after "debaste"
2nd to 6th:With intervals of 15 days

8.Formula of fertilizer: 4-30-10, 103.3 Kg/ha
9. Plot design:1 replication of large block. Each block measured 4,500 ㎡
10. Results:

Treatment No.	Yield	
	Kg/ha	%
ORGAMIN 6.0 L/ha x 6	2,313.3	**114**
Control	1,953.3	100

Test Result of Foliar Application of **ORGAMIN** on **Cotton**/Brazil BRPR0001

1.Reporter:Dr. Edison Aparecido Negroã, Fazenda Matubara
2.Cooperator:
3.Period of the test: September '86 to April '87
4.Location: Fazenda Matubara, Quadra 24, Astorga, Parana, Brazil
5.Crop:Cotton, Variety:IAC-20
6.Treatments:
Treatment 1: ORGAMIN at 4.2 L/ha x 5 times.
Applications:1st 48 DAS and rest 4 times with intervals of 15 days
Treatment 2:Untreated control
7. Formula of fertilizer: Gransol, 230 Kg/ha plus supplemental Urea 50 Kg/ha at 30 DAS and 60 Kg/ha at 55 DAS.
8. Plot design:1 replication
9. Results:

Treatment	Yield	
	* Arroba/ha	%
ORGAMIN 4.2 L/ha x 5	177	**130**
Control	136	100

Bos.: * @ arroba = 15 Kg
Following points were observed at ORGAMIN-treated field:
1) Increased number of fruits;
2) Increased foliar retention;
3) Reduced damage caused by mites;
4) Large sized fruits at end shoot.

Field Tests of Application of **ORGAMIN** on **Cotton**/**B**razil, 1987-'88 BRPR0015

Many of field trials and demonstrations were performed in Brazilian cotton fields. In the most of cases, the farmers enjoyed the notable increase of yield. Increase of the yield ranged usually from 15 to 30 percent and sometimes reached to 70 %. Yield increase is the final target of ORGAMIN to the crops.

Most of the reporters observed ORGAMIN performance to crops as follows:

① Accelerate the growth of root systems, length and volume;
② Better plant structure;
③ Better fructifying;
④ Increase of yield by 15 to 30 % and sometimes, up to 70 %;
⑤ Crop started to die later than that of control;
⑥ Ball weight of ORGAMIN-treated plots are much more than that of control;
⑦ Plant size of ORGAMIN-treated plots is uniform and good.

Some examples of the field tests and demonstrations run in Brazil are summarized in the Table at next page. Some of fotoes taken at the field of those tests are attached.

See Summary Table at next page

SUMMARY OF THE TESTS OF **ORGAMIN** APPLICATIONS ON **Cotton**/Brazil BRPR0015

Name of Farm/ Propriety	Location	Variety	Basic Fertilizer Kg/ha, N-P-K	ORGAMIN Treatment		Yield		Observations (ref. photo Nos.)
				Days after seeding	Dose L/ha	Av. Kg/ha	Percentage %	
1)Itapua, Maeda	Bon Jesus de Goias, Goias		333 (3-15-15) + 3 times of 125	4 applica-tions	6.0	2,940		*Yield of ORGAMIN-treated plot is much better than av. of past yield records of this farm. *Opening of cotton much more uni-form than control.
2)Maeda	Bom Jesus de Goias, Goias		333(3-15-15) + 3 times of 125	ORGAMIN Co-Mo 200 ml/25Kg seed 5 applictions	6.0	3,233	127	*Uniform germination and strong initial growth at ORGAMIN plot. *Well grown root system, *Tolerance to herbicide higher, treated
				Control	---	2,533	100	
3)Maeda	Bom Jesus de Goias, Goias		333(3-15-15) + 3 times of 125	4 applictions	6.0	1,625	118.1	
				Control	---	1,375	100	
4)Sitio Barro Preto, Edno Carmo	Andira, Parana	IAC-20	207 (4-24-12)	2 applicati.	5.6	1,562	170.7	*Seeding:87/9/29 *Harvest:88/March *Despite cold wind damaged crop, tre-ated area increased yield. *Uniform plant size at ORGAMIN plot
				Control	---	915	100	
5)Atalaia, Sergio Montanha	Lupionopolis, Parana	IAC-20	6 applicationsns with intervals of 15-18 days		5.0	3,769	116.0	*Seeding:87/November *ORGAMIN-treated cotton well grown and cotton ball weigh more vs control *Root system with ORGAMIN, excell.
				Control	---	3,250		
6)Marcondinha, Emp.Agro-pecu. Y. Ueno	Chavantes, Sao Paulo	IAC-20	250 (4-20-20) + 104 (20-0-20)	1st 2nd 3rd-5th	2.0 2.9 4.1	2,950	118	*Seeding:87/10/10 *Harvest:88/3/15 *ORGAMIN-treated plant well resisted cold wind. *Ball weight of treated plant is better.
				Control	---	2,500	100	

Evaluation of **ECOLOGYC** on **Cotton**/USA USOF0020

1. Reporter: RD Kukas, Tracs Corporation
2. Period of the test: May to October '97
3. Purpose: Evaluation of efficacies of ECOLOGYC on cotton in California
4. Location: Visalia, California
5. Crop: Cotton, Variety: Maxxa
6. Application timing of ECOLOGYC: 1st.: May 19(3 to 5 leaves, foliar), 2nd.: June 9(foliar)
   3rd.: July 3(foliar), 4th.: July 25(foliar)
7. Yielding date: October 18, '97
8. Plot design: Random block, 6 replications
9. Result:

Treatment	Rate oz/Acre(=L/ha)	Yield 10/18/97								
		LBS/ plot/2R 100FT	Seed cotton LBS/Acre	Seed		Lint		Farmer's Total Income		
				LBS/ Acre*	Price $/A**	LBS/ Acre ***	Price $/A ****	Price $/Acre	Percent (%)	Increased income $/A
ECOLOGYC +Seed dress	38.4(=2.81 L/ha) x 4 applications	38.47	3,351.3	2,178.3	190.6	1,173.0	856.3	**$1,046.9**	**113.3**	**$ 122.9**
ECOLOGYC	38.4(=2.81 L/ha) x 4 applications	40.03	3,488.2	2,267.3	198.4	1,220.7	891.1	**1,089.5**	**117.9**	**165.5**
ECOLOGYC	25.6(=1.87 L/ha) x 4 applications	39.03	3,400.7	2,210.5	193.4	1,190.2	868.8	**1,062.2**	**114.9**	**138.2**
Control	untreated	33.97	2,959.2	1,923.5	168.3	1,035.8	756.1	924.	100.0	±

Obs.: *Seed LBS/A was calculated using 65 percent Gin turn over.
**Price of seed was calculated using av. price of $ 175/2,000 LBS.,
***Lint LBS/A was calculated using 35 percent Gin turn over.
**** Price of lint was calculated using av. price of $ 0.73/LB.

Evaluation of **ORGAMIN DA** and **ECOLOGYC** on **Cotton**/USA USOF0022

1. Reporter: RD Kukas, Tracs Corporation
2. Period of the test: June 4 to November 4, '98
3. Purpose: Evaluation of efficacies of ORGAMIN DA and ECOLOGYC on cotton in California
4. Location: Visalia, California
5. Crop: Cotton, Variety: Maxxa
6. Application timing of ORGAMIN DA and ECOLOGYC: 1st.: June 4(5 leaves cotton, foliar)
   2nd.: June 25(12 leaves, foliar), 3rd.: July 15(Bloom, foliar), 4th.: August 1(bloom, foliar)
7. Yielding date: November 4, '98
8. Plot design: Random block, 4 replications
9. Result:

Treatment	Rate pt/Acre(=Ga/Acre=L/ha)	Yield 11/04/98							
		Seed cotton LBS/Acre	Seed		Lint		Farmer's Total Income		
			LBS/ Acre*	Price $/A**	LBS/ Acre ***	Price $/A ****	Price $/Acre	Percent (%)	Increased income $/A
ORGAMIN DA	1.6(=0.2 Ga/Acr =1.87 L/ha) x 4 applications	2,931.57	1,876.22	164.17	**1,055.35**	738.75	902.92	**(124.86)**	**179.76**
ECOLOGYC	1.6(=0.2 Ga/Acr =1.87 L/ha) x 4 applications	2,763.85	1,768.85	154.77	**995.00**	696.5	851.27	**(117.72)**	**128.11**
Control	untreated	2,347.88	1,502.63	131.48	845.25	591.68	723.16	(100.00)	--

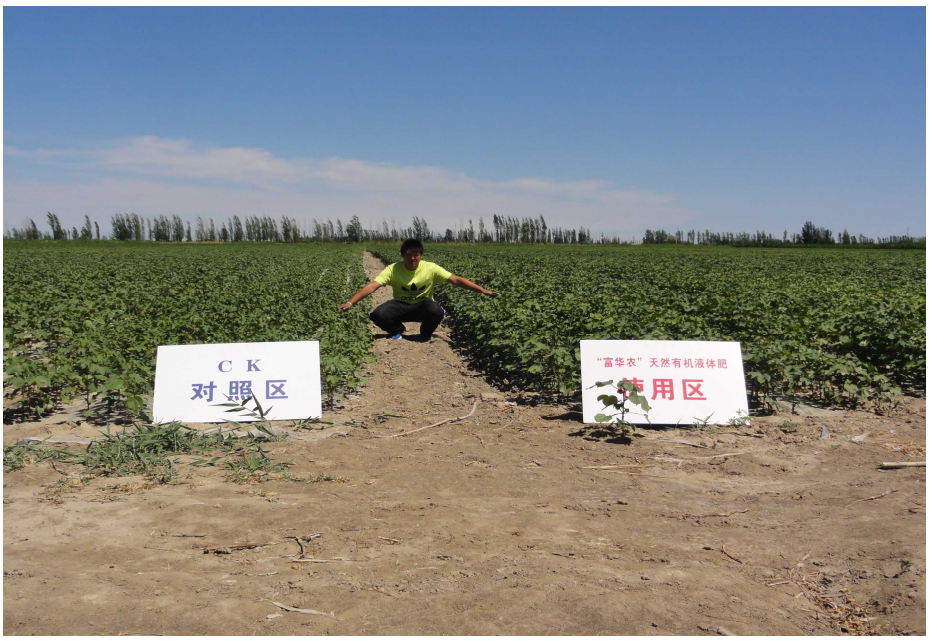
Obs.: *Seed LBS/A was calculated using 64 percent Gin turn over.
**Price of seed was calculated using av. price of $ 175/2,000 LBS.
***Lint LBS/A was calculated using 36 percent Gin turn over.
**** Price of lint was calculated using av. price of $ 0.70/LB.

Grower's Practical Field Use Report of ORGAMIN: Cotton/China

1. Reporter:
2. Cooperator: Mr. Wang Duo Bin
3. Period of the test: 2011 planting season
3. Purpose: Evaluation of the efficacies of ORGAMIN on Cotton
4. Location: Lao Sha Wan, Xinjiang Province, China
5. Crop and Cultivar: Cotton
6. Applications of ORGAMIN:
   5 applications at dose of 1.2 Liter/Ha x 5 times/season
   Tractor-mounted sprayer. ORGAMIN was diluted by about 400 times volume of water.
7. Harvest date: 2011
8. Plot design:No replication, Yield data was comparted to the previous year(2010)record data.
   Area applied: 6.6 Ha
9. Results:

	Yield: Kg/Ha	Percentage
2011/ORGAMIN 1.2 L/Ha x 5	**5,275**	**132**
2010 Non-treated Check	4,000	100

Obs.: * The year of 2011, Mr. Wang used ORGAMIN to his cotton. The yield of 2011 recorded over 30% increase from 2010.
**Pesticide use has reduced application times from 5 of 2010 to only 2 of 2011. The main targetted pests were red-spider mite and other.



The picture above was taken middle stage of growth.

Interin Report From Indian Cotton Field: In 2014 season, cotton farmer of Indu tested ORGAMIN DA. 4 times spray, before starting harvest, resulted excellent plant higfht and much increased number of flowers. The field partially started harvest in September. The owner expects 40-50 % increase of yield. A notable decrease of The Red-mite populationalso was observed at ORGAMIN DA-treated plot.

Right side of above picture is ORGAMIN DA-treated plot.

2 open cotton ball at right side of above picture are ORGAMIN DA-treated. Left ones are from non-treated control plot.

1. Reporter: Long Dinh Fruits Research Center
2. Cooperator:Engineer Nguyen Trinh Nhat Hang and farmer Nguyen Van Bay
3. Period of the test:1st spray on June 29, '95 to 2nd harvest on September 4, '95
4. Purpose: Evaluation of the efficacies of ORGAMIN on Dragon fruits
5. Location: Dang Hung Phuoc Village, Cho Gao District, Tien Giang Province
6. Crop: Dragon fruits(Hylocereus undulatus Haw), 3- 4 years old, Planted density:80 plants/1,000 ㎡
   1st harvest:August 8, '95 and 2nd harvest:September 4, '95
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:ORGAMIN sprays at dose of 0.2 %, Water consumption: 1 L/plant

<1st stage applications:>	<2nd stage applications:>
1st June 29, '95 at developed flower buds	1st July 20, '95 at developed flower buds
2nd July 7, '95 at 3 days after flowering	2nd August 1, '95 at 3 days after flowering
3rd July 15, '95 at 10 days after flowering	3rd August 8, '95 at 10 days after flowering
4th July 20, '95 at 15 days after flowering	4th August 16, '95 at 15 days after flowering

8. Formula of fertilizer:Organic manure 5 Kg, Super phosphate 0.4 Kg, Urea+DAP 0.5 Kg and KCl 0.1 Kg/plant/year
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:
   Effect of ORGAMIN to improve yield and quality of Dragon fruita

Treat-ment	Ratio of fruits over 350 g %		Fruits Yield Kg/plant		Quality factors			
	1st harvest Aug. 8	2nd harvest Sept. 4	1st harvest Aug. 8	2nd harvest Sept. 4	Brix digree(%)	Preserved fruits (Days)	Color ripen fruits	Thorn fruits
Control	42.8	21	5.6	3.3	13.8	5-7	Not lustrous	Mediu
ORGAMIN 0.2 %	47.2	27	7.1	4.8	14.2	5-7	Carmin, lustrous	Big

11. Discussion:1) Fruits weight(greater than 350 g) and brix degree were increasing by twice applications of ORGAMIN.
   2) Fruits color of ORGAMIN-treated plot was carmin and lustrous.

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Dor-Who,
3. Location: Shoei-Lin, Yunlin, Taiwan
4. Crop: Garlic, Var.: Black Leaf
5. Period of the test: Nov., '97 to Mar., 1998
6. Application of ORGAMIN : 1st: Dec. 15, '97, 1.3 L/ha diluted in 500 times volumes water, foliar
   2nd: Dec. 30, '97, 1.3 L/ha diluted in 500 times volume of water, foliar
   3rd: Jan. 14, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   4th: Jan. 29, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   5th: Feb. 14, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   6th: Feb. 28, '98, 1.3 L/ha diluted in 500 times volume of water, foliar

7. Reading Date: March, 1998
8. Plot design:
9. Result:

Treatment	Rate	Yield Evaluation		Percentages of garlic by size(%)		
	Liter/ha	Kg/ha	%	Large	Medium	Small
ORGAMIN	1.3 x 6 times	**18,101**	**180.7**	**51**	**41**	**8**
Control, untreated		10,017	100.0	29	45	26

10. Discussion:
    1) ORGAMIN extended the crop cycle of garlic.
    2) Not only yield increase, the size of each garlic of ORGAMIN tretment plot was much bigger than that of the plot of untreated control.

Report of Practical Use of **ORGAMIN** on **Garlic**/Taiwan No. TWNPR004

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Jih
3. Location: Shoei-Lin, Yunlin, Taiwan
4. Crop: Garlic, Var.: Black Leaf, Transplanted on Nov. 27, 1998
5. Period of the test: Nov., '98 to Mar., 1999
6. Application of ORGAMIN : 1st: Dec. 17, '98, 0.7 L/ha diluted in 500 times volumes water, foliar
   2nd: Dec. 28, '98, 0.7 L/ha diluted in 500 times volume of water, foliar
   3rd: Jan. 8, '99, 0.7 L/ha diluted in 500 times volume of water, foliar
   4th: Jan. 18, '99, 0.7 L/ha diluted in 500 times volume of water, foliar
   5th: Jan. 29, '99, 0.7 L/ha diluted in 500 times volume of water, foliar
   6th: Feb. 9, '99, 0.7 L/ha diluted in 500 times volume of water, foliar
   7th: Feb. 20, '99, 0.7 L/ha diluted in 500 times volume of water, foliar

7. Reading Date: March, 1999
8. Plot design: 2 replications with 100 ㎡ per block
9. Result:

Treatment	Rate	Yield Evaluation		Percentages of garlic by size(%)		
	Liter/ha	Kg/100 ㎡	%	Large	Medium	Small
ORGAMIN	0.7 x 7 times	**179**	**173.8**	**47**	**36**	**17**
Control, untreated		103	100.0	30	6	24

Report of Practical Use of **ORGAMIN** on **Garlic**/Taiwan TWNPR005

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Jih
3. Location: Shoei-Lin, Yunlin, Taiwan
4. Crop: Garlic, Var.: Black Leaf, Transplanted on Nov. 27, 1998
5. Period of the test: Nov., '98 to Mar., 1999
6. Application of ORGAMIN : 1st: Dec. 17, '98, 1.3 L/ha diluted in 500 times volumes water, foliar
   2nd: Dec. 28, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   3rd: Jan. 8, '99, 1.3 L/ha diluted in 500 times volume of water, foliar
   4th: Jan. 18, '99, 1.3 L/ha diluted in 500 times volume of water, foliar
   5th: Jan. 29, '99, 1.3 L/ha diluted in 500 times volume of water, foliar
   6th: Feb. 9, '99, 1.3 L/ha diluted in 500 times volume of water, foliar
   7th: Feb. 20, '99, 1.3 L/ha diluted in 500 times volume of water, foliar

7. Reading Date: March, 1999
8. Plot design: 2 replications with 100 ㎡ per block
9. Result:

Treatment	Rate	Yield Evaluation		Percentages of garlic by size(%)		
	Liter/ha	Kg/100 ㎡	%	Large	Medium	Small
ORGAMIN	1.3 x 7 times	**168**	**176.8**	**46**	**39**	**15**
Control, untreated		95	100.0	27	45	28

1. Reporter: RD Kukas, Tracs Corporation
2. Period of the test: May 15 '97 to August 8, '97
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on grape for wine.
4. Location: Tulare, California
5. Crop: Grape, variety:Chenin Blanc, age:13 years
6. Applications of ORGAMIN D-A:
   1st:May 12, '97, foliar
   2nd:June 4, '97, foliar
   3rd:June 19, '97, foliar
   4th:July 8, '97, foliar
   5th:July 25, 97, foliar
7. Yielding date: August 8, '97
8. Plot design:Random block, 6 replications
9. Results:

Tri No	Treatment Name	Rate oz/acre(=L/ha)	Vigor July 7 0-10	Yield Aug. 8 LB/2 vines	Yield Aug. 8 bunches/2 vines	Yield Aug. 8 LB/acre(%)	Brix Aug. 8 Degrees
1	ORGAMIN D-A	25.6(=1.87 L/ha) =0.2 Gal/acre	9.3	119.20	278.3	27,058.4(**109.2**)	19.02
2	ORGAMIN D-A	38.4(=2.81 L/ha) =0.3 Gal/acre	9.7	120.47	271.5	27,345.9(**110.4**)	19.03
3	Check	---	8.7	109.13	256.0	24,773.3(100.0)	18.08

Obs.:In 3 plots of Check and in 1 plot of ORGAMIN D-A 0.2 Gal/acre presence of symptoms of "MEASLES" were observed. Presence of this disease affect vigor and yield of the crop.

