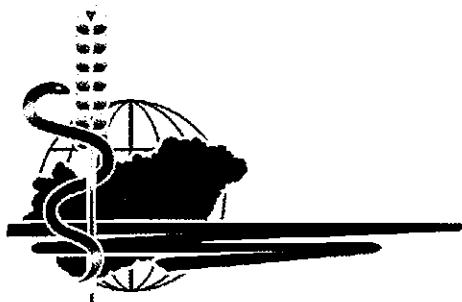


Code number: H/10/CELLADAM/0722/3

**Agricultural Office of County Fejér  
Plant Protection & Soil Conservation Directorate**



**REPORT ON  
PLANT CONDITIONER TRIAL**

**2010**



**Product: Floracell**

**Plant: Plum**

**Title of trial: Examination of Floracell plant conditioner product  
according to the GEP QA System in plum**

1. Product:

1.1. Name: **Floracell**

1.2. Active ingredient, composition:

<b>Name(s) of the product(s)</b>	<b>Floracell</b>
<b>Composition</b>	1mg/ml celladam

1.3. Manufacturer, trading company, client: **Celladam Group (Kovács Ádám Works)**

2. Plant:

2.1. Species (English): **Plum** Species (Latin): **Prunus domestica L.**  
Variety: **Bluefre**

2.2 Date and mode of sowing (planting): **1998.**

2.3. Date and mode of harvest: **27/08/2010**

3. Experimental site:

3.1. County, location, farm: **County Fejér, Agárd; Freshli Mihály, farmer**

3.2. Soil type: **Calcic chernozem**

3.3. Physical soil type: **loam**

**K<sub>A</sub>:** 41  
**pH<sub>KCl</sub>:** 7,1  
**organic matter content:** 2,9

3.4. Assessment of nutrient supply (data can be seen in attachment): **Nutrient supply of the trial area can be said to be good, both in its macro- and in micro elements.**

3.5. Volume and mode of nutrient supply (kg/ha):

	<b>N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>
<b>basic</b>	-	-	-
<b>in spring</b>	<b>80</b>	-	-
<b>summary</b>	<b>80</b>	-	-
<b>total in two previous years</b>	<b>160</b>	-	-
<b>manure in three years</b>	<b>year: -</b>	<b>volume: -</b>	

4. Experimental conditions

4.1. Plot size: 6 trees/plot

4.2. Replicates: 6

4.3. Lay-out (blocking out):

s p a c e d	5	s p a c e d	1	s p a c e d
	4		2	
	3		3	
	2		4	
	1		5	
	5		1	
	4		2	
	3		3	
	2		4	
	1		5	
	5		1	
	4		2	
3	3			
2	4			
1	5			

4.4. Treatment data:

Treatments	Dose	Date of treatment	Mode	Water quantity l/ha
1. Untreated control	-	-	-	-
2. Amalgerol Prémium Standard control	5,0	15/07/2010 (BBCH 76; 60% fruit size)	foliar spraying	600
3. Floracell	0,6			600
4. Floracell	1,0			600
5. Floracell	1,2			600

4.5. Application technological data:

Date	Equipment	Pressure (bar)	Handling
15/07/2010	CPC 25 high pressured motorized knapsack sprayer	15	good

4.6. Meteorological data at the time of application:

Date	Temperature	Wind	Rain in a day	
	°C	m/s	Time after the treatment (hours)	Amount (mm)
15/07/2010	22,3	1,3	-	-

4.7 Phytotoxicity: **There was no phytotoxicity observed.**

5. Plant protection and other cultural works:

**Application of contact and systemic pesticides was done against fungi and pests of plum during vegetation period in 8 times.**

**In spite of the high infection pressure orchard remained in healthy condition.**

**There was mechanical weed control done in the orchard.**

6. Weather conditions during vegetation period: (data in attachment):

**Weather conditions during trial period**

Month	Mean temperature (°C)	Rain (mm)	Number of rainy days
April	12,9	64	7
May	17,3	176	18
June	21,5	211	12
July	26,0	52	5
August	22,5	137	12