Experimental Results of **ORGAMIN** on **Grape**/Vietnam VIOF013

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Ninh Thuan Agricultural Extension Center)
2. Cooperator: Engineer Truong Van Xa, and farmer Dang Van Ngoc
3. Period of the test:Harvest:1st Oct. 8, '95 to last(4th) Oct. 23, '95
4. Purpose: Evaluation of the efficacies of ORGAMIN on Grape at farm land
5. Location: Phuoc My Village, Phang Rang Town, Ninh Thuan Province
6. Crop: Grape, Red Cardina, planted density:200 plants/1,000 ㎡
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Spray at dose of 0.2 % befor cutting branches: 1st:July 5, '95
   2nd:July 12, '95
   At Flowering: 3rd:July 25, '95
   4th:August 10, '95
   Frutifying: 5th:August 19, '95
   Fruits, 3mm: 6th:August 29, '95
8. Formula of fertilizer:Urea 30 Kg, Super phosphate 30 Kg, KCl 22 Kg and mixed fertilizer of NPK 20-20-15 150 Kg per 1,000 ㎡
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:

Fruits yield/500 ㎡:	ORGAMIN 0.2 % Plot: Av. 7.4 Kg/plant (**123.33**%)
	Untreated control Plot : Av. 6.0 Kg/plant (100 %)

11. Observation: * Leaves of grape trees of ORGAMIN-treated plot were dark blue.
    *Number of buds of ORGAMIN-treated plot was more than that of untreated plot.

Field Test of of AMIGROW(=**ORGAMIN**) on **Irish Potato**/Japan JPNPR0005

1. Reporter: R. Inoue-Pulsar International Corporation
2. Cooperator:
3. Period of the test:March to july, '87
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) on Irish Potato under field condition
5.Location: Farm of Mr. Nukanobu, Ongata, Hachioji, Tokyo
6. Crop:Irish Potato, Variety: Dansyaku
7. Treatments:
   Treatment 1:ORGAMIN 400 times water diluted x 7 times on May 13, 22, 27, June 3, 10, 18 and 26, '87
   Treatment 2:Untreated control
8. Formula of fertilizer:
9. Plot design:3 raws were devided into 2 parts, 1 for ORGAMIN treated and another for untreated control, by crossing line at center of lines. Each one plot had 30 plants of Irish potato.
10. Results:

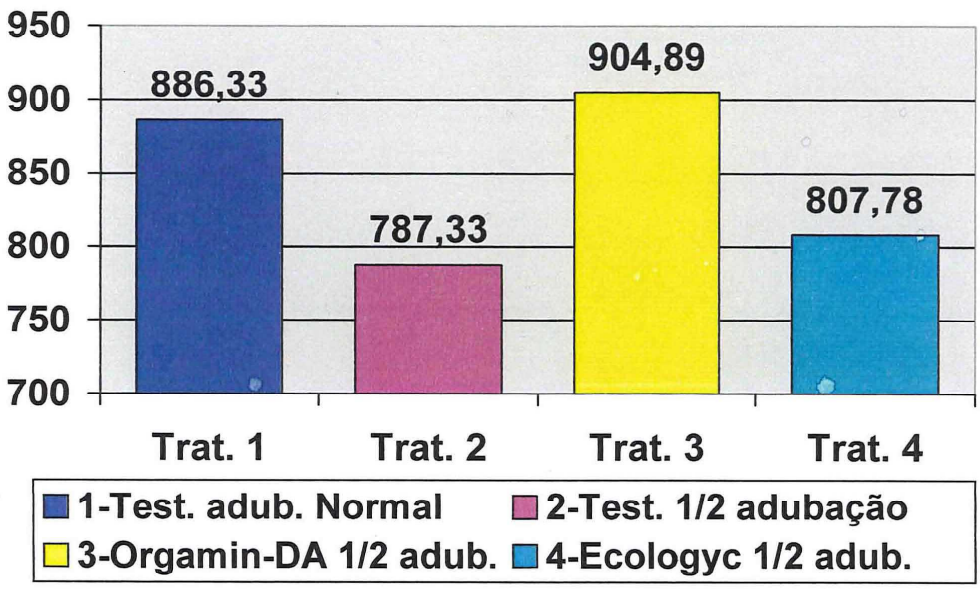
Treatment	YIELD				
	Number of tuber		Weight of tuber		
	Total	Av./plant	Total gr	Av. weight/tuber	Av. gr/plant
1. ORGAMIN (22 plants)	106	4.818	22,187	209.31	1,008.5 (**225.0**%)
2. Control (15 plants)	56	3.733	6,723	120.05	448.2 (100.0%)

11. Discussion:1. Main appearent cause of low yield of control plot is diseases like Alterinaria spot and Leaf roller virus, the symptoms of them occurred at tward end of crop cycle.(See fotoes.)
2. The crop of ORGAMIN-treated plot resisted well such diseases and continued to be breen for longer time than the crop of untreated control.
3. ORGAMIN treatment resulted to increase number of tuber per plant(129.07% over control) and much more in the growth of each tuber(174.4% over control). Yield per plant of ORGAMIN-treated plot reached to 225.0 % of control.

At the end of growth cycle, ORGAMIN-treated plants still keep green.

In the same day that left photo was taken, untreated control plants were almost dying mainly caused by "leaf roller virus".

1. Reporter: I. Kon-AGRO COSMOS (Cosmos Agrícola Produção e Serviços Ltda.)
2. Cooperator: Estaçã Shokucho Do Brasil Agríicola Ltda.
3. Purpose of the test:Evaluation of performance of ORGAMIN DA & ECOLOGYC on Kidney bean
4. Location:Engenheiro Coelho-State of São Paulo, Brazil
5. Period of the test: December, 2002 to March, 2003
6. Crop/Variety: Kidney bean(Phaseolus vulgares), Var. Carioca
7. Applications: 1st application: 2002/12/30, plant hight:14-16cm, consumption of the solution: 850 Litee
2nd application: 2003/01/14, with bloom, consumption of the solution: 1,250 Litee
3rd application: 2003/02/10, plant hight:76cm, consumption of the solution: 1,500 Litee
The dose of ORGAMIN DA and ECOLOGYC were 2.0 L/ha and 2.0 L/ha at all time.
8. Treatments: 1. Untreated control with normal(recommended) soil fertilizer
2. Untreated control **with half of the basic soil fertilizer recommended.**
3. ORGAMIN DA: **with half of the basic soil fertilizer recommended.**
4. ECOLOGYC: **with half of the basic soil fertilizer recommended.**
9. Results: Weights of beans harvested from each treatment were converted to **Kg/ha**, shown below.



TREATMENT	YELD, Beans Kg/ha	
	Treat 1 base	Treat 2 base
1. Untreated control with normal dose soil fertilizer	886.33(100%)	(112.6%)
2. Untreated control with 1/2 dose soil fertilizer	787.33(88.8%)	(100%)
3. ORGAMIN DA: with 1/2 dose soil fertilizer	904.89(**102.1%**)	(**114.9%**)
4. ECOLOGYC: with 1/2 dose soil fertilizer	807.78(91.1%)	(102.6%)

Observations:
1) Though the plots of ORGAMIN DA treatment were dosed with 50% of reccomended dose of the basic fertilizer to soil, have shown the highest yield of grain.
2) The plot of ECOLOGYC treatment have shown lower grain yield, slightyl over the treatment No. 2, which is the plot of 50% dose of reccomended soil fertilizer.
3) ORGAMIN DA treatment should be reccomended for Kidney Bean to increase yield and improvement of the seed quality produced. The dose reccomended is 2L/ha x 3 applications.

1. Reporter: Hokko Chemical Corporation
2. Cooperator:
3. Period of the test: October to December, '86
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) on lettuce in small scale field
5. Location: Farm of Hokko Chemical Research Center, Atsugi, Kanagawa
6. Crop: Lettuce, Variety:Sunlakes, Date of transplant:October 3, '86,
7. Treatments:
   Treatment 1: ORGAMIN sprays at dose of 6.0 L/ha, x 6 times
   1st October 3, 2nd Oct. 28, 3rd November 7, 4th Nov. 14, 5th Nov. 18 and 6th Nov. 28, '86
   Treatment 2: Untreated control
8. Formula of fertilizer:
9. Plot design:2 replications, 1 block with 2 ㎡
10. Results:

Treatment	No. of plants yielded	Size Diameter	%	Weight Av./plant	percent(%)
1.ORGAMIN 6.0 L x 6	56	14.2 ㎝	106	749.1 gr	**109**
2. Control	57	14.2 ㎝	100	687.1	100

1. Reporter: Long Dinh Fruits Research Center
2. Cooperator: Vietnam Pesticide Company
3. Period of the test:1st spray on June 15, '95 to harvest on October 4, '95
4. Purpose: Evaluation of the efficacies of ORGAMIN on Longan fruits
5. Location: Long An Village, Chau Thanh District, Tien Giang Province
6. Crop:Longan, 4 years old
7. Treatments:

Treatment 1:Untreated control
Treatment 2:ORGAMIN sprays at dose of 0.2 %: 1st at Bloom
Treatment 3:ORGAMIN sprays at dose of 0.3 % 2nd to young fruits
3rd at 15 days after 2rd spray
4th at 15 days after 3rd spray

Treatment 4:Libspray sprays at dose of 0.5 %: 1st at before flowering
2nd at after fructifying
3rd at 15 days after 2nd spray
4th at 15 days after 3rd spray

8. Formula of fertilizer:NPK 16-16-8 300 Kg/Ha/Year dosed after harvest in '94
9. Plot design:Randomized complete block with 3 replications. Each plot with 2 plants.
10. Other pesticides:Monocrotofos at 0.25 % on June 22, June 29, July 24 and July 31 to control Tessaratoma longicorn and Dichocrosis punctiferalis. To each spray of foliar fertilizers, adhesive TOBA-ST was mixed at concentration of 0.125 %
11. Results:

Effect of ORGAMIN to prevent young fruits' dropping off, yield of fruits and it' quality

Treatment	% Dropping off						Yield					Quality factors	
	Days after 2nd application					Total of	Av. no.	Total	Av wt	Calcu-	Fruits	Brix	Color
	10	20	30	40	50	5 stages	frit/cl.	no cl/pl	fruits(g)	lated kg/pl	yield kg/pl(%)	Av, 30 fruits	(1-5)*
Control	48.7	25.3	19.3	10.1	11.4	73.5	8.97	143.7	10.4	13.0	15.17(100)	22.11	2.85
ORGAMIN 0.2 %	39.5	22.6	4.7	3.5	2.2	56.3	10.92	156.7	12.1	20.8	17.8 (**118**)	21.79	3.00
ORGAMIN 0.3 %	31.7	24.9	6.9	3.3	1.8	54.0	13.91	155.0	12.7	27.7	19.17(**126**)	20.63	3.00
Libspray 0.5 %	31.7	22.3	10.9	2.4	1.9	58.6	13.02	148.0	11.2	22.0	15.83(104)	19.88	2.64
cv %	21.3	50.5	54.2	48	50	12	15.1	13	5.8	20.8	18.7	3.6	

Obs.:* Color leading of fruits peel:Scale: 1 - 5 = Dark yellow - Light white

12. Discussion:1) ORGAMIN at 0.2 %, ORGAMIN at 0.3 % and Libspray at 0.5 % decreased young fruits' dropping off
2) At all treatment, fruits yield was higher than untreated. Highest fruits yield was recorded in ORGAMIN 0.3 % plots.
3) It is recommendable to spray ORGAMIN to Longan at 0.3 % at bloom and 3 times with 15 days intervals at young fruits stages.

1. Reporter: I. Kon-AGRO COSMOS(Cosmos Agrícola Produção e Serviços Ltda.)
2. Cooperator: Sitio Conceição, Conchal-SP
3. Purpose of the test:Evaluation of performance of ORGAMIN DA & ECOLOGYC on Mango
4. Location:Conchal-State of São Paulo, Brazil
5. Period of the test: July, 2003 to February 2004
6. Crop/Variety: Mango(Mangifera indica), Var. Palmer
7. Applications: 1st application: 20 days before bloom
2nd application: Imediately after bloom
3rd application: 30 days before harvest
4th application: 7 days before harvest

ORGAMIN DA & ECOLOGYC were diluted by 500 times in water(200 ml product/100 L water) for whole tree spray.

8. Treatments: 1. Untreated control
2. ECOLIFE(Local Product) 400 ml
3. ORGAMIN DA 200 ml/100 L
4. ECOLOGYC 200 ml/100 L
9. Results: Number of the fruits(from the test plots), total weight of fruits(equivalent:ton/ha) and Brix were counted.

Treatment	Total Number of Fruits	Total weight of fruits (equivalent:ton/ha)	Sugar Content Brix
Untreated Control	110	54.8 (100%)	14.1
ECOLIFE	92	41.0 (74.8%)	12.8
ORGAMIN DA	**120**	**58.7 (107.1%)**	**14.5**
ECOLOGYC	101	47.8 (87.2%)	13.3

Peach:
1. Reporter: Odagiri
2. Location: Yamanashi Pref
3. Variety: Yamanashi Hakuhou
4. Application of ORGAMIN D-A: 3 times in a season at 1000 times dilution in water. ≒ 3.0 L/ha(=0.32 Gal/acre)
5. Result:

Size	Percentage of fruits by size 1995(tested year)	1994(previous year)
No. 11	1 %	0 %
15	10	0.5
18	31	3.2
20	38	15.5
22	15	36.0
25	8	34.7
28	0.8	14.2

Weight of commercialized fruits was increased by about 10 % in the year that Mr. Odagiri started to use ORGAMIN D-A, than the previous year. In 95, some peach trees of this farm were cut to reduce planted acrage than 94 by 10 %.

Obs.:Size number shows the number of fruits which occupy a standard sized carton box.

Reports of Practical Uses of **ORGAMIN D-A** on **Peach** /Japan JPNPR0015

Peach:
1. Reporter: Odagiri
2. Location: Yamanashi Pref
3. Variety: Kanoiwa Hakuhou
4. Application of ORGAMIN D-A: 3 times in a season at 1000 times dilution in water. ≒ 3.0 L/ha(=0.32 Gal/acre)
5. Result:

Size	Percentage of fruits by size 1995(tested year)	1994(previous year)
No. 11	0.5 %	0 %
15	0.5	0.5
18	10	2.4
20	41	15.5
22	29	42.9
25	19	33.0
28	1.0	10.9

Weight of commercialized fruits was increased by 53.9 % in the year that Mr. Odagiri started to use ORGAMIN D-A, than the previous year This yield increase was ovtained mainly by increased size and drascally reduced off-spec fruits.

Obs.:Size number shows the number of fruits which occupy a standard sized carton box.

Green House Test of **ORGAMIN** on **Peach**/Japan JPNPR0012

1. Reporter: R. Inoue-Pulsar International Corporation
2. Cooperator: Mr. Y. Nozawa, Mr. K. Oshima-Japan Carlit Co., Ltd.
3. Purpose of the test:Evaluation of performance of ORGAMIN to Peach
4. Location:Farm of Mr. Y. Nozawa, Ichimiya, Yamanashi
5. Period of the test: March to June, '92
6. Crop/Variety:Peach, Var. Hikawa
7. ORGAMIN application: Orgamin diluted by 600 times in water, sprayed by speed-sprayer.
   Timing of application: 1st: Early March, soon after petal fall
   2nd: 2 weeks after 1st application
8. Treatments: 1. OPRGAMIN
   2. Untreated control
9. Results: 1-Chlorophyll density of samples, 6 3rd leaves of each treatment collected from tips of shoots randomly selected were checked on May 28, using Chlorophyll mesuring device "MINOLTA".

Chlorophyll Density(SPDA value)

Treatment	leaf position	1	2	3	4	5	6	Average(%)	
1. ORGAMIN	Leaf tip	41.0	43.4	43.4	42.8	40.2	40.5	41.9	(**125.4** %)
	Leaf base	44.1	45.8	41.7	40.6	38.4	37.6	41.6	(**114.9**)
2. Control	Leaf tip	34.1	38.8	29.0	34.1	33.2	31.2	33.4	(100.0)
	Leaf base	36.9	32.8	33.5	43.6	35.6	35.0	36.2	(100.0)

2-Size of leaves which were used for cholorophyll density counting. All of the leaves were spread on the glass of copy machine(RICOPY FT4530) and copied on graph

Treatment		1	2	3	4	5	6	Average(%)	
1. ORGAMIN		39.60	41.28	33.87	37.0	32.45	25.91	35.02 c m^2	(**187.2**5 %)
2. Control		22.76	23.58	19.77	17.1	15.55	13.47	18.70	(100.0)

Obs.: 1) Fig. is a area calculation sheet of the sample leaves.
2) At the farm Nozawa(farm "N"), off-spec fruits used to be produced due to injuries of some mechanical causes and mal-formation due to physiological causes at ratio of 2 to 3 % of total fruits in the past however, in the test, ORGAMIN-treated plot produced only 1 fruits among totral 900 fruits yielded was off-spec. Percentage wise, it is 0.11 %.
3) At another farm "A", peach greenhouse usually has produced about 10 % of off-spec fruits but, in the greenhouse where ORGAMIN spray test was done this year, off-spec of mal-formation has desappeared.
4) Average brix level of ORGAMIN treatment plot of Farm"A" ranged 13 to 14 while, brix levels of fruits of neighboring farms was about 12 in average.
5) ORGAMIN-treated peach trees of both farms "N" and "A" showed further vigourous shoot growth than control.
6) Though during all the time of after petal-fall to harvest, the Farm"A" did not use miticidebut, almost nothing of red mite which has been usual pest of greenhouse peach, was present.
7) Sizes of the fruits harvested from ORGAMIN-treated greenhouse of the Farm"A" were one class upper than that have been experienced in the past years.

Discussion:
1) Unlike urea, ORGAMIN is not a "Nitrogen rich" fertilizer but, application of ORGAMIN made darker colored leaves with almost 90 % more of surface area of the leaves than control at least at certain stage of growth. Under unfavorable light conditions of greenhouse where tha light volume is estimated to be 60 % of the open field, ORGAMIN performance of increase leaf surface area and increase chlorophyll density seem to improve quality of the peach fruits.
2) Other experiences on preventive effects of ORGAMIN spray, to red and leaf mites or spider mites of crops were reported on chrysanthemum, orange, cotton and "Shiso". The reason of this effect is explaned that complete plant respiration accerelated by plant enzyms produced by amino-acids contained in ORGAMIN, clean oviposition atractants which are some by-products of incomplete respiration.

1. Reporter:Sankei Chemical Ltd.
2. Period of the test:May15-September 8, 1996
3. Purpose: To observe performance of ORGAMIN D-A in Japanese Pear
4. Location:Tottori Pref. Akasaki-tyou
5. Crop/Variety:Japanese Pear/Nijyusseiki(Green Type)
6. ORGAMIN D-A Applications: 3 times, water solution at 3000 L/ha(=320 Gal/acre) were applied to a separated plot of a commercial firm. Beside the ORGAMIN D-A treated area, an area of non treated control was set.
   1st:May 15 0.10 % solution(=3 L of ORGAMIN D-A/ha=0.32 Gal/acre) mixed to organic copper at 0.1%, Polyoxin AL at 0.15% and SpracideWP at 0.15%
   2nd:June 2 0.10% solution(=3 L of ORGAMIN D-A/ha=0.32 Gal/acre) mixed to "DIARIN" WP at 0.6%, and AdmireWP at 0.05%
   3rd:June27 0.10 % solution(=3 L of ORGAMIN D-A/ha=0.32 Gal/acre) mixed to organic copper at 0.1%, Polyoxin AL at 0.15% and Kirval at 0.1%
7. Yielding: August 28 to September 8
8. Evaluation: All of yielded fruits were classified by classifier machine featured with a sensor of color, size and cleanness. Sugar levels were checked with Blix meter.
   Size levels are from small to large, S, M, L, 2L, 3L, 4L, and 5L
   Quality levels based on the color and cleanness are Excellent, Good and Fare which are commercializable. Off-spec fruits are classified as "-".
   9,300 fruits from ORGAMIN D-A treated plot and 2,500 fruits from control plot were automatically classified by the sensor.
9. Result:

Table 1. Classification of The Fruits, ORGAMIN D-A treated Pear

Size	Excellent	Good	Fare	-	Total	Percentage(%)
5 L	15	12	6	6	39	0.4
4 L	472	250	116	70	908	9.7
3 L	2,138	1,162	450	158	3,908	41.9
2 L	1,335	1,070	358	138	2,901	31.1
L	487	472	144	49	1,152	12.3
M	98	166	64	16	344	3.7
S	19	37	15	13	84	0.9
Total fruits number	4,564	3,169	1,153	450	9,336	100.0
Percentage(%)	48.9	33.9	12.4	4.8	100.0	
Total weight(KG)	1,546.2	1,038.1	381.9	151.2	3,117.4	
Percentage(%)	49.6	33.3	12.2	4.9	100.0	
Av. weight/fruit	338.8	327.5	331.2	336.0	333.9	

Table 2. Classification of The Fruits, Non-Treated Pear

Size	Excellent	Good	Fare	-	Total	Percentage(%)
5 L	0	0	0	0	0	0.0
4 L	6	5	5	3	19	0.7
3 L	167	172	64	17	420	16.3
2 L	432	472	159	55	1,118	43.4
L	250	350	90	40	730	28.3
M	88	139	29	12	268	10.4
S	2	15	2	2	21	0.8
Total fruits number	945	1,153	349	129	2,576	100.0
Percentage(%)	36.7	44.7	13.5	5.0	100.0	
Total weight(KG)	288.3	345.6	106.9	38.7	779.5	
Percentage(%)	37.0	44.3	13.7	5.0	100.0	
Av. weight/fruit	305.1	299.7	306.3	300.0	302.6	

Table 3. Comparison of Sugar Content(Brix Level)

	September 1st. '96	September 25, '96
a. ORGAMIN D-A TREATED	11.15(n=12)	12.56(n=13)
b. Non Treated Control	10.3(n=3)	11.68(n=15)

Observations:

① Size of fruits in the ORGAMIN D-A treated plot was increased by one step under Japanese pear market classification standard. Average weight of the fruits of ORGAMIN D-A treated was superior than that of non treated control by 10.34 %.
② Percentage of the fruits qualified as "Excellent" in the ORGAMIN D-A treated plot was 48.9% against 36.7% of non treated plot.
③ Sugar content of fruits of ORGAMIN D-A treated plot showed nearly 1 point superior than that of non treated control.

1. Reporter: Luiz Paschoal Cuglieri, Tropical Technica Agricola Ltd., Brazil
2. Cooperator:
3. Period of the test: First application on November 25, '88 to harvest March 4-5, '89
4. Purpose: Evaluation of the efficacies of ORGAMIN on Peanuts
5. Location: Fazenda Santa Rosa II, Quata-Sao Paulo
6. Crop:Peanuts, Variety:Tatu branco
7. Treatments:
   Treatment 1:ORGAMIN 4.2 L/Ha x 4 times
      1st: November 25, '88, 2nd: December 12, '88, 3rd: December 27, '88 and 4th: January 12, '89
   Treatment 2: Untreated control
8. Formula of fertilizer:Basic 4-30-10, 208 Kg/ha.
9. Plot design:Total 9.6 ha was used to make 13 replications of 2 treatments in 26 plots. Each plot having 66.12 ㎡ of 12 rows.
10. Results:

Treatment	Yield Kg/plot			
	Area 1	Area 2	Total	%
ORGAMIN 4.2 L x 4	34 44 33 44 35.5 40 31.5	45 34.5 33 30 44 33.5	482.0	**118.6**
Control	28 30 32 35 30 30. 33	36 29 40.5 24 30.5 28	406.5	100

Obs.: 1) Plant color of ORGAMIN-treated plots was well accented dark-green while that of control plots was much lighter.
2) In ORGAMIN plots, crops went to die about 10 days later than that of control.
3) It was aproved that ORGAMIN never cause excessive plant growth.

Photo shows a difference of leaf colors of ORGAMIN-treated plot(near side) and untreated control plot(furtherside).

1. Reporter: Dr. G. Aparecido de Aquino Guedes-Escola Superior de Agricultura de Lavras
2. Cooperator:
3. Period of the test:August, '85 to july, '86
4. Purpose: Evaluation of the efficacies of ORGAMIN on Peanuts
5. Location: ESAL-Lavras, minas Gerais, Brazil65. Crop: Peanuts, variety:Tatui
6. Treatments:

Treatments	Application timings
Treatment 1:ORGAMIN 6.0 L/Ha x 3 times	1st: January 7, 86
Treatment 2:Product A 6.0 L/Ha x 3 times	2nd: January 30, '86
Treatment 3:Product B 6.0 L/Ha x 3 times	3rd: February 20, '86
Treatment 4:Untreated control	

7. Formula of fertilizer:Basic 4-16-8, 400 Kg/ha.
8. Plot design:4 replicated blocks mesured 40 ㎡(10 m x 4 m)
9. Results:

Treatment	Yield Kg/Ha	Yield %
ORGAMIN 6.0 L x 3	1,410	**130**
Product B 6.0 L x 3	1,285	116
Product A 6.0 L x 3	1,268	117
Control	1,085	100

Test Results of Foliar Application of **ORGAMIN** on **Peanuts** in Dry Season/Brazil BROF0003

1. Reporter: Dr. M. E.Maechetti-Escola Superior de Agricultura de Paraguaçu Paulista
2. Cooperator:
3. Period of the test:April to november, '86
4. Purpose: Evaluation of the efficacies of ORGAMIN on Peanuts in dry season
5. Location: Model farm of ESAPP, Paraguaçu Paulista, Sao Paulo, Brazill
6. Crop: Peanuts, variety:Tatui, Sawn April 7, '86, Germination:April 11, Spacing:60 10 cm
7. Treatments:
   Treatment 1:Basic fertilizer+ORGAMIN 6.0 L/Ha x 1 application
   Treatment 2:ORGAMIN treatment to seed+ORGAMIN 6.0 L/Ha x 2 applications
   Treatment 3:ORGAMIN 6.0 L/ha x 3 applications
   Treatment 4:ORGAMIN 6.0 L/ha x 4 applications
   Treatment 5:ORGAMIN 6.0 L/Ha x 2 applications+ORGAMIN-Ca 6.0 L/Ha x 1 application
   Treatment 6:Untreated control without fertilizer
   Treatment 7:Untreated control with basic fertilizer
8. Formula of fertilizer:Basic 0-30-10, 600 Kg/ha.
9. Plot design:4 replicated blocks mesured 10 ㎡(5 m x 2 m)
10. Results:

Treatment	Yield With shell Kg/Ha	(%)
1) Basic fertilizer+ORGAMIN 6.0 L/Ha x 1 application	1,877	**118**
2) ORGAMIN seed+ORGAMIN 6.0 L/Ha x 2 applics.	1,957	**125**
3) ORGAMIN 6.0 L/ha x 3 applications	1,637	**103**
4) ORGAMIN 6.0 L/ha x 4 applications	1,423	90
5) ORGAMIN 6.0 L/ha x 2 applics.+ORGAMIN-Ca 6.0L/ha x 1 appl.	1,765	**111**
6) Untreated control without fertilizer	1,584	100
7) Untreated control with basic fertilizer	1,648	104

Experimental Results of **ORGAMIN** on **Peanuts**/Vietnam VIOF018

1. Reporter:VIETNAM PESTICIDE COMPANY(Cooperation with Thua Tien Agricultureal Extension Center)
2. Cooperator: Engineer Dan Van Thuan
3. Period of the test:Sawing March 2, '95 to harvest June 10, '95
4. Purpose: Evaluation of the efficacies of ORGAMIN on Peanuts at farm land
5. Location: Huong Long Village, Hue City
6. Crop: Peanuts, Lac giay(local variety)
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Sprays at dose of 0.25 %: 1st:Before flower and
   (Water consumption:480 L/Ha) 2nd at end of flower
8. Formula of fertilizer:Urea 60 Kg, P2O5 300 Kg, KCl 80 Kg and manuring lime 200 Kg and Ash of wood 2,000 Kg per Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:

Nuts yield/500 ㎡:	ORGAMIN 0.25 % Plot: 130 Kg/500 ㎡(=2.60 MT/Ha) (**118.18**%)
	Untreated control Plot : 110 Kg/500 ㎡(=2.20 MT/Ha) (100 %)

11. Observation: * Leaves of crop of ORGAMIN-treated plot were dark blue.
   * Plant hight of ORGAMIN-treated plot was increased.
   * Brown spot(=Cercospora sp.) decreased in the ORGAMIN plot.
   * Peanuts plants of ORGAMIN-treated plot were tolerated drought.

Experimental Results of **ORGAMIN** on **Peanuts**/Vietnam VIOF019

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Hue VIPESCO Branch)
2. Cooperator: Engineer Le Thi Da
3. Period of the test:Sawing March 12, '95 to harvest June 20, '95
4. Purpose: Evaluation of the efficacies of ORGAMIN on Peanuts at farm land
5. Location: Huong Long Village, Hue City
6. Crop: Peanuts, Lac giay(local variety)
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Sprays at dose of 0.25 %: 1st:Before flower and
   (Water consumption:320 L/Ha) 2nd at end of flower
8. Formula of fertilizer:Urea 60 Kg, P2O5 300 Kg, KCl 80 Kg and manuring lime 200 Kg and Ash of wood 2,000 Kg per Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
10. Results:

Nuts yield/500 ㎡:	ORGAMIN 0.25 % Plot: 120 Kg/500 ㎡(=2.40 MT/Ha) (**122.44** %)
	Untreated control Plot : 98 Kg/500 ㎡(=1.96 MT/Ha) (100 %)

11. Observation: * Plant hight of ORGAMIN-treated plot was 17 cm against control, 15 cm, 15 days after application.
   * Number of leaf worm the ORGAMIN plot was 7 to 10 larvae/㎡ against 20 to 22 larvae/㎡ at control plot. .
   * Peanuts plants of ORGAMIN-treated plot were tolerated drought.

EVALUATION of **ORGAMIN DA** on **Prunes**/USA-98 USOF0023

1. Reporter: RD Ron Kukas, Tracs Corporation
2. Period of the test: May 16, 1998 to September 9, 1998
3. Location: Farmersville, California
4. Crop: Prunes, Var.: D'Agen
5. Applications of ORGAMIN DA: 1st: March 16, '98 at 5 % bloom stage,
   2nd: April 15, foliar at petal fall,
   3rd: May 8, foliar at 0.5 inch fruits,
   4th: June 3, foliar at 0.75 inch fruits,
   5th: July 7, foliar at 1.0 inch fruits.
6. Harvest date: September 9, '98
7. Plot design: Random block, 4 replications, each plot 22 ft x 216 ft
8. Result:

Treatment	Rate oz/Acre	Yield, September 9			
		LB/100 fruits	LB/Acre	Dried Fruitston/Acre(%)	$/Acre
ORGAMIN DA	25.6(=0.2 Gal)	4.63	**16,867.5**	2.715(**128.8** %)	**2,172.0**
Control, untreated		4.43	13,055.3	2.108(100 %)	1,686.0

Obs.:LBs per 100 fruits = The weight of 100 prunes randomly selected from 4 trees in each replication;
LBs per Acre = The calculated LBs of prunes per Acre;
Dried fruits in tones per Acre = Calculated tones of dried prunes per Acre(It takes 3.1 tones of fresh fruits to equal 1 ton of dried prune);
Dollar per Acre = The calculated income per Acre(Dried prune were worth approximately $ 800.0 per ton).

1.Reporter: Dr. G. A. de Aquino Guedes-Escola Superior de Agricultura de Lavras
2. Period of the test: November 4, '85 to harvest in April '86
3. Purpose: Evaluation of the efficacies of ORGAMIN on Rice
4. Location: ESAL - Lavras, Minas Gerais, Brazil
5. Crop: Rice, Variety:IAC-47
6. Treatments:
   Treatment 1:ORGAMIN 6.0 L/ha x 3 times
   Treatment 2:Product A 6.0 L/ha x 3 times
   Treatment 3:Product B 6.0 L/ha x 3 times
   Treatment 4:Untreated control

Application timings:
1st: Dec 27, '85
2nd: January 21, '86
3rd: February 20, '86

7. Formula of fertilizer:Basic 4-16-8 400 Kh/ha
8. Plot design:4 replications of blocks mesured 40 ㎡(10 m x 4 m)
9.Results:

Tri No	Treatment Name	Rate L/Ha	Yield Kg/ha.	Percent(%)
1	ORGAMIN	6.0 x 3 times	3,161	110
2	Product A	6.0 x 3 times	2,802	97
3	Product B	6.0 x 3 times	2,930	102
4	Control	-------	2,876	100

Test Result of Foliar Application of **ORGAMIN** on **Rice**(84/85)/Brazil BROF0008

1. Reporter: Dr. Akihiko Ando-Escola Superior de Agricultura "Luiz de Queiroz, USP
2. Period of the test: November 4, '84 to harvest in March '85
3. Purpose: Evaluation of the efficacies of ORGAMIN on Rice
4. Location: Experimental Field of ESALQ- Piracicaba, Brazil
5. Crop: Rice, Variety:IAC-1246, Seeding:November 6, '84
6. Treatments:
   Treatment 1:ORGAMIN 15.0 L/ha x 1 application at ramification stage
   Treatment 2:ORGAMIN 15.0 L/ha x 1 application at sprouting stage
   Treatment 3:ORGAMIN 15.0 L/ha x 1 application at earing stage
   Treatment 4:ORGAMIN 15.0 L/ha x 2 applications at ramification and sprouting stages
   Treatment 5:ORGAMIN 15.0 L/ha x 2 applications at ramification and earing stages
   Treatment 6:ORGAMIN 15.0 L/ha x 2 application at sprouting and earing stages
   Treatment 7:ORGAMIN 15.0 L/ha x 3 applications at ramification, sprouting and earing stagesl
   Treatment 8:Untreated control
7. Formula of fertilizer:
8. Plot design:2 replications of blocks mesured 8 ㎡(4 m x 2 m)
9.Results:

Tr. No.	Treatment ame	Rate L/Ha	Timings	Yield Kg/ha.	Percent(%)
1	ORGAMIN	15.0 x 1 times	(1)	803	144
2	ORGAMIN	15.0 x 1 times	(2)	1,087	195
3	ORGAMIN	15.0 x 1 times	(3)	1,047	188
4	ORGAMIN	15.0 x 2 times	(1),(2)	883	159
5	ORGAMIN	15.0 x 2 times	(1),(3)	917	165
6	ORGAMIN	15.0 x 2 times	(2),(3)	807	145
7	ORGAMIN	15.0 x 3 times	(1),(2),(3)	950	171
8	Control	--------		557	100

Timing code: (1):Ramification stage, (2):Sprouting stage, (3):Earing stage

Test Result of Foliar Application of **ORGAMIN** on **Rice** (85/86)/Brazil BROF0009

1. Reporter: Dr. Akihiko Ando-Escola Superior de Agricultura "Luiz de Queiroz, USP
2. Period of the test: November 11, '85 to harvest in March '86
3. Purpose: Evaluation of the efficacies of ORGAMIN on Rice
4. Location: Experimental Field of ESALQ- Piracicaba, Brazil
5. Crop: Rice, Variety:IAC-1246, Seeding:November 11, '85
6. Treatments: Treatment 1:ORGAMIN 15.0 L/ha x 1 application at 70 days after seeding
Treatment 2:ORGAMIN 15.0 L/ha x 1 application at 85 days after seeding
Treatment 3:ORGAMIN 15.0 L/ha x 1 application at 100 days after seeding
Treatment 4:ORGAMIN 15.0 L/ha x 2 applications at 70 and 85 days after seeding
Treatment 5:ORGAMIN 15.0 L/ha x 2 applications at 70 and 100 days after seeding
Treatment 6:ORGAMIN 15.0 L/ha x 2 application at 85 and 100 days after seeding
Treatment 7:ORGAMIN 15.0 L/ha x 3 applications at 70, 85 and 100 days after seeding
Treatment 8:Untreated control
7. Formula of fertilizer:
8. Plot design:Random blocks with 3 replications, each plot mesured 8 ㎡(4 m x 2 m)
9.Results:

Tr. No.	Treatment ame	Rate L/Ha	Timings	No.Total ear	Length ear av	Yield total Kg(%)
1	ORGAMIN	15.0 x 1 times	(1)	1,649	22.4	4,646 (122)
2	ORGAMIN	15.0 x 1 times	(2)	1,367	19.9	3,575 (94)
3	ORGAMIN	15.0 x 1 times	(3)	1,312	21.6	3,488 (92)
4	ORGAMIN	15.0 x 2 times	(1),(2)	1,204	18.1	2,988 (79)
5	ORGAMIN	15.0 x 2 times	(1),(3)	1,199	23.5	3,829 (101)
6	ORGAMIN	15.0 x 2 times	(2),(3)	1,448	23.5	4,441 (117)
7	ORGAMIN	15.0 x 3 times	(1),(2),(3	1.534	24.1	4,445 (117)
8	Control	--------		1,235	22.2	3,795 (100)

Timing code:
(1):70 DAP
(2):85 DAP
(3):100 DAP
Obs.:DAP=Days after planting(seeding)

Test Result of AMIGROW(=**ORGAMIN**) on **Rice** in Field/Japan JPNPR0007

1. Reporter: Iwao Honda, Japan Carlit Co., Ltd.
2. Period of the test: June to October, '87
3. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) on Rice in field
4. Location: Farm of Mr. Matsuji Tsumaru, Shibukawa, Gunma
5. Crop: Rice, Variety:Himenamoti, Seeding:May 7, '87 and transplanted on June 16
6. Treatments:
Treatment 1:ORGAMIN 400 times dilution in water x 3 times:1st in seedling case 15 L/100 cases, each case mesured 40 x 60 cm, 2nd:prior to ear sprouting stage, 100 L/1,300 ㎡, 3rd:Soon after bloom, 100 L/1,300 ㎡
Treatment 2:Untreated control
7. Formula of fertilizer:
8. Plot design:1 replication, each plot mesured 1,300 ㎡
9. Result:

Treatment	Height of seedlings	No. of stem/stock	No. of ear/stock	Length of ear	No. of grain/ear	Yield gr/18 stocks
1.ORGAMIN	19 ㎝	17.7	14.9	18.25 ㎝	110.7	824.6 gr (124.2%)
2. Control	17 ㎝	14.5	13.8	18.34 ㎝	108.6	664.0 gr (100.0%)

10: Obs.: 1)Color of young seedlings of ORGAMIN-treated plot was deep green and sound and yellowish of control.
2)No seedling of ORGAMIN-treated plot suffered damage caused by transplanting while, seedlings of control plot suffered damage which has recovered later.
3)Number of stem was slightly superior at ORGAMIN plot. No difference was between treated and control plot on appearance.
4)Difference was obvious about weight of ears of ORGAMIN plot which were hung down when compared to control.
5)Plant hight of ORGAMIN plot was slightly shrter than of control.
6)It was observed that the root systems of plants of ORGAMIN-treated plot was well developed in number and length.
7)Increased yield of grain in weight of ORGAMIN-treated rice may be attributed to higher level of maturation.