7. Assessment of the trial results, technical proposals (data can be seen in attached tables):

**The trial was set in Agárd, in good conditioned orchard. There is a calcic chernozem type of soil on the trial area. Plant protection was carried out with a great care; applications were done in 9 times against pests and fungi using a good product rotation.**

**The treated and the untreated plots received the same treatment.**

**The treatments were done at the time of 60-70% fruit size development stage of plum. For application have already found that little fruits of this plum variety are very waxy, and cuticles layer is on their leaves too, so it was questionable, weather products could be absorbed without adjuvant.**

**Although there was 2,2-2,3% difference, but these deviation is not significant.**

**The 1,0 and the 12 l/ha dosage of a Floracell caused only tendency-like increase.**

**There are only lower than 1% deviations in sugar content, which are also not significant.**

**In case of application with 1,0 l/ha Floracell acid content of fruits increased with a 6,5%, but because of the 7,4% CV value it also not significant.**

***Phytotoxic effect:***

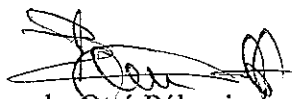
**There were not phytotoxic symptoms observed.**

***Suggestion:***

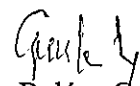
**The 1,0 l/ha Floracell product is suggested to apply in case of only one treatment in plum.**

**Product is suggested to spray in 600 l/ha spray volume, in tiny droplets. In case of plum variety with waxy cuticle adjuvant is needed to use.**

Velence, 30/November/2010



dr. Ottó Pálmai  
Director



Balázs Gyulai  
Study director

Attachment 1

**Yield (t/ha)**

Treatment	Dosage l/ha	Replicate						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	14,7	16,1	15,3	14,2	14,4	15,2	14,98
2. Amalgerol premium Standard control	5,0	15,1	15,4	15,9	14,1	14,8	15,3	15,10
3. Floracell	0,6	15	15,5	16,1	14,3	14,6	15,2	15,12
4. Floracell	1,0	15,3	15,5	14,6	14,9	15,9	15,8	15,33
5. Floracell	1,2	14,6	15,7	14,8	15,8	15,7	15,3	15,32

**Sugar content (% m/m)**

Treatment	Dosage l/ha	Replicate						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	12,6	12,6	12,11	12,11	12	12	12,24
2. Amalgerol premium Standard control	5,0	12,25	11,8	12	12,15	12,5	12,4	12,18
3. Floracell	0,6	12,4	12,4	12,2	12,15	12,85	11,9	12,32
4. Floracell	1,0	11,95	12,25	11,75	12,65	12,6	12	12,20
5. Floracell	1,2	12,55	12,2	11,95	12,55	11,95	11,4	12,10

**Acid content (g/100g)**

Treatment	Dosage l/ha	Replicate						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	0,97	0,97	0,99	0,99	0,88	0,88	0,95
2. Amalgerol premium Standard control	5,0	0,84	0,96	1,04	0,89	0,93	0,95	0,94
3. Floracell	0,6	0,98	0,76	0,96	1,01	0,95	0,99	0,94
4. Floracell	1,0	0,92	0,95	1,05	0,93	1,06	1,14	1,01
5. Floracell	1,2	0,92	0,96	0,94	1,02	1,02	1,01	0,98

**Results of soil examinations**  
(Agárd, 15/07/2010)

Measured parameter		Sample I.
pH <sub>KCl</sub>		7,10
Texture K <sub>A</sub>		41,00
Salt content %		0,02
CaCO <sub>3</sub> %		10,50
Organic matter content%		2,9
(NO <sub>2</sub> +NO <sub>3</sub> )-N	mg/kg	14,40
P <sub>2</sub> O <sub>5</sub>	mg/kg	211,00
K <sub>2</sub> O	mg/kg	218,00
Na	mg/kg	45,00
Mg	mg/kg	145,00
SO <sub>4</sub> -S	mg/kg	9,80
Mn	mg/kg	40,00
Zn	mg/kg	2,30
Cu	mg/kg	2,40