Trial Results of **ORGAMIN** on **Rice plant**/Vietnam VIOF002

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Hue Agric. Univ.)
2. Period of the test:Transplant:June 8, '95 to harvest in autum '95
3. Purpose: Evaluation of the efficacies of ORGAMIN on transplanted paddy rice
4. Location: Huong So Village, Hue City, Thua Thien Hue Province
5. Crop: Rice, variety:CN2(IR 19746-11-33), 28 days old seeding, density 49 hills/m²
6. Treatments:
   Treatment 1:Untreated control
   Treatment 2:1st application at begining of Tillering stage(15 DAT) and 2nd at Booting(40 DAT) both ORGAMIN at 1.5 L/Ha
   Treatment 3:1st application at begining of Tillering stage(15 DAT) and 2nd at Booting(40 DAT) both ORGAMIN at 2.0 L/Ha
   Treatment 4:1st application at begining of Tillering stage(15 DAT) and 2nd at Booting(40 DAT) both ORGAMIN at 2.5 L/Ha
   Treatment 5:1st application at begining of Tillering stage(15 DAT) and 2nd at Booting(40 DAT) both Libspray at 1.6 L/Ha
   Treatment 6:1st application at begining of Tillering stage(15 DAT) and 2nd at Booting(40 DAT) both Komix at 1.6 L/Ha
   Treatment 7:1st application at begining of Tillering stage(15 DAT), 2nd at Booting(40 DAT) and 3rd at Full heading(65 DAT) all ORGAMIN at 1.0 L/Ha
   Treatment 8:1st application at begining of Tillering stage(15 DAT), 2nd at Booting(40 DAT) and 3rd at Full heading(65 DAT) all ORGAMIN at 1.33 L/Ha
   Treatment 9:1st application at begining of Tillering stage(15 DAT), 2nd at Booting(40 DAT) and 3rd at Full heading(65 DAT) all ORGAMIN at 1.66 L/Ha
   Treatment 10:1st application at begining of Tillering stage(15 DAT), 2nd at Booting(40 DAT) and 3rd at Full heading(65 DAT) all Libspray at 1.6 L/Ha
7. Formula of fertilizer:Urea 260 Kg/Ha(100 Kg at 7 DAT and 160Kg at 45 DAT)
   KCl 100Kg/Ha(40 Kg at 7 DAT and 60 Kg at 45 DAT)
   Super phosphate:100 Kg/Ha at 1 DBT as basic
8. Water management:3-10 cm, and hand weeded at 20 DAT
9. Plot design:Randomized complete block with 3 replications, each plot 30 m² for each treatment
   Water consumption for spray:320 L/Ha
10. Results:

no	Treatment Name	Rate (Kg/ha) x appl. times	Application timing	Yield components: Panicle/ Hill	Panicles/ m²	Filled grain per panicle	unfilled grain %	1000 grain wt(g)	Grain Yield MT/Ha (%)
1	Control	---		9.9	485.1	54.19	11.2	21.38	5.616 (100)
2	ORGAMIN	1.5 x 2 appls.	1,2	10.8	529.2	56.66	8.90	21.40	6.385 (113.69)
3	ORGAMIN	2.0 x 2 appls.	1,2	10.9	534.1	62.64	8.10	21.40	7.139 (127.11)
4	ORGAMIN	2.5 x 2 appls.	1,2	10.1	494.9	54.88	11.20	21.39	5.792 (103.13)
5	Libspray	1.6 x 2 appls.	1,2	10.5	514.5	54.65	10.20	21.33	5.992 (106.69)
6	Komix	1.6 x 2 appls.	1,2	10.9	534.1	56.14	8.30	21.40	6.397 (113.90)
7	ORGAMIN	1.0 x 3 appls.	1,2,3	10.0	490.0	51.43	13.40	21.40	5.325 (94.82)
8	ORGAMIN	1.33 x 3 appls.	1,2,3	10.4	509.6	53.38	10.10	21.38	5.797 (103.22)
9	ORGAMIN	1.66 x 3 appls.	1,2,3	10.6	519.4	52.40	10.00	21.38	5.987 (106.60)
10	Libspray	1.6 x 3 appls.	1,2,3	10.1	494.9	49.38	14.30	21.38	5.193 (92.47)
		LSD 1%							0.391
		LSD 5%							0.285

Timing code: 01=15 days after transplant(1)
02=40 days after transplant(2)
03=65 days after transplant, full heading(3)

Observation: 1) Komix and Libspray are foliar fertilizer in common use.
2) DAT=Days after transplant

Discussions:1) Plant hight are not significantly different.
2) Tillers' numbers/hill are significantly different. Higher in order of ORGAMIN 2.0 L/Ha x 2 times, Komix 1.6 L/Ha x 2 times and ORGAMIN 1.0 L/Ha x 3 times.
3) Grain yield were higher in order of ORGAMIN 2.0 L/Ha x 2 times, Komix 1.6 L/Ha x 2 times and ORGAMIN 1.5 L/Ha x 2 times

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Mekong Delta Rice Research Institute)
2. Period of the test:Summer - Autumn '95
3. Purpose: Evaluation of the efficacies of ORGAMIN on direct sawn paddy rice
4. Location: Phuoc Thoi Village, O Mon District, Can Tho Province
5. Crop: Rice, variety:OM 997-6(Colombia/IR64), Duration: 100 Days, Broadcasting: density 250 Kg/Ha
6. Treatments:

Treatment 1:Untreated control
Treatment 2:1st application at begining of Tillering stage and 2nd at Booting both ORGAMIN at 1.5 L/Ha
Treatment 3:1st application at begining of Tillering stage and 2nd at Booting both ORGAMIN at 2.0 L/Ha
Treatment 4:1st application at begining of Tillering stage and 2nd at Booting both ORGAMIN at 2.5 L/Ha
Treatment 5:1st application at begining of Tillering stage and 2nd at Booting both Komix at 1.5 L/Ha
Treatment 6:1st application at begining of Tillering stage and 2nd at Booting both Libspray at 1.5 L/Ha
Treatment 7:1st application at begining of Tillering stage, 2nd at Booting and 3rd at Full heading all ORGAMIN at 1.0 L/Ha
Treatment 8:1st application at begining of Tillering stage, 2nd at Booting and 3rd at Full heading all ORGAMIN at 1.33 L/Ha
Treatment 9:1st application at begining of Tillering stage, 2nd at Booting and 3rd at Full heading all ORGAMIN at 1.66 L/Ha
Treatment 10:1st application at begining of Tillering stage, 2nd at Booting and 3rd at Full heading all Libspray at 1.66 L/Ha

7. Formula of fertilizer:100 N 40 P2O5 40 K2O, application at 10, 20 and 35 days after sowing
8. Plot design:Randomized complete block with 3 replications, each plot 30 m² for each treatment
Water consumption for spray:320 L/Ha
10. Results:

Tri No	Treatment Name	Rate (Kg/ha) x appl. times	Application timing	Yield components: Tiller/m² 45 DAS	Panicles/m²	Filled grain per panicle	unfilled grain %	1000 grain wt(g)	Grain Yield MT/Ha (%)
1	Control	---		507	456	39	29.2	26.4	3.47 (100)
2	ORGAMIN	1.5 x 2 appls.	1,2	503	472	40	25.7	26.3	3.66 (105.48)
3	ORGAMIN	2.0 x 2 appls.	1,2	521	468	41	31.8	26.8	3.64 (104.90)
4	ORGAMIN	2.5 x 2 appls.	1,2	509	488	44	26.9	27.1	3.78 (108.93)
5	Komix	1.5 x 2 appls.	1,2	527	488	43	27.5	27.3	3.78 (108.93)
6	Libspray	1.5 x 2 appls.	1,2	522	462	40	33.7	26.8	3.69 (106.38)
7	ORGAMIN	1.0 x 3 appls.	1,2,3	529	486	43	32.7	26.5	3.85 (110.95)
8	ORGAMIN	1.33 x 3 appls.	1,2,3	518	478	44	29.9	26.4	3.78 (107.20)
9	ORGAMIN	1.66 x 3 appls.	1,2,3	532	482	42	24.7	26.9	3.88 (111.82)
10	Libspray	1.66 x 3 appls.	1,2,3	509	472	41	28.8	26.3	3.71 (106.92)
		F			ns	ns	ns	ns	ns
		cv %			6.1	6.8	18.1	2.8	9.7

Timing code: 01=Begining of tillering stage(1)
02=Booting stage(2)
03=80 % full heading stage(3)

Observation: 1) Komix and Libspray are foliar fertilizer in common use.
2) DAS=Days after Sawing

Discussions:1) Plant hight are not significantly different.
2) Tillers' numbers/m² are significantly different. Higher in order of ORGAMIN 1.33 L/Ha x 3 times, ORGAMIN 1.0 L/Ha x 3 times, ORGAMIN 2.0 L/Ha x 2 times, Libspray 1.5 L/Ha x 2 times and Komix atb 1.5 L/ha x 2 times.
3) Panicles/m², Filled grain/panicle, % of unfilled grain and Grain yield, ORGAMIN at 2.5 L/Ha, Orgamin at 1.0 L/Ha x 3 times, ORGAMIN at 1.66 x 3 times and Komix at 1.5 L/ha x 3 times have shown good respectively.
4) Grain yield was good in order of ORGAMIN 1.66 L/Ha x 3 times, ORGAMIN at 1.0 L/Ha x 3 times, and ORGAMIN at 2.5 L/Ha x 2 times and Komix at 1.5 L/Ha x 2 times were good.

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Thua Thien Hue Agricultural Extension Center)
2. Cooperator: Engineer Dang Vang Thuan
3. Period of the test:Winter - Spring '94-'95(Sawing on Dec. 10, '94 and harvested on May 25, '95)
4. Purpose: Evaluation of the efficacies of ORGAMIN on direct sawn paddy rice at farm land
5. Location: Huong Long Village, Hue City
6. Crop: Rice, variety:IRI 17494
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:1st application at Booting stage and 2nd at 80 % heading stage both ORGAMIN at 0.25 % solution
8. Formula of fertilizer:Urea 240 Kg, P2O5 400 Kg and KCl 120 Kg per Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
   Water consumption for spray:320 L/Ha
10. Results:

Grain yield/500 ㎡:	ORGAMIN 0.25 % Plot: 224 Kg(=4.48 MT/Ha)	(**113.1**3%)
	Untreated control Plot : 198 Kg(=3.96 MT/Ha)	(100 %)

11. Observation: Leaves of rice of ORGAMIN-treated plot were in dark blue color.

Experimental Results of **ORGAMIN** on **Rice plant**/Vietnam VIOF006

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Hue VIPESCO BRANCH)
2. Cooperator: Engineer Nguyen Thi Van
3. Period of the test:Winter - Spring '94-'95(Sawing on Dec. 09, '94 and harvested on April 28, '95)
4. Purpose: Evaluation of the efficacies of ORGAMIN on direct sawn paddy rice at farm land
5. Location: Phu Da Village, Phu Van District, Thua Thien Hue Province
6. Crop: Rice, variety:IRI 17494
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:1st application at Booting stage and 2nd at heading stage both ORGAMIN at 0.25 % solution
8. Formula of fertilizer:Urea 200 Kg, P2O5 300 Kg and KCl 40 Kg per Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
   Water consumption for spray:320 L/Ha
10. Results:

Grain yield/500 ㎡:	ORGAMIN 0.25 % Plot: 240 Kg(=4.80 MT/Ha)	(**109.09**%)
	Untreated control Plot : 220 Kg(=4.40 MT/Ha)	(100 %)

11. Observation: Grains of rice of ORGAMIN-treated plot were bright yellow.

Experimental Results of **ORGAMIN** on **Rice plant**/Vietnam VIOF007

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Hue VIPESCO BRANCH)
2. Cooperator: Engineer Tran Huu Nho
3. Period of the test:Winter - Spring '95-'95(Sawing on Jan. 20, '95 and harvested on May 16, '95)
4. Purpose: Evaluation of the efficacies of ORGAMIN on direct sawn paddy rice at farm land
5. Location: Phu Xuan Village, Phu Loc District, Thua Thien Hue Province
6. Crop: Rice, variety:IRI 17494
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:1st application at Booting stage and 2nd at booting stage both ORGAMIN at 0.25 % solution
8. Formula of fertilizer:Urea 200 Kg, P2O5 340 Kg and KCl 0 Kg per Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
   Water consumption for spray:320 L/Ha
10. Results:

Grain yield/500 ㎡:	ORGAMIN 0.25 % Plot: 275 Kg(=5.50 MT/Ha)	(**122.22**%)
	Untreated control Plot : 225 Kg(=4.50 MT/Ha)	(100 %)

11. Observation: Grains of rice of ORGAMIN-treated plot were bright yellow.

Experimental Results of **ORGAMIN** on **Rice plant**/Vietnam VIOF008

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with Hue VIPESCO BRANCH)
2. Cooperator: Engineer Truong Cong Phat
3. Period of the test:Winter - Spring '95-'95(Sawing on Jan. 8, '95 and harvested on May 16, '95)
4. Purpose: Evaluation of the efficacies of ORGAMIN on direct sawn paddy rice at farm land
5. Location: Phong Chuong Village, Phong Dieng District, Thua Thien Hue Province
6. Crop: Rice, variety:IR38
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:1st application at begining of tillering stage and 2nd at booting stage both ORGAMIN at 0.25 % solution
8. Formula of fertilizer:Urea 160 Kg, P2O5 200 Kg and Straw manure 2MT/Ha.
9. Plot design:ORGAMIN plot 500 ㎡ and untreated control 500 ㎡ each treatment 1 replication
   Water consumption for spray:320 L/Ha
10. Results:

Grain yield/500 ㎡:	ORGAMIN 0.25 % Plot: 225 Kg(=4.50 MT/Ha)	(**109.22**%)
	Untreated control Plot : 206 Kg(=4.12 MT/Ha)	(100 %)

11. Observation: Leaves of rice of ORGAMIN-treated plot were dark blue.

Test Result of **ORGAMIN** on **Rice Nursery Bed**/Taiwan TWNPR007

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Cheng, Maun-Li Rice Nursery Center
3. Location: Maun-Li, Taiwan
4. Crop: Rice, Var.: Taichung 10(Indica type)
5. Period of the test: February 1 to February 27, 1998
6. Application of ORGAMIN : Single time spray to the nursery box at the dose of 5 ml/10 boxes, diluting ORGAMIN in water in 500 times volume of water, foliar, on Feb. 1.
7. Reading Date:
8. Plot design: 4 replications, 1 block with 4 nursery boxes
9. Result:

Treatment	Rate 5ml/10 box	Length of stem (cm)	Diameter of stem (cm)	Color	Appearance of roots
ORGAMIN	1 time	**4.3**	**0.24**	**Green**	**Thick and longer**
Control, untreated		4.6	0.22	Green	Middle

Test Result of **ORGAMIN** on **Rice Nursery Bed**/Taiwan TWNPR008

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Hung, Mei-Nung Rice Nursery Center
3. Location: Mei-Nung, Kaohsiung, Taiwan
4. Crop: Rice, Var.: Kaohsiung 142(Japonica type)
5. Period of the test:January 4 to January 29, 1999
6. Application of ORGAMIN : Single time spray to the nursery box at the dose of 5 ml/10 boxes, diluting ORGAMIN in water in 500 times volume of water, foliar, on January 4. '99.
7. Reading Date:
8. Plot design: 4 replications, 1 block with 4 nursery boxes
9. Result:

Treatment	Date 5ml/10 box	Length of stem (cm)	Diameter of stem (cm)	Color	Appearance of roots
ORGAMIN	1 time	**4.1**	**0.25**	**deep Green**	**thick and longer**
Control, untreated		4.5	0.21	Green	Middle

CANOPY(=**ORGAMIN DA**) on **Rice**, Sprayed by **Radio-Controled Helicopter**/Japan JPNOF02007

1. Reporter: Sankei Chemical Co., Ltd.
2. Period of the test: Seeding: March 30; Transplant: May 3-14; Harvest: August 25, 2004
3. Purpose: To evaluate performance of **ORGAMIN DA** sprayed by radio-controled helicopter on Rice in field
4. Location: Farm of Mr. Toshikazu Matsushita, Hamaoka, Shizuoka
5. Crop: Rice, Variety: Fusaotome
6. Treatments:
   Treatment 1: ORGAMIN DA mixed with pesticides of Casu-Lab Trevon Sol and Moncut F. All components were diluted in 8 times volume of water. This mixed high concentrated solution was sprayed by radio-controled helicopter at rate of 8.0 Lter per ha.
   Treatment 2: Only pesticides mixture was sprayed by same methods of Treatment 1.
   6-2. Timing of spray: 1st: July 5, just before earing; 2nd: After complete earing.
7. Formula of fertilizer:
8. Plot design:1 replication, each plot mesured 2.0 Ha and yield was checked from 3,00 m² of each plot.
9. Result-1:

Treatment	Water content at harvest	Yield Kg/ha without husk dried rice	Quality Index of Grains(%)					
			Normal	Immature	Damaged	Dead	Stained	Crushed
1.ORGAMIN DA	23.9 %	**5,700 (117%)**	86.4	5.1	4.6	0.7	1.6	1.6
2. Control	23.0 %	4,860 (100%)	81.2	4.0	11.8	0.3	2.0	0.7

Result-2:

Treatment	Nutritiv Factors: Dried Rice					Tast Factor Score
	Water content	Protein content	Amirose	Fatty acid index	Maturity	
1.ORGAMIN DA	13.5 %	8.55 %	20.4 %	15	85	**68** points
2. Control	13.4 %	9.1 %	20.45%	14	86	62.5 points

10: Obs.: ORGAMIN was sprayed to paddy field by radio-controlled helicopter, together with pesticides by high concentration of 8 times volume of water. Followings were observed:
   a. Percentage of normal grains of ORGAMIN-treated plot was 5 points higher than non-treated plot.
   b. Taste Factor Score of ORGAMIN-treated plot was 5.5 points higher than non-treated plot.
   c. The yield of ORGAMIN-treated plot exceeded yield of non-treated plot by 17 %.
   d. Quality of rice of ORGAMIN-treated plot exceeded in total of various factors, over non-treated plot.

1. Reporter: Dr. Wayne Olson, Hertland Technologies
2. Period of the test: Planting:May 28, '94 to harvest on October 18'94
3. Purpose: Evaluation of the efficacies of ORGAMIN on Soybean
4. Location: Noblesville, Hamilton, Indiana
5. Crop: Soybean, variety:Pioneer 9392
6. Applications of ORGAMIN:
   Treatment 1:1 application at 20-30 days after emergence at dose 2.0 Lb/A(=2.24 Kg/ha)
   Treatment 2:1st application at 20-30 DAE and 2nd 40-50 DAE both at dose 2.0 Lb/A
   Treatment 3:1 application at 20-30 DAE at dose 3.00 Lb/A(=3.36 Kg/ha)
   Treatment 4:1st application at 20-30 DAE and 2nd 40-50 DAE both at dose 3.0 Lb/A
   Treatment 5:1 application at 40-50 DAE at dose 2.0 Lb/A
   Treatment 6:1 application at 40-50 DAE at dose 3.0 Lb/A
   Treatment 7:Control, Untreated
7. Yielding date: October 18, '94
8. Plot design:Randomized complete block with 4 replications, each plot 10FT wide x 38 FT long
9.Results:

Tri No	Treatment Name	Rate Lb/acre(=Kg/ha) x appl. times	Applicatio timing	Yield Kg/Pl 10/18/94	Percent Moisture 10/18/94	Yield Bu/acre 10/18/94	Grain Test Wt. 10/18/94
1	ORGAMIN	2.0(=2.24) x 1 appl.	1	6.11	12.5	52.7	51.9
2	ORGAMIN	2.0(=2.24) x 2 appls.	1, 2	5.65	12.5	48.7	51.0
3	ORGAMIN	2.0(=2.24) x 1 appl	1	5.84	12.1	50.6	50.4
4	ORGAMIN	2.0(=2.24)x 1appl.	1, 2	5.63	12.0	48.9	50.3
5	ORGAMIN	2.0(=2.24) x 2 appls.	1	6.07	13.1	52.0	49.9
6	ORGAMIN	2.0(=2.24) x 1 appl	1, 2	5.79	12.6	49.9	50.8
7	Control		0	5.88	12.8	50.4	48.3
			LSD(0.05)	0.56	1.6	5.4	2.4
			Significance of F	ns	ns	ns	ns
			Standard deviation	0.58	1.1	5.4	2.4
			DAT Application # 01 Timings(1)	117	117	117	117
			DAT Application # 02 Timings(2)	90	90	90	90

Timing code: 01=20-30 Days after emergence(06/23/94 (1)
02=40-50 Days after emergence(07/20/94) (2)

Result of Demonstrative Application of **ORGAMIN** on **Soybean**/Brazil BRPR0005

1. Reporter: Hamilton Vigano, Fazenda Santo Antonio
2. Period of the test: November '86 to April '87
3. Purpose: Evaluation of the efficacies of ORGAMIN on Soybean
4. Location: Fazenda Santo Antonio, Salto Grande, S. Paulo, Brazil
5. Crop: Soybean, variety:Cobb, Seeding date:November 27, '86
6. Basic fertilizer:4-24-12 290 Kg/ha
7. Applications of ORGAMIN:
   Treatment 1:2 applications at 46 and 70 DAS, at dose of 7.5 L/ha
   Treatment 2:Control, Untreated
8. Yielding date:
9. Plot design:1 replication, each plot 29 ha
10.Results:

Treatment	Yield Kg/ha	Percent
ORGAMIN 7.5 L/ha x 2	2,678	**124**
Control	2,157	100

Report of Practical Use of **ECOLOGYC** on **Soybean**/Brazil BRPR0018

1. Reporter: Carlos Camello Brisk, Monte Mor, Sao Paulo, Brazil
2. Period of the test:November '96 to April '97
3. Purpose: Evaluation of the efficacies of ECOLOGYC on Soybean in a farmer's field
4. Location: Fazenda Bordon, Monte Mor, Sao Paulo, Brazil
5. Crop: Soybean, variety:Cobb, Seeding date:November '96
6. Basic fertilizer:
7. Applications of ECOLOGYC:
   Treatment 1: 2 L/ha x 5 times
   Treatment 2:Control, Untreated
8. Yielding date: April '97
9. Plot design:1 replication, ECOLOGYC-treated area:180 ha, Control:5 ha
10.Results:

Treatment	Yield	
	Kg/ha	Percent
ECOLOGYC 2.0 L/ha x 5	2,400	**218**
Control	1,100	100

Obs.:1)To both plots of ECOLOGYC-treated and untrated control, basic fertilizer was dosed same.
2)To both plots of ECOLOGYC-treated and control, none of insecticide or fungicide was used.
3)Color of leaves of ECOLOGYC-treated was much darker than control.(See photo No.)
4)Soybean plants have kept the greeness for several days longer after the plants of control plots died.(See photo No.)

Field Test of Application of **ORGAMIN** on **Soybean**/Brazil BRPR0013

Many of field trials and demonstration were performed in Brazilian soybean fields. In the most of cases, the farmers enjoyed notably high yield from ORGAMIN-treated plots. Increase of yield is the final target of ORGAMIN. Most of the reporters observed that ORGAMIN performs to the crops followings:

① Accelerate growth of root systems;
② Better plant structures;
③ Better frutifications;
④ Increase of yield ranged by 15 to 20 % and sometimes reached to 60 % in cpmarison to control.

Some examples of the field tests and demonstrations run in Brazil are summerized in the Table .

See Summery Table at next page

SUMMARY OF THE TESTS OF **ORGAMIN** APPLICATIONS ON **Soybean**/Brazil BRPR0013

Name of Farm/ Propriety	Location	Variety	Basic Fertilizer Kg/ha, N-P-K	ORGAMIN Treatment		Yield			Observations (ref. photo Nos.)
				Days after seeding	Dose L/ha	Av. Kg/ha	Percentage %	Kg/ 100L	
1)Santo Antonio, Companhia Ag. Ind. Ave	Salto Grande, Sao Paulo	Cobb	292 (4-24-12)	1st 46 2nd 70	8.0 8.0	2,700	124		*Seeding:86/11/27 *Harvest:87/4/11
				Control	---	2,175	100		
2)Santo Antonio, Companhia Ag. Ind. Ave	Salto Grande, Sao Paulo	Cobb		1st 22 2nd 36 3rd 56	6.25 6.25 8.33	3,900	120.8		*Seeding:87/11/18 *Harvest:88/4/21 *Higher development of root system *Increased number of beens/sheeth
				Control	---	3,400	100		
3)Paredao, Jose Garcia de Moraes	Sertaneja, Parana	Davis	167 (4-30-10)	1st 2nd 3rd	6.25 6.25 9.16	2,900	120		*Seeding:87/11/13 *Harvest:88/2/16 *Well grown root system, *Better plant structure
				Control	---	2,400	100		
4)Campo de Fora A. Souza Taques, Semente Aurora	Ventania, Parana	Davis	208 (-20-10)	1st 2nd 3rd	4.20 8.40 8.40	2,875	120.8		*Seeding:87/12/3 *Harvest:88/4/27 *Well grown root system *Better plant structure
				Control	---	2,223	100		
5)Lambari, Tomita Itimura	Cornerio Pro-copio, Parana	BR-4		1st 2nd	6.25 6.25	2,000	160		*Seeding:87/11/12 *Harvest:88/3/25
				Control	---	1,250	100		
6)Alvoplan, Celso Perna	Alvorada do Sul, Parana	FT-2	100 (2-30-10)	1st 2nd	7.9 7.9	2,250	123.3		*Seeding:87/11/17 *Harvest:88/3/10
				Control	---	1,825	100		
7)Pingo de Ouro Hansruchdi Wild	Santo Antonio de Paraiso, Parana	BR-4	227 Fosmag 545	1st 25 2nd 55 3rd 75	4.2 8.3 8.3	2,875	121.1		*Seeding:87/10/25 *Harvest:88/3/10 *Well grown root system *Better plant structure
				Control	---	2,375	100		

Soybean of untreated control plot

Right: Soybean treated with ECOLOGYC at 2.0 L/ha x 4 times(at the time of photo, refer to BRPR0018). Photo taken on January 25, 1997

Photo left: Final stage of soybean of untreated control plot.
Monte Mor, Sao Paulo, Brazil(BRPR0018)

Photo right: Final stage of soybean treated with ECOLOGYC. Number of grain/sheath and strong stems are observed.

Evaluation of **ORGAMIN D-A** on **Soybean/**Japan JPNPR02007

1. Reporter: Seibu Alef Co., Ltd./Sankei Chemical Co., Ltd
2. Cooperator: Matsuno Farm
3. Period of the test: August to November, 2002
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on Soybean
4. Location: Mikumo, Ichishi-gun, Mie Pref.
5. Crop and Variety: Soybean, Hukuyutaka
6. Applications of ORGAMIN D-A, 3 applications, foliar
   1st:August 7
   2nd:September 3
   3rd:September 18
7. Yielding date: November 12, 2003;
8. Plot design: Treated and non-treated actual commercial farm;
9. Sampling: From randomly selected 3 points, 2 stocks of ORGAMIN DA-treated soybean plants, and from 2 points of non-treated plot were taken for samples. Those samples were seighed and chemically analyzed:
10. Results:

Average weight and other index of harvested stocks
(6 plants from ORGAMIN DA-treated plot and 4 plants from Control plot)

Treatment	Av. Weight of Stock Total (g) (%)	Av. Dimeter of Stem (mm)	Av. Weght of Total Beans Weight(g)	100 Beans Weght (g)
ORGAMIN DA	773.3 (**193.3**)	16.3 (**135.8**)	391.3 (**168.7**)	40.1 (**111.7**)
Control	400.0 (100)	12.0 (100)	232.0 (100)	35.9 (100)

Obs.: The indexes evaluated were based on the samples not dried after harvest.

Analysis of Compornents of Beans, g/100g of beans
(Japan Foods Analysis Center)

	Water*	Protein**	Oil***
ORGAMIN DA	23.1 (103.6)	31.0 (**104**)	17.2 (**103**)
Control	22.3 (100)	29.8 (100)	16.7 (100)

Obs.:* Water content was analyzed by Heated Dry method under normal pressure.
** Protein content was analyzed by Kjeldahl Method.
*** Oil content was analyzed by extracting with mixed liquid of chloroform/methanol.
The bean samples analyzed were not dried after harvest.

ORGAMIN Economy in Soybean Plantation Soybean/Japan JPNPR 02008

1. Reporter: Toyama Branch, Hokko Chemical IndustryCo., Ltd., Tested by Aoyama Chief, Ag.Development Center, Kurobe-Shinkawa;
2. Period of the test: Seeding: 2000/07/- to 2000/12;
3. Location: 2 farms of Ikeda and Hashimoto at Kurobe, Toyama Pref.;
4. Crop: Soybea: Var. ;
5. Timmings of spray: 1st spray: Late July: Withine 7 days after bloom: Simultaneous control with Pylaridae pest;
   2nd spray: Early August: Simultaneous control with Cercospora disease and insects pests.
   3rd spray: Mid of August: Simultaneous control with Cercospora disease and insects pests.
6. Date of harvest: ;
7. Test field design: 1 replication: Each treatment has 3,000
8. The volume of ORGAMIN solution in one application: 1,500 liter of 500-times diluted in waterper ha. (=3.0 L ORGAMIN/Ha)
9. Result

① Ikeda Farm (10 plants/treatment were checked)

Treatment	Length of stem (cm)	Weight of stem (Kg/10 plants)	Max of stem ∅ (cm)	Status of sheath (%: at 10plants)				At each 10 plants		Rate by grain size (%)			Weight / 100 graines (g)	Yield/ha (Kg)				Farmer's Income ¥/Ha
				3 bean	2 bean	1 bean	steril	No. sheath	Yield(g)	Large	Med	Small		Large	Med	Small	Total	
A, 3 spray ORGAMIN	64.2	0.12	0.76	6.5	83.4	4.9	5.2	493	241	52.4	40.3	7.8	29.6	1,510	1,160	220	2,890	618,400
B, 3 spray ORGAMIN	66.8	0.09	0.71	2.6	87.9	7.3	2.2	422	210	52.4	38.4	9.2	28.7					
Katoukun	53.1	0.06	0.60	7.0	82.1	7.3	3.6	329	176	54.4	38.3	7.3	30.7					
Cal plus	59.0	0.08	0.66	6.6	82.2	8.5	2.4	411	177	23.9	52.3	23.8	28.8					
Control, no spray	55.5	0.08	0.69	6.0	85.4	4.9	3.7	451	223	24.1	53.2	22.7	26.6	640	1,430	610	2,660	556,740

② Hashimoto Farm (10 plants/treatment were checked)

Treatment	Length of main stem (cm)	Weight of stem (Kg/10 plants)	Max of stem ∅ (cm)	Status of sheath (%: at 10plants)				At each 10 plants		Rate by grain size (%)			Weight /100 graine	Yield/ha (Kg)				Farmer's Income ¥/Ha
				3 bean	2 bean	1 bean	steril	No. sheeth	Yield (g)	Large	Med	Small		Large	Med	Small	合計	
A, 3 spray ORGAMIN	63.4	0.12	0.79	6.3	84.3	2.6	6.6	542	319	82.4	15.7	1.9	34.1	3,160	600	70	3,830	841,070
B,3 spray, ORGAMIN	59.0	0.12	0.79	7.5	88.6	3.3	0.6	491	300	73.1	22.0	6.0	31.2					
Control, no spray	55.2	0.13	0.76	7.6	84.9	4.2	3.3	577	309	50.9	40.6	8.5	29.7	1,880	1,510	320	3,710	792,520

Obs.: * Yield/Ha was estimated assuming that 120,000 soybenn plants were seeded per Ha.
** The following prices of soybean by different class of sizes were applied as: 1) Large, 2nd class:¥13,362/60Kg 2) Medium, 2nd class: ¥12,362/60Kg 3) Smal, 2nd class: ¥11,762/60Kg(Farmers' income)
*** Cost of ORGAMIN(=AMIGROW): 500times dilutio, 1500L/Ha, ¥15,300- （＝ 3.0 L consumption for 1 spray）

Green House Test of AMIGROW(=**ORGAMIN**) on **Strawberry**/Japan JPNPR0011

1. Reporter: Japan Carlit Co., Ltd.
2. Cooperator:
3. Period of the test:January 8 to March 25, '88
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) in improvement of quality of strawberry in green house planted in pots.
5. Location: Central Laboratory of Japan Carlit Co., Ltd., Shibukawa, Gunma
6. Crop:Strawberry, Variety:Mehou and Reikou, transplanted on January 8, '88
7. Treatments: Application timings:
   Treatment A:ORGAMIN 400 times water diluted, x 3 times — 1st:At transplant; 2nd:Prior to 1st flower; 3rd:After 1st flower
   Treatment B:ORGAMIN 400 times water diluted x 5 times — 1st:At transplant; 2nd to 5th:2 weeks' intervals after 1st appl.
   Treatment 4:Untreated control
8. Formula of fertilizer:Basic:NPK 10-10-10, 20g/pot, Additional 10-10-10, 10 g/pot on Feb. 9 and March 9, 3rd additional 1000 times water diluted Hyponex 6.5-6-19, 20 ml/pot by foliar applied.
9. Plot design:
10. Results:Each fruits yielded and weighd over 6 gramms was juiced and sugar content wer measured with an aparatus Atago ATC-I type.

Treatment	Av. Sugar content	SD	SD %	Calculated Dist. range	No. of Data	No. of Data in Distribution Range	Av. of Data in Distribution Range
Variety Meho							
A:3 times	8.56364	.288734	3.37162	8.69168 8.4356	22	9	8.55556
B:5 times	8.57083	.215622	2.51577	8.6619 8.47977	24	8	8.5625
C:Control	8.16071	.164073	2.01053	8.22434 8.09709	28	11	8.13636
Variety Reikou							
A:3 times	8.5333	.279192	3.27178	8.65125 8.41542	24	8	8.5625
B:5 times	8.56	.520339	6.07872	8.75428 8.36572	30	17	8.49412
C:Control	8.23684	.206032	2.50134	8.33615 8.13753	19	8	8.25

11. Discussion: Summary of sugar content and statistic calculation are shown above table.
    a. Orgamin application to strawberry increased its' sugar content.
    b. As far as this test is concerened, times of application of ORGAMIN did not influence on the increase of sugar content.

Test Spray Results of **ORGAMIN DA** and Other Plant Growth Activators on **String Beans**/Japan JPPR02008

1. Reporter: Ishiguro Pharmaceutical Co., Ltd.
2. Cooperator: Grower Mr. Hotta and SANKEI CHEMICAL CO., LTD.
3. Period of the test:March to August, 2004
4. Purpose: Evaluation of the efficacies of ORGAMIN DA compared to some plant growth activators to String beans.
5. Location: Sofue Cho, Nakajima Province, Aichi Pref.
6. Crop: String beans, var. Jyuuroku Sasage
7. Treatments:
   Treatment 1: "Chitosaru M", 300 times dilution in water, foliar spray;
   Treatment 2: "Chitosaru F", 300 times dilution in water, foliar spray;
   Treatment 3: Mixture of "Fight O2", 1000 times dilution in water and "Fight Cal", 1000 times dilution in water sprayed foliar plus soil trenching of "Fight Met", 2000 times diluted in water;
   Treatment 4: "Catechinpower", 500 times dilution in water, foliar spray plus soil trenching of "Catechinpower", 500 times dilution in water;
   Treatment 5: "Catechinpower", 500 times dilution in water, foliar spray plus soil trenching of "Catechinpower", 2000 times dilution in water;
   Treatment 6: ORGAMIN DA(=CANOPY), 1000 times dilution in water, foliar spray;
   Treatment 7: Untreated Control.
8. Formula of fertilizers:
9. General crop cycle: Seeding: Early March. Until Mid/End of May, the crop was covered with plastic sheet.
   Between raw: 125 ㎠, Between plants: 35 ㎠:
10. Plot design: Each treatment had one plot of 10 ㎡, 1 replication;
    Water consumption for spray:300 L/1000 ㎡ and 0.5 liter per plant, for soil trenchings.
11. Timmings of spray and/or soil trenching: June 3, 14, 24, July 5, 14 and July 26 totally 6 times.
12. Evaluation Date and methos: On August 17, 2004, length and width of 10 leaves of middle position of plant hight, diameter of stems at 10 ㎠ hight from soil surface and, weight of commerciable beans(Over 31 ㎠ sh1eth long) were evaluated.
13. Results:

Treatments	Leaf length x width (cm)	Diameter of Stem (cm) (%)	Harvested No of Shieth (%)	Yield, Weight(Gr) (%)
1 Chitosaru M foliar	10.0 x 5.3	1.09 (114.7)	112 (116.7)	538 (133.4)
2 Chitosaru F foliar	9.8 x 6.1	1.18 (124.2)	110 (114.6)	550 (136.4)
3 Fight O2+Fight Cal, foliar + Fight Met(soil)	10.7 x 6.1	1.13 (118.9)	146 (152.1)	657 (162.9)
4 Catechinpower foliar + Catechinpower soil	10.8 x 6.0	1.17 (123.2)	100 (104.2)	420 (104.2)
5 Catechinpower foliar Fight Met soil	10.4 x 6.4	1.15 (121.1)	140 (145.8)	616 (152.8)
6 ORGAMIN DA foliar	10.0 x 5.9	1.11 (116.8)	**170 (177.1)**	**748 (181.3)**
7 Untreated Control	8.1 x 5.4	0.95 (100)	96 (100)	403 (100)

Obs.: Control of the insect pests and diseases followed local practice of the grower.