**Yield***TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average t/ha	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	14,7	16,1	15,3	14,2	14,4	15,2	14,98	100,0
2.	Amalgerol Prémium (St. control)	5,0	15,1	15,4	15,9	14,1	14,8	15,3	15,10	100,8
3.	Floracell	0,6	15	15,5	16,1	14,3	14,6	15,2	15,12	100,9
4.	Floracell	1,0	15,3	15,5	14,6	14,9	15,9	15,8	15,33	102,3
5.	Floracell	1,2	14,6	15,7	14,8	15,8	15,7	15,3	15,32	102,2

*ANALYSIS OF VARIANCE*

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	9,50						
Replicate	3,03	5			2,25	10%	0,54
Treatment	0,54	4	0,136	0,46	2,87	5%	0,66
Error	5,92	20	0,296		4,43	1%	0,89

F-test: No signifikant



### Yield

Date of evaluation: 27/08/2010

Mode of evaluation:

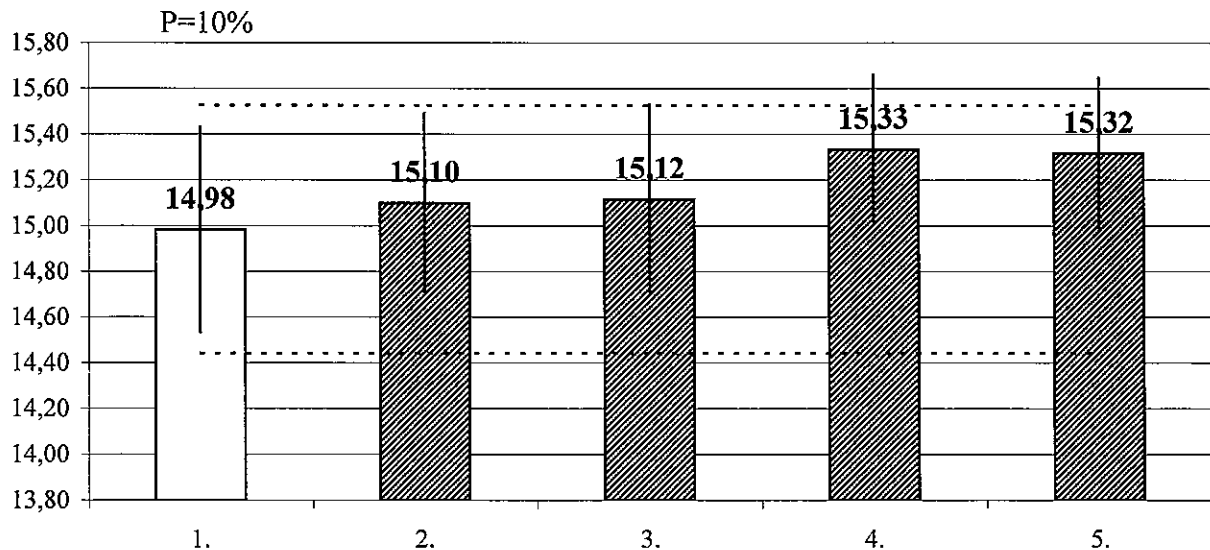
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average t/ha	Control 100%
1.	Untreated control	-	-	-	14,98	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 60	15,10	100,8
3.	Floracell	0,6	15/07/2010	BBCH 60	15,12	100,9
4.	Floracell	1,0	15/07/2010	BBCH 60	15,33	102,3
5.	Floracell	1,2	15/07/2010	BBCH 60	15,32	102,2
<i>SzD</i> 10% = *					0,54	3,6
<i>SzD</i> 5% = **					0,66	4,4
<i>SzD</i> 1% = ***					0,89	6,0

CV= 3,6 %

### Yield

yield  
t/ha



**Sugar content***TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average %	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	12,6	12,6	12,11	12,11	12	12	12,24	100,0
2.	Amalgerol Prémium (St. control)	5,0	12,25	11,8	12	12,15	12,5	12,4	12,18	99,6
3.	Floracell	0,6	12,4	12,4	12,2	12,15	12,85	11,9	12,32	100,7
4.	Floracell	1,0	11,95	12,25	11,75	12,65	12,6	12	12,20	99,7
5.	Floracell	1,2	12,55	12,2	11,95	12,55	11,95	11,4	12,10	98,9