Evaluation of **ORGAMIN** on **Sugarbeet**/USA USOF0006

1. Reporter: Dr. Allan Cattanach, North Dakota State University
2. Period of the test: Planting:April 22, '94 to harvest on September 21 '94
3. Purpose: Evaluation of the efficacies of ORGAMIN on Sugar beet
4. Location: Fargo, North Dakota
5. Crop: Sugar beet, variety:Maribo 862
6. Applications of ORGAMIN:
   Treatment 1:1 application at 3-4 leaves stage, at dose 2 qt/A(=4.675 L/ha)
   Treatment 2:1st application at 3-4 leaves stage and 2nd at 10 to 14 days after thining both at dose 2 qt/A
   Treatment 3:1st application at 3-4 leaves stage, 2nd at 10 to 14 days after thining and 3rd at the last week of August, all applications at dose of 2 qt/A
   Control:Untreated
7. Yielding date: September 21, '94
8. Plot design:CRD with 6 replications
9.Results:

Tri No	Treatment Name	Rate qt/acre(=L/ha) x appl. times	Sugarbeet population plots/70'	Sucrose	Loss to molas	Root yield Ton/A	Impurity index	Extract Sucrose Lb/A	(%)
1	ORGAMIN	2.0(=4.675) x 1 appl.	86	15.9	1.6	25.6	743	7205	**(108.6)**
2	ORGAMIN	2.0(=4.675) x 2 appls.	87	16.5	1.5	23.6	659	7004	**(105.5)**
3	ORGAMIN	2.0(=4.675) x 3 appls.	89	16.1	1.5	24.5	683	7113	**(107.2)**
4	Untreated	--------	83	16.5	1.6	22.3	704	6636	(100)
	EXP MEAN		86	16.2	1.5	24.0	697	6990	
	C.V. %		7	8.6	10.2	9.8	15	15	
	LSD 10%		NS	NS	NS	NS	ND	NS	
	LSD 5%		NS	NS	NS	NS	ND	NS	
	# OF REP		6	6	6	6	6	6	

Evaluation of **ORGAMIN** on **Sugarbeet**/USA USOF0007

1. Reporter: Dr. Allan Cattanach, North Dakota State University
2. Period of the test: Planting:May 6, '94 to harvest on September 28 '94
3. Purpose: Evaluation of the efficacies of ORGAMIN on Sugar beet
4. Location: Crookston, North Dakota
5. Crop: Sugar beet, variety:Mitsu Monohikari
6. Applications of ORGAMIN:
   Treatment 1:1 application at 3-4 leaves stage, at dose 2 qt/A(=4.675 L/ha)
   Treatment 2:1st application at 3-4 leaves stage and 2nd at 10 to 14 days after thining both at dose 2 qt/A
   Treatment 3:1st application at 3-4 leaves stage, 2nd at 10 to 14 days after thining and 3rd at the last week of August, all applications at dose of 2 qt/A
   Control:Untreated
7. Yielding date: September 28, '94
8. Plot design:CRD with 4 replications
9.Results:

Tri No	Treatment Name	Rate qt/acre(=L/ha) x appl. times	Sucrose	Loss to molas	Root yield Ton/A	Impurity index	Extract Sucrose Lb/A	(%)
1	ORGAMIN	2.0(=4.675) x 1 appl.	15.0	1.4	24.3	681	6523	**(123.5)**
2	ORGAMIN	2.0(=4.675) x 2 appls.	15.5	1.4	25.4	655	7099	**(122.3)**
3	ORGAMIN	2.0(=4.675) x 3 appls.	15.4	1.4	23.4	673	6546	**(127.5)**
4	Untreated	--------	14.8	1.5	22.1	741	5806	(100)
	EXP MEAN		15.2	1.4	23.4	673	6546	
	C.V. %		3.3	9.0	12.3	11	14	
	LSD 10%		NS	NS	NS	ND	NS	
	LSD 5%		NS	NS	NS	ND	NS	
	# OF REP		4	4	4	4	4	

Evaluation of **ECOLOGYC** on **Sugar-beet**/Japan JPNPR0017

1. Reporter: Hokkaido Togyo Co. Ltd.
2. Cooperator:
3. Period of the test: June 2000 to November 2000
4. Purpose: To evaluate performance of ECOLOGYC on Sugar-beet in field.
5. Location:Experimental Station of Hokkaido Togyo, Honbetsu and Ikeda, Nakagawa, Hokkaido
6. Crop:Sugar-beet,
7. Treatments: Same treatment at 2 locations of Honbetsu and Ikeda
   Treatment A: Untreated control
   Treatment B: ECOLOGYC in field x 3 times on June 16, June 22 and July 6 at dose of 500 times dilution
   Treatment C: ECOLOGYC seedling bed spray x 2 on March 30 and April 6 at dose of 500 times dilution
8. Formula of fertilizer:
9. Plot design:Random block with 4 replications, 1 block with 4 raws x 6 m = 14.4 ㎡
10. Result:

Treatment	Root Weight		Brix in Root		Total Sugar Volume		Index/Impurity		Root Rot	
	H.	I.	H.	I.	H.	I.	H.	I.	H.	I.
A:Untreated	100	100	100	100	100	100	100	100	0.0	8.9
B:ECOLOGYC/Field	**103**	**103**	**103**	**101**	**106**	**104**	**88**	**100**	0.0	4.8
C:ECOLOGYC/Bed	**101**	**101**	**101**	**101**	**102**	**102**	**96**	**100**	0.6	7.1

Obs.: 1) "H" indicates Honbetsu. 2) "I" indicates Ikeda.

Evaluation of **ECOLOGYC** on **Sugar-beet**/Japan JPNPR0018

1. Reporter: Hokkaido Togyo Co. Ltd.
2. Cooperator:
3. Period of the test: June 2001 to November 2001
4. Purpose: To evaluate performance of ECOLOGYC on Sugar-beet in field.
5. Location:Experimental Station of Hokkaido Togyo, Honbetsu and Ikeda, Nakagawa, Hokkaido
6. Crop:Sugar-beet,
7. Treatments: Same treatment at 2 locations of Honbetsu and Ikeda
   Treatment A: Untreated control
   Treatment B: ECOLOGYC in field x 3 times on June 15, June 25 and July 10 at dose of 500 times dilution
   Treatment C: Sea weed extract material spray x 4 on June 25, July 10, July 18 and August 6 at dose of 500 times dilution
8. Formula of fertilizer:
9. Plot design:Random block with 4 replications, 1 block with 4 raws x 6 m = 14.4 ㎡
10. Result:

Treatment	Root Weight		Brix in Root		Total Sugar Volume		Index/Impurity		Root Rot	
	H.	I.	H.	I.	H.	I.	H.	I.	H.	I.
A:Untreated	100	100	100	100	100	100	100	100	0.0	0.0
B:ECOLOGYC	**103**	**106**	**100**	**99**	**102**	**105**	**104**	**104**	0.6	0.0
C:Sea weed extract	102	105	99	98	101	103	101	109	0.0	0.0

Obs.: 1) "H" indicates Honbetsu. 2) "I" indicates Ikeda.

Evaluation of **ORGAMIN** on **Sugar-cane**/Brazil BRPR0017

1. Reporter:
2. Cooperator:
3. Period of the test: October '85 to January '86
4. Purpose: To evaluate performance of ORGAMIN) on Sugar-cane in commercial farm.
5. Location:Fazenda Paredao Vermelho, Farm Modelo, Piracicaba, Sao Paulo
6. Crop:Sugar-cane, Variety:IAC 64-257, 3rd cut on Jult 17, '90(test, former cut-2nd cut-June 15, '89)
7. Treatments:
   Treatment A: Untreated control
   Treatment B: ORGAMIN sprayed at dose of 8.0 L/ha, 1 application in September '89
   Treatment C: ORGAMIN sprayed at dose of 8.0 L/ha, 1 application in November '89
   Treatment D: ORGAMIN sprayed at dose of 8.0 L/ha, 2 applications in September and November '89
   Treatment E: ORGAMIN sprayed at dose of 8.0 L/ha, 2 applications in September '89 and February '90
8. Formula of fertilizer:
9. Plot design:Random block with 4 replications, 1 block with 5 raws x 15 m(Space between raws 1.4 m)
10. Result:

Treatment	Yield: MT/ha	(%)	Pol.% of cane	No. of stems/ linear meter	Fiber % of cane
A	89.55	(100.0)	13.73	10.30	10.05
B	99.03	(110.6)	13.70	10.35	9.78
C	97.25	(108.6)	13.95	10.03	9.70
D	99.60	(111.2)	13.29	10.70	9.62
E	99.00	(110.6)	13.54	10.72	9.49
F	5.96		ns	ns	ns
CV %	3.55		3.20	5.91	8.72
DMS (5%)	7.75		-	-	-
DMS(1%)	10.03		-	-	-

Evaluation of **ORGAMIN D-A** on **Sugar-cane**/Cuba CUOF001

1. Reporters: E. Perez & E. Rodrigues-INICA-Cuban Institute of Investigation of Sugar-cane
2. Cooperator:
3. Period of the test: 1992-'94
4. Purpose: To evaluate performance of ORGAMIN D-A in substitute mineral fertilizing and increase yield on Sugar-cane.
5. Location:Oriental Region, Cuba
6. Crop:Sugar-cane, Variety:C-266-70 & C-120-78
7. Treatments: 1st test:To check if ORGAMIN D-A gives influence to germination ratio of sugar-cane:
   Treatment A: NPK(100 Kg N/ha; 50Kg P2O5 and 150 Kg K2O/ha)
   Treatment B: ORGAMIN D-A20 L/ha:ORGAMIN was sprayed over cut-stem before they were covered with soil..
   Treatment C: ORGAMIN D-A 30 L/ha:ORGAMIN was sprayed over cut-stem before they were covered with soil..
8. Result-1:

Percentage of Germination of Planted Cut-stems Counted at 20, 40 and 60 Days After Plantation

Treatment	Variety C266-70			Variety C 120-78		
	20 DAP	40 DAP	60DAP	20 DAP	40 DAP	60DAP
	Germination Percentages					
A NPK	13.2	38.8	77.7	18.7	45.6	86.4
B 20 L ORGAMIN D-A	11.8	36.0	81.3	21.5	45.4	85.8
C 30 L ORGAMIN D-A	12.2	38.4	79.6	22.7	46.2	87.1

9.Treatment: 2nd test: To check productivity increase by application of ORGAMIN D-A

10.Results:

Results of Productivity (Sugar-cane T/ha) of 1st and 2nd Cuts, in Function of Treatment

Space between lines	Treatment L/h ORGAMIN D-A	1st Cut	2nd Cut	Total	%
		sugar-cane t/ha			
1.6 m	0	51.2 c	48.90 c	101.1 d	100
	2	56.18 bc	56.92 b	113.1 c	**111.9**
	4	71.40 a	60.23 ab	131.6 a	**130.2**
	10	61.78 b	63.07 a	124.9 b	**123.5**
1.3 m	0	62.68 c	45.02 c	107.7 c	100
	2	72.62 c	52.41 b	125.0	**116.1**
	4	79.67 a	58.68 a	138.4 a	**128.5**
	10	68.81 b	60.42 a	129.2 b	**120.0**
1.0 m	0	54.00 ns	28.36 c	82.4 c	100
	2	58.36 ns	32.00 b	90.4 b	**109.7**
	4	58.37 ns	36.36 ab	94.7 ab	**115.0**
	10	58.36 ns	38.23	96.6 a	**117.3**
0.8 m	0	40.00 c	26.76 b	66.8d	100
	2	47.74 b	26.15 b	76.9 c	**110.6**
	4	51.25 ab	30.62 ab	81.9 b	**122.6**
	10	55.82 a	35.99 a	91.8 a	**137.4**

11.Results and Discusstions:

1) Application of ORGAMIN D-A did not give any influence to germination ratio since, the variety C120-78 constantly showed higher germination ratio than the variety C266-70 independently of the dose of fertilizer.
2) Application of ORGAMIN D-A originated elevated yield in comparison to control, based on the statistic analysis at both 1st and 2nd cut.
3) At only the line space of 1.0 m, no differnces was observed at 1st cut.
4) The test results show that best dose may be between 4 to 10 L/ha which is a similar results obtained by Orlando Filho, J. (1991) and INICA(1992) with similar product.
5) In general mode, Certain relation of space between lines and year of cut to the best dose of ORGAMIN D-A. It means that when the crop density is higher or the cut year is more advanced, the higher dose is more effective.

12.Conclusion and Recomendation:

1)A germination is not affected by spray of ORGAMIN D-A to cut-stems placed at the bottoms of plantation line.
2)Yield of sugar-cane(T/ha) can significantly elevated by foliar application of ORGAMIN D-A.
3)The space between lines lower than 1.3 m, the yield decreased, independently of treatment.
4)Not apply ORGAMIN D-A at the time of plantation.
5)Use ORGAMIN to re-germinated sugar-cane at 90th day after cut by foliar application.
6)To continue trials with ORGAMIN D-A and other varieties and different type of soil, different dose of NPK.

1. Reporter: Sankei Chemical Co., Ltd.
2. Cooperator: Mr. Y. Nishii, Seibu Arefu Co., Ltd.
3. Location: Minami-Muro District, Mie Pref., Japan
4. Crop: Tangerine Orange Var.: Sakikubo Wase Unsyu
5. Period of the test: August, '99 to October, 1999
6. Application of ORGAMIN DA :
   1st: August 11, '99, 1000 times volume water dilution, foliar, wet trough
   (Dithane and Orthoran were mixed to ORGAMIN DA)
   2nd: August 29, '99, 1000 times volume water dilution, foliar, wet trough
7. Harvest Date: September 28, 1999
8. Reading Date: September 29, 1999
9. Plot design/Sampling:
   Randomly 40 fruits were collected from each of ORGAMIN DA treated and control plot for quality analysis.
10. Result:

Treatment	Fruits Size, Av. 40 fruits			Fruits Quality, Av. 20 fruits			
	Diameter	Hight	Weight	Color	Sugar	Acidity	Sugar/Acids
ORGAMIN DA diluted in 1000 volume water	62.7 mm	47.2 mm	103.6 g	**3.1**	**10.1**	**0.91**	**11.10**
Control, untreated	63.0	47.8	102.7	0.6	8.1	0.86	9.42

11. Discussion:
    1) About 1 month before harvest, ORGAMIN DA diluted in 1000 times volume water, was sprayed twice over leaves to wet trough.
    2) ORGAMIN DA improved in coloring and sugar content and sugar/acid ratio increased by about 1.5 point.

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Tea**/Japan JPNPR02002

1. Reporter: SANKEI CHEMICAL CO., Ltd.
2. Cooperator: Houdai Tea Farm
3. Period of the test: October 1997-April 1998
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Tea production by using
   ORGAMIN DA AT LATE AUTUMN
5. Location: Ibusuki-gunn, Kagoshima
6. Crop: Tea, Var. Yutakamidori
7. Treatments:
   Treatment 1:ORGAMIN DA, 1000 times dilution in water, 1 application(October 15)
   Treatment 2:ORGAMIN DA, 1000 times dilution in water, 2 applications(October 15 and November 5)
   Treatment 3:ORGAMIN DA, 500 times dilution in water, 1 application(October 15)
   Treatment 4:ORGAMIN DA, 500 times dilution in water, 2 applications(October 15 and November 5)
   Treatment 5:Non-treated Control
8. Formula of fertilizer:
9. Plot design: Raw 1.8 m width x 12.5 m long = 22.5 ㎡/plot x 2 replications for all treatment
10. Evaluation:
    - ♧ On April 19 of the next spring, the 1st harvest leaves were counted for evaluation.
    - ♧ A frame, sized 20 cm x 40 cm was randomly placed on plots.
    - ♧ All of the new shoots found in the frame were harvested.
    - ♧ All of new shoots were classified **by the number of leaves grown at the shoots.**
    - ♧ The number, weight and length of the harvested shoots were measured. Also the shoots with 3 or more leaves were cut at the bottom point of the 3rd leaves and measured the length and weight.
11. Results

The Influences of ORGAMIN DA Application to Tea Tree in Autumn to The First Spring Harvest

	All of Harvested New Shoots Number of Shoots by number of leaves *							Shoots cut with 3 leaves	
Treatment	>2	3	4	5	Total	Total ** Weight g (%)	Av. shoot Length*** cm	Av. Length cm	Weight g
ORGAMIN DA x 1000 x 1	263	247	144	29	683	183.6 (**103.4**)	8.0	5.6	116.6 g
ORGAMIN DA x 1000 x 2	274	212	158	35	679	179.7 (**101.2**)	8.0	5.5	118.9
ORGAMIN DA x 500 x 1	177	216	195	37	625	218.6 (**123.2**)	8.3	5.4	134.0
ORGAMIN DA x 500 x 2	204	194	192	33	623	213.0 (**120.0**)	8.3	5.6	114.5
Control, non-treatment	329	195	156	10	690	177.5 (100.0)	8.3	5.6	114.5

12. Observations: * All of shoots harvested were classified by number of new leave on the shoots(leaves completely open were counted)
    ** Total weight is weight of harvested branches(with leaves) from 2 plots x 20 cm x 40 cm =1600 ㎡.
    *** Length of shoots: grown in the spring.
13. Discussion: 1) By visual observation of the tea trees, clear differences between ORGAMIN DA-treated plots and control plots were not observed. No early germination by use of ORGAMIN DA in autumn was not observed.
    2) The treatment of ORGAMIN DA in autumn, especially by 500 times dilution, increased number of 4 leaves shoots And it decreased number of 2 or less leaves shoots.
    3) The treatment of ORGAMIN DA 500 times dilution increased yield of leaves by over 20 % over control. Between 1 spray and 2 sprays of same dilution ratio, no difference was observed.
14. Conclusion: ORGAMIN DA autumn treatment to tea trees can increase yield of spring leaves. 500 times dilution seems to be better than 1000 times dilution.

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Tea**/Japan JPNPR02003

1. Reporter: SANKEI CHEMICAL CO., Ltd.
2. Cooperator:
3. Period of the test: October 1998-April 1999
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Tea production by using
   ORGAMIN DA AT LATE AUTUMN
5. Location: Ibusuki-gunn, Kagoshima
6. Crop: Tea, Var. Yabukita, 17 years' old
7. Treatments:
   Treatment 1:ORGAMIN DA, 500 times dilution in water, 2 applications(October 27 and November 12)
   Treatment 2:ORGAMIN DA, 1000 times dilution in water, 2 applications(October 27 and November 12)
   Treatment 3:Non-treated Control
   Obs.: ORGAMIN DA solutions were sprayed by knap-sack sprayer at ratio of 200 L per 1000 ㎡. Surface surfactant was used.
8. Formula of fertilizer:
9. Plot design: Raw 1.8 m width x 25 m long = 45 ㎡/plot 1 replication for all treatment
10. Evaluation:
    - ♧ On April 21 of the next spring, 1999, the 1st harvest leaves were counted for evaluation.
    - ♧ A frame, sized 20 cm x 20 cm was placed in the center of each plot.
    - ♧ All of the new shoots found in the frame were harvested.
    - ♧ All of new shoots were classified **by the number of leaves grown at the shoots.**
    - ♧ The number, weight and length of the harvested shoots were measured.
11. Results

The Influences of ORGAMIN DA Application to Tea Tree in Autumn to The First Spring Harvest

All of Harvested New Shoots
Number of Shoots by number of leaves *

Treatment	>2	3	4	5	Total	Total ** Weight cm	Av. shoot Length cm ***
ORGAMIN DA x 500 x 2	39	66	50	7	162	54.2 (**133**)	9.7
ORGAMIN DA x 1000 x 2	53	76	41	5	175	49.1 (**120**)	8.7
Control, non-treatment	45	75	33	1	154	40.7 (100)	7.9

12. Observations: * All of shoots harvested were classified by number of new leave on the shoots(leaves completely open were counted)
    ** Total weight is weight of harvested branches(with leaves) from 1 plot x 20 cm x 20 cm =400 ㎡.
    *** Length of shoots: grown in the spring.
13. Discussion: 1) The treatment of ORGAMIN DA in autumn, especially by 500 times dilution, increased yield of tea leaves than 1000 times dilution.
    2) Increase of yield was observed clearly at just time of harvest than 1 week before that day of harvest. Especially, the length of shoots have shown a clear difference.
    3) The number of leaves tends to increase in the ORGAMIN DA-treated plots.
14. Conclusion: ORGAMIN DA autumn treatment to tea trees at 500 times dilution x 2 sprays, before and after tree-shape-forming cut of old branches, can increase yield of spring leaves.

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Tea**/Japan JPNPR02004

1. Reporter: SANKEI CHEMICAL CO., Ltd.
2. Cooperator:
3. Period of the test: September 1998-April 1999
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Tea production by using
   ORGAMIN DA AT LATE AUTUMN
5. Location: Hioki-gunn, Kagoshima
6. Crop: Tea, Var. Yabukita, 17 years' old
7. Treatments:
   Treatment 1:ORGAMIN DA, 500 times dilution in water, 2 applications(September 2 and Sept. 8)
   Treatment 2:ORGAMIN DA, 1000 times dilution in water, 2 applications(September 2 and Sept. 8)
   Treatment 3:ORGAMIN DA, 500 times dilution in water, 3 applications(Sept. 2, Sept. 8 and November 10)
   Treatment 4:ORGAMIN DA, 1000 times dilution in water, 3 applications(Sept. 2, Sept. 8 and November 10)
   Treatment 5:Non-treated Control
   Obs.: ORGAMIN DA solutions were sprayed by knap-sack sprayer at ratio of 200 L per 1000 ㎡. Surface surfactant was used.
8. Formula of fertilizer:
9. Plot design: Raw 2.0 m width x 15 m long = 30 ㎡/plot 1 replication for all treatment
10. Evaluation:
    - On April 24 of the next spring, 1999, the 1st harvest leaves were counted for evaluation.
    - A frame, sized 20 cm x 20 cm was placed in the center of each plot.
    - All of the new shoots found in the frame were harvested.
    - All of new shoots were classified **by the number of leaves grown at the shoots.**
    - The number, weight and length of the harvested shoots were measured.
11. Results

The Influences of ORGAMIN DA Application to Tea Tree in Autumn to The First Spring Harvest

All of Harvested New Shoots
Number of Shoots by number of leaves *

Treatment	>2	3	4	5	Total	Total ** Weight cm	Av. shoot Length cm ***
ORGAMIN DA x 500 x 2	35	75	43	2	155	36.6 (**112**)	7.2
ORGAMIN DA x 1000 x 2	33	78	43	5	159	32.2 (**102**)	7.4
ORGAMIN DA x 500 x 3	68	69	43	6	186	41.3 (**131**)	7.2
ORGAMIN DA x 1000 x 3	51	57	48	5	161	34.2 (**108**)	7.4
Control, non-treatment	68	57	25	1	146	31.5 (100)	7.2

12. Observations: * All of shoots harvested were classified by number of new leave on the shoots(leaves completely open were counted)
    ** Total weight is weight of harvested branches(with leaves) from 1 plot x 20 cm x 20 cm =400 ㎡.
    *** Length of shoots: grown in the spring.
13. Discussion: 1) The treatment of ORGAMIN DA in autumn, especially by 500 times dilution, increased yield of tea leaves than 1000 times dilution.
    2) Increase of yield was observed clearly at just time of harvest than 1 week before that day of harvest. Especially, the length of shoots have shown a clear difference.
    3) The number of leaves tends to increase in the ORGAMIN DA-treated plots.
14. Conclusion: ORGAMIN DA autumn treatment to tea trees at 500 times dilution, 2 or 3 sprays, before and after tree-shape-forming cut of old branches, can increase yield of spring leaves.

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Tea**/Japan JPNPR02005

1. Reporter: SANKEI CHEMICAL CO., Ltd.
2. Cooperator: Hodai Tea Farm
3. Period of the test: March 1997-April 1997
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Tea production,
   ESPECIALLY FIRST HARVEST, BY SPRAY IN EARLY SPRING
5. Location: Ibusuki-gunn, Kagoshima
6. Crop: Tea, Var. Yutakamidori, 15 years' old
7. Treatments:
   Treatment 1:ORGAMIN DA, 1000 times dilution in water, 1 application(March 28, 2 leaves open stage)
   Treatment 2:ORGAMIN DA, 1000 times dilution in water, 2 applications(March 28 and April 8, 3 leaves open)
   Treatment 3:Non-treated Control
   Obs.: In the treatment 1, ORGAMIN DA solutions were sprayed by knap-sack sprayer at ratio of 200 L per 1000 ㎡. Surface surfactant was used. And in the treatment 2, 250 L of solution per 1000 ㎡ were used.
8. Formula of fertilizer:
9. Plot design: Raw 1.8 m width x 20 m long = 36 ㎡/plot x 2 replications for all treatment
10. Evaluation:
    - ♧ On April 11, 1997, the 1st harvest leaves were counted for evaluation.
    - ♧ A frame, sized 20 cm x 40 cm was placed in 2 randomly selected places of each plot.
    - ♧ All of the new shoots found in the frame were harvested.
    - ♧ All of new shoots wer classified **by the number of leaves grown at the shoots.** The shoots with 1 leaf were not counted.
    - ♧ The number, weight and length of the harvested shoots were measured.
11. Results

The Influences of ORGAMIN DA Application to Tea Tree in Autumn to The First Spring Harvest

All of Harvested New Shoots
Number of Shoots by number of leaves *

Treatment	>2	3	4	5	Total	Total ** Weight g (%)	Total Number of leaves	Av. Length of new shoots cm
ORGAMIN DA x 1000 x 1	120	563	242	12	937	290.8 (**111**)	2957(**117**)	8.3
ORGAMIN DA x 1000 x 2	96	564	273	6	939	326.0 (**125**)	3006(**118**)	9.2
Control, non-treated	121	584	135	0	840	261.6 (100)	2534(100)	7.8

12. Observations: * All of shoots harvested were classified by number of new leave on the shoots(leaves completely open were counted)
    ** Total weight is weight of harvested branches(with leaves) from 2 plots x 20 cm x 40 cm x 2/plot = 3200 cm^2.
13. Discussion: 1) The treatment of ORGAMIN DA in spring, before harvest, by 1000 times dilution, increased yield of tea leaves up to 25 percent over control.
    2) The number of new leaves per each shoots has increased by spray of ORGAMIN DA and total number of harvested leaves, as well as total weight also increased.

Experimental Results of **CANOPY(=ORGAMIN DA)** on **Tea**/Japan JPNPR02006

1. Reporter: SANKEI CHEMICAL CO., Ltd.
2. Cooperator: Hodai Tea Farm
3. Period of the test: March 1997-May 1997
4. Purpose: Evaluation of the efficacy of ORGAMIN DA on Tea production of **2ND HARVEST**, **BY SPRAY IN EARLY SPRING, BEFORE AND AFTER 1ST HARVEST**
5. Location: Ibusuki-gunn, Kagoshima
6. Crop: Tea, Var. Yutakamidori, 15 years' old
7. Treatments:
   Treatment 1:ORGAMIN DA, 1000 times dilution in water, 2 applications before 1st harvest and 1 additional applications before 2nd harvest.(March 28, 2 leaves open stage)
   2:ORGAMIN DA, 1000 times dilution in water, 1 application before 1st harvest and 1 additional application before 2nd harvest.
   3: ORGAMIN DA, 1000 times dilution in water, 1 application before 2nd harvest.
   4: ORGAMIN DA, 1000 times dilution in water, 2 applications before 1st harvest.
   5: ORGAMIN DA, 1000 times dilution in water, 1 application before 1st harvest.
   6: Non-treated Control
   Obs.: In the treatment 1, ORGAMIN DA solutions were sprayed by knap-sack sprayer at ratio of 250 L per 1000 ㎡. Surface surfactant was used.
8. Formula of fertilizer:
9. Plot design: Raw 1.8 m width x 10 m long = 18 ㎡/plot x 2 replications for all treatment
10. Evaluation:
   - On May 26, 1997, the 2nd harvest leaves were counted for evaluation. In the location, the 1st harvest was done on/around mid April.
   - A frame, sized 20 cm x 40 cm was placed in 2 randomly selected places of each plot.
   - All of the new shoots found inside the frame were harvested.
   - All of new shoots were classified **by the number of leaves grown at the shoots.** The shoots with 1 leaf were not counted.
   - The number, weight and length of the harvested shoots were measured.
11. Results The Influences of ORGAMIN DA Application to Tea Tree in Autumn to The First Spring Harvest

All of Harvested New Shoots
Number of Shoots by number of leaves *

Treatment ●: Marks date(s) applied 1st harvest season 2nd harv. 3/28 4/8 5/8	2	3	4	5	Total	Total ** Weight g (%)	Total Number of leaves	Av. Length of new shoots cm
1. ORGAMIN DA x 1000 x 3 ● ● ●	330	631	48	0	1009	350.8 (**116**)	2745 (**115**)	10.0 (**116**)
2. ORGAMIN DA x 1000 x 2 ● ●	255	617	86	2	960	341.4 (**113**)	2715 (**113**)	10.0 (**116**)
3. ORGAMIN DA x 1000 x 1 ●	286	586	74	0	946	357.0 (**118**)	2626 (**110**)	9.1 (**106**)
4. ORGAMIN DA x 1000 x 2 ● ●	330	597	40	0	967	333.1 (**110**)	2611 (**109**)	9.4 (**109**)
5. ORGAMIN DA x 1000 x 1 ●	420	533	15	0	968	323.3 (**107**)	2499 (**104**)	9.0 (**105**)
6. Control, non-treated	352	521	32	1	906	302.9 (100)	2395 (100)	8.6 (100)

12. Observations: * All of shoots harvested were classified by number of new leave on the shoots(leaves completely open were counted)
   ** Total weight is weight of harvested shoots(with leaves) from 2 plots x 20 cm x 40 cm x 2/plot = 3200 cm^2.
13. Discussion: 1) The treatment of ORGAMIN DA in spring, by 1000 times dilution, before 2nd harvest have shown increase of length of the shoots. But the tea trees which had been treated with ORGAMIN DA at 1st harvest timing, this trend of increase of the length of shoots was stronger than use of ORGAMIN DA only in the timing of the 2nd harvest.
   2) The number of new leaves per each shoots tends to increase by spray of ORGAMIN DA. As the treatments with the product are closed for harvest, or the number of treatments are more, the yield is more.
   3) No difference of water content in the leaves between treated with ORGAMIN DA and control.

Evaluation of **ORGAMIN D-A** on **Tomato**/USA USOF0019

1. Reporter: RD Kukas, Tracs Corporation
2. Period of the test: May 19 '97 to August 19, '97
3. Purpose: Evaluation of the efficacies of ORGAMIN D-A on tomato for processing
4. Location: Tulare, California
5. Crop: Tomato, variety:Rio Gran,
6. Applications of ORGAMIN D-A:
   1st:May 19, '97, foliar, at 5 leaves stage, 1st bloom
   2nd:May 30, '97, foliar
   3rd:June 9, '97, foliar
   4th:June 19, '97, foliar
   5th:July 2, 97, foliar
7. Yielding date: August 19, '97
8. Plot design:Random block, 6 replications
9. Results:

Tri no	Treatment Name	Rate oz/acre(=L/ha)	Yield Aug. 19				
			LB/10 FT	LB/acre	St ton/acre	MT/ha (%)	$/acre
1	ORGAMIN D-A	25.6(=1.87 L/ha) =0.2 Gal/acre	88.50	77,101	38.57	86.41 (**135.9**)	**1,928.3**
2	ORGAMIN D-A	38.4(=2.81 L/ha) =0.3 Gal/acre	84.78	73,888	36.93	82.82 (**130.23**)	**1,846.7**
3	Check	---	65.13	56,744	28.37	63.60 (100.0)	1,418.3

Obs.:All of ripe tomatoes were hand harvested from 10 foot of raw in each plot. The tomatoes were weighed and the data is presented as the weight per 10 foot of raw. The LB/acre, Tones(short)/acre and Metric Tones/ha were calculated. The dollar amount per acre was calculated using a contract price of $50.00 per ton(short).

Result of Demonstrative Test of **ORGAMIN** on **Tomato**/Brazil BRPR0007

1. Reporter: Yoritoshi Umeki
2. Period of the test:February to August, '78
3. Purpose: To evaluate performance of ORGAMIN on tomato in the field
4. Location: Farm of Mr. Yoshinori Umeki, Sol Nascente, Julio Mesquita, Sao Paulo, Brazil
5. Crop: Tomato, variety:Roma, Seeding:February 20, '78
6. Applications of ORGAMIN: 0.5 % x 10 times
7. Yielding date:
8. Plot design:1 replication, 1 plot of 2.42 ha/plot
9. Fertilizer:4-14-8 mixed 3,500Kg/ha
10. Results:

Treat-ment No.	Treatment name	Rate Concentration ratio(%)x time	Yield	
			Kg/ha	(%)
1	ORGAMIN	0.5 x 10 times	75,280	(**121**)
2	Check	------	62,313	(100)

Result of Demonstrative Test of **ORGAMIN** on **Tomato**/Brazil BRPR0008

1. Reporter: Cooprtativa Agricola de Cotia
2. Period of the test:August, to December '76
3. Purpose: To evaluate performance of ORGAMIN on tomato in the field
4. Location: Farm of Mr. Kaneo Monma, Santo Amaro, Sao Paulo, Brazil
5. Crop: Tomato, variety:Santa Cruz, transplanted on August 10, '76 with sutem support
6. Applications of ORGAMIN: 1.0 % x 7 times in Octover and December with intervals of 7 days.
7. Yielding date:
8. Plot design:1 replication, 1 plot of 50 plants
9. Fertilizer:4-14-8 mixed 3,500Kg/ha
10. Results:

Treat-ment No.	Treatment name	Rate Concentration ratio(%)x tims	Yield	
			Kg/50 plants	(%)
1	ORGAMIN	1.0 x 7 times	261.2	(**120**)
2	Check	------	217.9	(100)

Experimental Results of **ORGAMIN** on **Tomato**/Vietnam VIOF017

1. Reporter: VIETNAM PESTICIDE COMPANY(Cooperation with National Plant Protection Institute)
2. Cooperator: Engineer Nguyen Huu Vinh
3. Period of the test:Transplant October 4, '95 to harvest
4. Purpose: Evaluation of the efficacies of ORGAMIN on Tomato at farm land
5. Location: Tu Liem District, Ha Noi Capital
6. Crop: Tomato, Planted density:1,200 plants/360 ㎡
7. Treatments:
   Treatment 1:Untreated control
   Treatment 2:Sprays at dose of 0.3 %: 1st:At seed-bed(2 leaves stage)
   (Consumption of water:240-540 L/Ha) 2nd:Regrowth after transplanting
   3rd:1st flower cluster
   4th:Young fruits(2nd flower cluster appeared)
8. Formula of fertilizer:
9. Plot design:ORGAMIN 0.3 % plot 360 ㎡, Lbspray 0.5 % plot 360㎡ and untreated control 360 ㎡ each treatment 1 replication
10. Results:

Treatment	1st Flower-cluster(Days)	No.flo-wer/ cluster	No.fruits/ cluster	Frutifi-cation %	1st Harvest			2nd Flower cluster		
					No.fru-its/pl	Wt of fruits(Kg) plant Av.	Wt of fruits(Kg) 360 ㎡	No.Fl. buds/cl	No.Fr./ cluster	Frutific. %
ORGAMIN (0.3 % x 4)	40	5.4	3.2	59.25	2.60	0.190	228.0(**118.8**%)	9.1	7.20	79.12
Libspray (0.5 % x 4)	40	4.7	2.6	55.31	2.40	0.184	220.8(115%)	8.90	7.00	78.65
Control	43	3.5	1.8	51.42	2.40	0.160	192.0(100%)	6.40	4.00	62.50

Report of Practical Use of **ORGAMIN** on **Tomato**/Taiwan TWNPR006

1. Reporter: Lih-Nung Agricultural Chemical Ind., Ltd.
2. Cooperator: Mr. Cheng Shin-Gaang
3. Location: Shin-Gaang, Chia-Yi, Taiwan
4. Crop: Tomato, Var.: Know-Yun 303, Transplanted on Oct. 7, 1998
5. Period of the test: Oct. '98 to Nov. 1998
6. Application of ORGAMIN: 1st: Oct. 19, '98, 1.3 L/ha diluted in 500 times volumes water, foliar
   2nd: Oct. 28, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   3rd: Nov. 3, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   4th: Nov. 11, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
   5th: Nov. 16, '98, 1.3 L/ha diluted in 500 times volume of water, foliar
7. Reading Date: November, 1998
8. Plot design: 2 replications with 10 ㎡ per block
9. Result:

Treatment	Rate	Yield Evaluation		Percentages of fruits by size(%)		
	Liter/ha	Kg/10 ㎡	%	Large	Medium	Small
ORGAMIN	1.3 x 5 times	**41**	**113.9**	**45**	**37**	**8**
Control, untreated		36	100.0	23	46	11

10. Discussion:

Energyc(=**ORGAMIN**) field trial on the turf of Golf Course **Turf/Japan** JPNPR501

1. Reporter: Japan Carlit, Co., Ltd.
2. Cooperator: Mr. Yamaguchi, Igaho Country Club, Co., Ltd.
3. Period of the test: April to December, 1990
4. Purpose: Evaluation of the efficacy of ORGAMIN on the turf of golf course: Observation of total weight, weight of aerial parts plus crawling branches, weight of fine roots, weight of cut leaves, color of leaves and existence of diseases;
5. Location: Igaho Country Club, Shibukawa, Gunma
6. Crop and Variety: Turf: Bencross

7-1. Treatments of Test- A: Observation of growth including root development: Each plot had 1 replication of 36 ㎡

Treatment 1: ORGAMIN treatment by 200 times dilution in water, 1st April 12, 2nd April 23 and 3rd May 2nd. Applications were done using watering can.

Treatment 2: ORGAMIN treatment by 400 times dilution in water, 1st April 12, 2nd April 23 and 3rd May 2nd. Application was done using watering can.

Treatment 3: Non-treated control

a. The results was evaluated on May 30, 1990
b. Volume of solution used: 1,000 ml/㎡
c. The lawn of 5 cm deep and 4.25 inch diameter were cut and washed for weighing.

Results:(Test-A) Table-1

	Non-treated Control(T-1)		200 Times Dilution(T-2)		400 Times Dilution(T-3)	
	Aerial Part	Roots	Aerial Part	Roots	Aerial Part	Roots
A	85.2	4.4	84.3	4.9	79.9	4.5
B	34.1	5.1	77.3	5.2	48.7	5.0
C	72.9	4.6	29.1	4.9	82.2	4.6
D	47.3	4.9	93.5	5.4	36.4	4.7
E	99.4	4.6	56.0	5.8	39.6	4.7
Average	67.8	4.7	68.0	5.2	57.4	4.7
Root weight vs Total plant weight	6.48 % (100.0)		7.10 % (**109.6**)		7.57 % (**116.8**)	

Discussion: By visual observation, growth and leaf color of the turf did not show difference between ORGAMIN-treated and Non-Treated Control however, a difference was shown in the "Root weight vs Total plant weight". **ORGAMIN treatment showed better development of the roots system.** In the both plots of ORGAMIN 200 times and 400 times dilution did not show any phytotoxicity symptoms.

7-2. Treatment of Test-B: Observation of resistance level against disease

Treatment 1: ORGAMIN treatment by 200 times dilution in water, 1st May 30, 2nd June 12 and 3rd June 22. Applications were done using watering can. 1 plot test of 20 ㎡

Treatment 2: ORGAMIN treatment by 400 times dilution in water, 1st May 30, 2nd June 12 and 3rd June 22. Applications were done using watering can. 1 plot test of 20 ㎡

Treatment 3: ORGAMIN treatment by 200 times dilution in water, 1st May 30, 2nd June 12 and 3rd June 22. Applications were done engined sprayer. 1 plot test of 40 ㎡

Result(Test-B)

In 1990, on May 30, June 12 and June 22, ORGAMIN was sprayed to the plots of turf, using watering can and engined sprayer. No difference among treatments of ORGAMIN, from the aspect of disease incidence, leaves color and phytotoxicity appearance by visual evaluation. However, a clear difference in leaves weight was obviously observed as shown in the Table 2. Each plot of turf surfaces of 11.2 ㎡(=10 m x 0.56m x 2) were cut for observation.

Table-2

	Raw weight of cut leaves(g)	Number of leaves per 100 mg	
	Total weight(%)		
Control	318.1 (100)	453, 439, 403	Av. 431.7 (100)
ORGAMIN treatment	352.1 (**110.7**)	359, 391, 414	Av. 388.0 (**89.8**)

(cont'd)

7-3. Test for observation of green color maintenance level at nursery. ORGAMIN was sprayed 3 times on September 25, October 5 and Oct. 16, 1990, in the nursery. At No. 3 green, twice on Oct. 5 and Oct. 16, ORGAMIN was sprayed. At all areas, ORGAMIN was diluted in 400 times volume water. 1000 ml solution per m^2 was only rate. Observation was made on December 20 of 1990 by visual and using Minolta SPDA chlorophyl meter. The results are shown in the Table-3.

Table-3 Chlorophyl Density measured with Minolta SPDA Chlorophyll Meter

	Nursery bed		No. 3 Green	
	Control	ORGAMIN-treated	Control	ORGAMIN-treated
Chlolophyll: Min to Max	1.9 to 23.5	2.0 to 28.1	2.0 to 32.1	2.8 to 34.6
Average	9.7	15.1	12.3	15.4
%	100	**155.6**	100	**125.2**

Discussions:

★ **Growth**: By visual observation, ORGAMIN-treated plots did not show difference compared to non-treated control however, by surface leaves cutting and by cup cutting observations, ORGAMIN treatment showed advantage over control, especially on root system development.

★ Leaf Color: By visual observation, ORGAMIN-treated plots did not show difference compared to non-treated control however, chlorophyl density check using Minolta SPDA Chlorophyl meter showed clear advantage of ORGAMIN treatment to increase chlorophyl of the turf.

★ **Diseases and Drought**: In the test plots of the turf, ocurrence of any disease was not observed. So, the influence of ORGAMIN to the disease of the turf could not be observed. However, after the tests were run, **extra ordinal high temperatures have damaged the turf in general. The turf of the non-treated plot suffered drought and high temperatures showed many of wilted plants and dried-up leaves while, ORGAMIN-treated turf almost could keep normal status which clearly showed advantage of ORGAMIN treatment, especially by spring spray.**

★ **Phytotoxicity**: By use of 200 and 400 times dilution in water, ORGAMIN did not show any phytotocicity to turf.

Test Result of AMIGROW(=**ORGAMIN**) on **Vegetable/Pak choi**/Japan JPNPR0003

1. Reporter: Hokko Chemical Corporation
2. Cooperator:
3. Period of the test: October '85 to January '86
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) on vegetables in small scale field
5. Location: Farm of Hokko Chemical Research Center, Atsugi, Kanagawa
6. Crop: Aojiku Pakchoi and Radish of variety Kanemachi Kokabu, both transplanted on October 10, '86
7. Treatments:
   Treatment 1: ORGAMIN sprays at dose of 6.0 L/ha, x 6 times
   1st October 28 and the rest 5 times with intervals of 10 days.
   Treatment 2: Untreated control
8. Formula of fertilizer:
9. Plot design:3 replications, 1 block with 2 ㎡
10. Result:

Treatment	Length of leaves Av. cm	%	Weight Av./plant gr	%
Aojiku Pakchoi				
1. ORGAMIN 6.0 L x 6	22.3	104.2	239	**107**
2. Control	21.4	100	223	100

Radish	No. of leaves		Length of leaves Av./leaf	%	Root diameter	%	Weght/plant	
1. ORGAMIN 6.0 x 6	14.8 cm	104	34.1 cm	105	6.7 cm	105	**224** gr	**117**
2. Control	14.2	100	32.7	100	6.4	100	191.2	100

Test Result of AMIGROW(=**ORGAMIN**) on **Vegetable, Nozawana**/Japan JPNPR0009

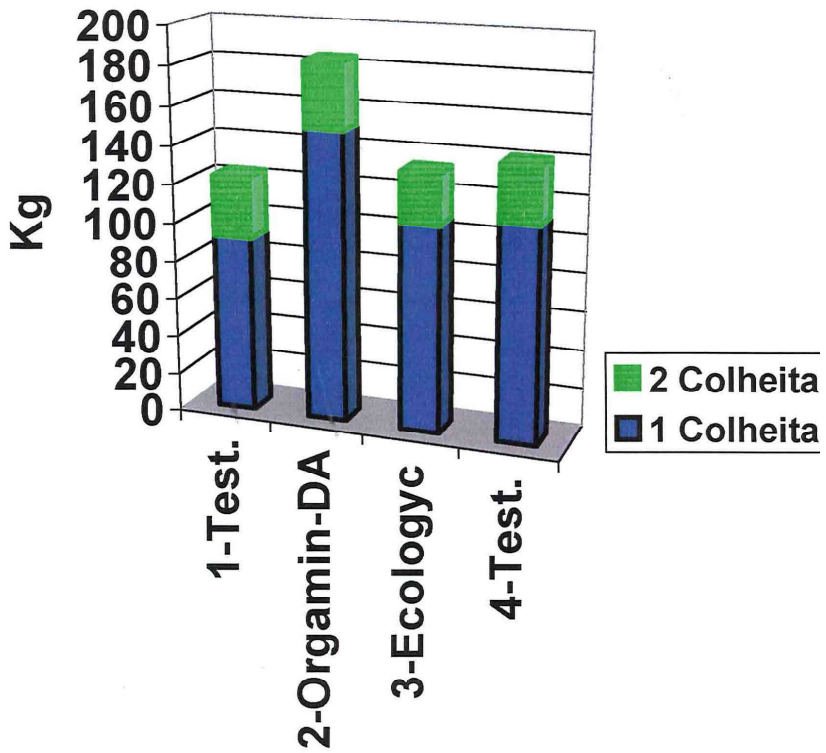
1. Reporter: Japan Carlit Co., Ltd., Japan
2. Cooperator:
3. Period of the test: September to november '87
4. Purpose: To evaluate performance of AMIGROW(=ORGAMIN) in commercial farm of leaf vegetable "Nozawana"
5. Location: Farm of Mr. Iwao Hirose, Yoshioka-Mura, North Gunma
6. Crop: Nozawana, seeded September 19, '87
7. Treatments:
   Treatment 1: ORGAMIN sprays at dose of 400 times dilution in water at 20 Liter/400 ㎡ on October 6 and 60 liter/400 ㎡ on October 16, '87
   Treatment 2: Untreated control
8. Formula of fertilizer:
9. Plot design:1 replication, 1 block with 400 ㎡
10. Result:

Treatment	Yield Kg	%
1. ORGAMIN 400 times dill. x 2	2,120	**120.5**
2. Control	1,760	100

Field Tests of Efficacies of **ORGAMIN DA** and **ECOLOGYC** on Water Melon/Brazil BRPR0021

1. Reporter: I. Kon-AGRO COSMOS (Cosmos Agrícola Produção e Serviços Ltda.)
2. Cooperator: Estaçã Shokucho Do Brasil Agríicola Ltda.
3. Purpose of the test:Evaluation of performance of ORGAMIN DA & ECOLOGYC on Water Melon
4. Location:Engenheiro Coelho-State of São Paulo, Brazil
5. Period of the test: December, 2002 to April 2003
6. Crop/Variety: Water melon(Citrullus lanatus), Var. AG 598
7. Applications: 1st application: 2002/12/27, plant hight: 4-6cm, consumption of the solution: 400 Litee
   2nd application: 2003/01/06, plant hight: 50-88 cm, consumption of the solution: 600 Litee
   3rd application: 2003/01/16, with bloom, consumption of the solution: 600 Litee
   4th application: 2003/01/29, with fruits, consumption of the solution: 800 Litee
   5th application: 2003/02/10, with fruits, consumption of the solution: 1000 Litee

   The dose of ORGAMIN DA and ECOLOGYC were 2.0 L/ha and 2.0 L/ha at all time.
8. Treatments: 1. Untreated control **with half of the basic soil fertilizer recommended.**
   2. ORGAMIN DA: **with half of the basic soil fertilizer recommended.**
   3. ECOLOGYC: **with half of the basic soil fertilizer recommended.**
   4. Untreated control with normal(recommended) soil fertilizer
9. Results: Weight of fruits harvested from 48 ㎡of each treatment are shown in the Table below. Twice harvested and the result are shown in Kg/48 ㎡.



Result of Demonstration Applocation of **ORGAMIN** on **Wheat**/Brazil BRPR0006

1. Reporter: Chuzo Fjioka, owner of farm
2. Cooperator:
3. Period of the test: April to September '79
4. Purpose: To evaluate performance of ORGAMIN in commercial farm of wheat
5. Location: Farm of Mr. Chuzo Fujioka, Paulistana, Parana, Brazil
6. Crop: Wheat, Variety: Jubateco
7. Treatments:
   Treatment 1: ORGAMIN 5-7 L/ha x 4 sprays: May 11(5.0 L/ha), May 25(5.0), June 7(5.0) and June 29(7.0)
   Treatment 2: Untreated control
8. Formula of fertilizer: 500 Kg/ha 4-31-13
9. Plot design:1 replication, 1 block with 400 ㎡
10. Result:

Treatment	Yield Kg	%
1. ORGAMIN 5-7 L/ha x 4	2,479	**150**
2. Control	1,653	100

Field Test Results of Application of **ORGAMIN** on **Wheat**/Brazil/1987 BRPR0010

1. Introduction

ORGAMIN has been reckognized for it's efficacy to increase yield and to improve quality of various crops. In the North Parana Region where wheat is most important crop, ORGAMIN is widely used to treat wheat. The practcal use of ORGAMIN went ahead of the accumulation of the official and/or private technical data. The start of practical use of ORGAMIN was based on the widely spread recognition of the efficacy among farmers. We still feel necessity to accumulate reliable indetailed technical data.To cover this point, the practical field evaluation tests were widely run in 1987 crop season. Fortunately we had cooperations of local technical people, Engenheiros Agronomos and the farm owners of 30 locations. A summery of the tests is shown at the following pages.

2. Test Results

The tests results are summerized in the Summery Table. Because of some unfavorable weather, mechanical and other factors, from only 16 test sites we succeeded to obtain full data.

3. Observations: Trough all technical information we obtained, we can summerize the efficacies of ORGAMIN as follows:

① Vigorous Development of Root System of Wheat :ORGAMIN showed excellent efficacy to stimulate development of the root system of wheat. Compared to untreated control, wheat of ORGAMIN-treated plot had 2 to 3 times more volume of the root.

② Strong Growth of Stems: As the result of the improved development of the root system, the stems and the leaves of ORGAMIN-treated wheat became strong and sound.

③ Prolonged Growing Period: At the ORGAMIN-treated plots, wheat prolonged it's life cycle for about one week. Increase of the yield recorded at many of the test sites partly could be understandable for this phenomena.

④ Increase of Yield: We observed maximum 55 % to minimum 4 % of increase of the yield of wheat grain in the ORGAMIN-treated plots. The productivity of the wheat grain of this region is 2,240 Kg/ha while, ORGAMIN--treated wheat of our tests have produced 2,770 Kg/ha in average which is 26 % increase over local average.

⑤ Improvement of The Quality Measured by "Kg/100 Liters" Index.: An improvement of quality of grain is very important from the stand point of the farmers' income increase. The grain of ORGAMIN-treated plots resulted maximum 7 points superior to the untreated control and the average improvement was 3.3 points.

⑥ Improvement of Crop Resistance to The Disease: In the test number 7 of the Summary Table, a highly notable difference of the yield between ORGAMIN-treated and control plots is reported. The notably low yield of grain at the control plot was reported to be caused by disease of *Piricularia oryzae* which widely occurred in the region while, the damage of the wheat of ORGAMIN plot suffered by the disease was light. The fact may suggest a possibility that ORGAMIN have fortified the natural power of the crop to resist a attack of disease. Similar phenomena are observed in other tests with other crops.

See Summary Table at next page

SUMMARY OF THE TESTS OF **ORGAMIN** APPLICATIONS ON **Wheat**/Brazil-**1** BRPR0010

Name of Farm/ Propriety	Location	Variety	Basic Fertilizer Kg/ha, N-P-K	ORGAMIN Treatment		Yield			Observations (ref. photo Nos.)
				Days after seeding	Dose L/ha	Av. Kg/ha	Percentage %	Kg/ 100L	
1)Santo Antonio, Jose G. Neto	Alvorada do Sul-Parana	Cocoraque	145 (4-30-10)	1st 30 2nd 55 3rd 85	6.2 8.3 8.3	3,000	114	84	*Seeding:87/5/9 *Harvest:87/9/4 *Strongly developed root system in treated plants.
				Control	---	2,630	100	81	
2)Ferracin, Pedro Ferracin	Sertanopolis, Parana	Anahuac	145 (2-30-10)	1st 40 2nd 65	8.3 8.3	2.850	104	80	*Seeding:87/5/6 *Harvest:87/9/8 *1st application was delayed.
				Control	---	2,730	100	79	
3)Imbauva, Marcos Marchi	Paiquere, Parana	Tapajara	167 (4-30-10)	1st 30 2nd 70	8.3 8.3	2.980	138		*Seeding:87/5/6 *Harvest:87/9/10 *Better plant growth and improved Kg/100L was observed.
				Control	---	2,160	100		
4)Correntina, Tomita Itimura	Sertaneja, Parana	Anahuac	125 (4-30-10)	1st 30 2nd 70	5.4 5.4	2,160	133		*Seeding:87/4/3 *Harvest:87/8/13 *Good development of roots/treated
				Control	---	1,620	100		
5)Pontal do Tibaji, Jose Antonio Nunes	Sertaneja, Parana	Cocoraque	167 (4-30-10)	1st 30 2nd 70	8.3 8.3	2,760	139	81	*Seeding:87/5/6 *Harvest:87/9/10 *Root system well developed vol/lengt
				Control	---	1,980	100	71	
6)Matao, Reis brothers	Florestopolis, Parana	Tapejara	165 (4-30-10)	1st 30 2nd 55 3rd 85	6.2 8.3 8.3	2,360	119	83	*Seeding:87/5/6 *Harvest:87/9/11
				Control		1,980	100	80	
7)N.S.Aparecida, Olivardo Toneze	Leopolis, Parana	Anahuac	124	1st 30 2nd 70	8.3 8.3	2,310	155		*Seeding:87/4/20 *Occurence of disease *Piricuraria oryzae* gave damage of control plot.
				Control	---	1,490	100		
8)Santa Fe	Leopolis, Parana	Anhauac	124 (4-24-12)	Treated		2,740	130		*Seeding:87/April *Notable increase of Kg/100 Liter was observed at treated area.
				Control	---	2,110	100		
9)San Judas, Wilson bagio	Cornerio, Parana			1st 30 2nd 55 3rd 80	6.2 8.3 8.3	3,250	110	82	*Seeding:87/4/24 *Harvest:87/8/30 *Significant increase of root, yield and Kg/100 L by ORGAMIN treatment.
				Control		2,950	100	79	
10) Santa Ana J. Baumgartener	Santa Mariana Parana	Anahuac	227 (4-9-10)	1st 30 2nd 70	8.3 8.3	3,210	152		*Seeding:87/4/13 *Harvest:87/8/28
				Control	---	2,110	100		
11)Irmoes, Uemura, Uemura brothers	Maua, Parana	Tapejara	269 (5-24-24)	1st 45 2nd 56 3rd 91	6.2 6.2 8.3	2,980	109	82	*Seeding:87/4/15 *Harvest:87/9/5 *Disease "Mau de pe" occured in treat-ed area.
				Control	---	2,730	100	82	

SUMMARY OF THE TESTS OF **ORGAMIN** APPLICATIONS ON **Wheat**/Brazil -**2** BRPR0010

Name of Farm/ Propriety	Location	Variety	Basic Fertilizer Kg/ha, N-P-K	ORGAMIN Treatment		Yield			Observations (ref. photo Nos.)
				Days after seeding	Dose L/ha	Av. Kg/ha	Percentage %	Kg/ 100L	
12)Yamanaka, Jose Yamanaka	Maua, Parana	IAC-5	248 (2-20-20)	1st 43 2nd 66	8.3 8.3	2,530	120	82	*Seeding:87/4/28 *Harvest:87/9/4
				Control	---	2,110	100	77	
13)Serra Morena, Francisco Campos Lima F.	Urai, Parana	Anahuac	125 (4-24-12)	1st 30 2nd 75 3rd 85	4.1 8.3 8.3	3,000	125	80	*Seeding:87/4/8 *Harvest:87/September *Increased root system of treated plants were observed.
				Control	---	2,400	100	79	
14)Yamaguchi, H. Yamaguchi	Phenix, Parana	Tapajara	248 (4-24-12)	1st 38 2nd 70	4.1 6.2	2.960	125	81	*Seeding:87/4/11 *Harvest:87/8/27
				Control	---	2,360	100	78	
15)N.S.Aparecida Tomow Karigyo	S. Pedro do Ivari, Parana	Anahuac	165 (4-22-12)	1st 44 2nd 68 3rd 86	4.1 8.3 8.3	2,480	125	81	*Seeding:87/4/11 *Harvest:87/8/27
				Control	---	1,980	100	78	
16)N.S.Aparecida Kenji Karigyo	S. Pedro do Ivari, Parana	Anhauac	165 (4-22-12)	1st 35 2nd 60 3rd 85	6.2 6.2 6.2	2,850	117	83	*Seeding:87/4/9 *Harvest:87/9/8
				Control	---	2,430	100	76	
17 S. Parana, Osvaldo Bonini	Alvorada do Sul, Parana	Anhauac	145 (4-30-10)	1st:Ramific. 2nd:Sprout 3rd:Earing	4.2 8.3 8.3	Only visual evaluation was made	About 120		*In treated area, good root development in volume and length, and stout stems were observed.
				Control			100		
18)S.S. Joaquim E. Kawanaka	Alvorada do Sul, Parana	Anahuac	167 (4-30-10)	1st 44 2nd 65 3rd 80	4.2 8.3 8.3	Because of rain, no yield was evaluated.			*Size, volume and deapth of root of treated area were superior to control.
				Control	---				
19)S. Antonio, A.&A. Zamarian	Sertaneja, Parana	Cocoraque	124 (4-24-12)	1st 2nd	8.3 8.3			82	*In treated area, good root development in volume and length and stout stems were observed.
				Control	---				
20)Sao Joao, Luiz A. P. Lima	Alvorada do Sul, Parana	Cocoraque	229 (4-24-12)	1st 65 2nd 85	4.2 8.3	Whole area was treated. Av. yield:2,663		83	*Development of root was excellent.
21) Agua Limpa, Katsuhiko Itimura	S. Pedro do Ivari, Parana	Anahuac	165 (4-17-10)	1st 50/55 2nd 75/80	4.2 8.3	Whole area was treated.			*Observer was convinced that ORGAMIN treatment increased yield by 10-20 %.
22)Maria Amelia N.Zamarian et al.	Cornerio Procopio, Parana	Anhauac		1st:Ramifi. 2nd:Sprout 3rd:Earing	4.2 8.3 8.3	375 to 500 Kg/ha more yield than control by visual evaluation was observed.			*Seeding:87/5/15 *Harvest:87/September *Improved grain weight by ORGAMIN was observed.
				Control	---				