*ANALYSIS OF VARIANCE*

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	3,02						
Replicate	0,89	5			2,25	10%	0,31
Treatment	0,15	4	0,037	0,38	2,87	5%	0,38
Error	1,98	20	0,099		4,43	1%	0,52

F-test: No signifikant

### Sugar content

Date of evaluation: 31/08/2010

Mode of evaluation:

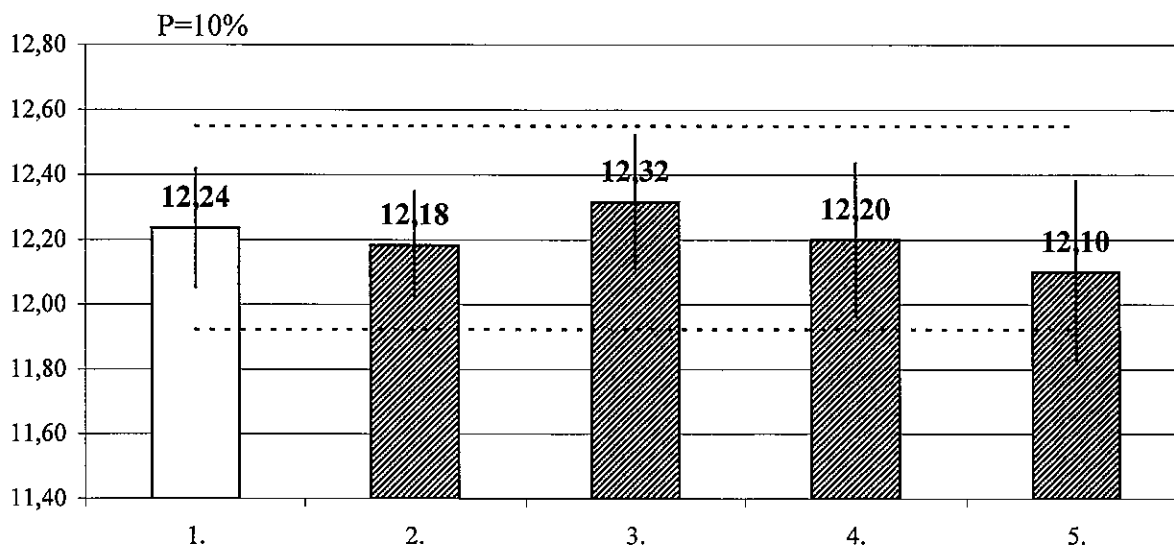
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average %	Control 100%
1.	Untreated control	-	-	-	12,24	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 60	12,18	99,6
3.	Floracell	0,6	15/07/2010	BBCH 60	12,32	100,7
4.	Floracell	1,0	15/07/2010	BBCH 60	12,20	99,7
5.	Floracell	1,2	15/07/2010	BBCH 60	12,10	98,9
<i>SzD</i> 10% = *					0,31	2,6
<i>SzD</i> 5% = **					0,38	3,1
<i>SzD</i> 1% = ***					0,52	4,2

CV= 2,6 %

### Sugar content

sugar content %



**Acid content***TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average g/100 g	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	0,97	0,97	0,99	0,99	0,88	0,88	0,95	100,0
2.	Amalgerol Prémium (St. control)	5,0	0,84	0,96	1,04	0,89	0,93	0,95	0,94	98,8
3.	Floracell	0,6	0,98	0,76	0,96	1,01	0,95	0,99	0,94	99,5
4.	Floracell	1,0	0,92	0,95	1,05	0,93	1,06	1,14	1,01	106,5
5.	Floracell	1,2	0,92	0,96	0,94	1,02	1,02	1,01	0,98	103,3

*ANALYSIS OF VARIANCE*

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	0,15						
Replicate	0,03	5			2,25	10%	0,07
Treatment	0,02	4	0,006	1,13	2,87	5%	0,09
Error	0,10	20	0,005		4,43	1%	0,12

F-test: No signifikant

**Acid content**

Date of evaluation: 31/08/2010

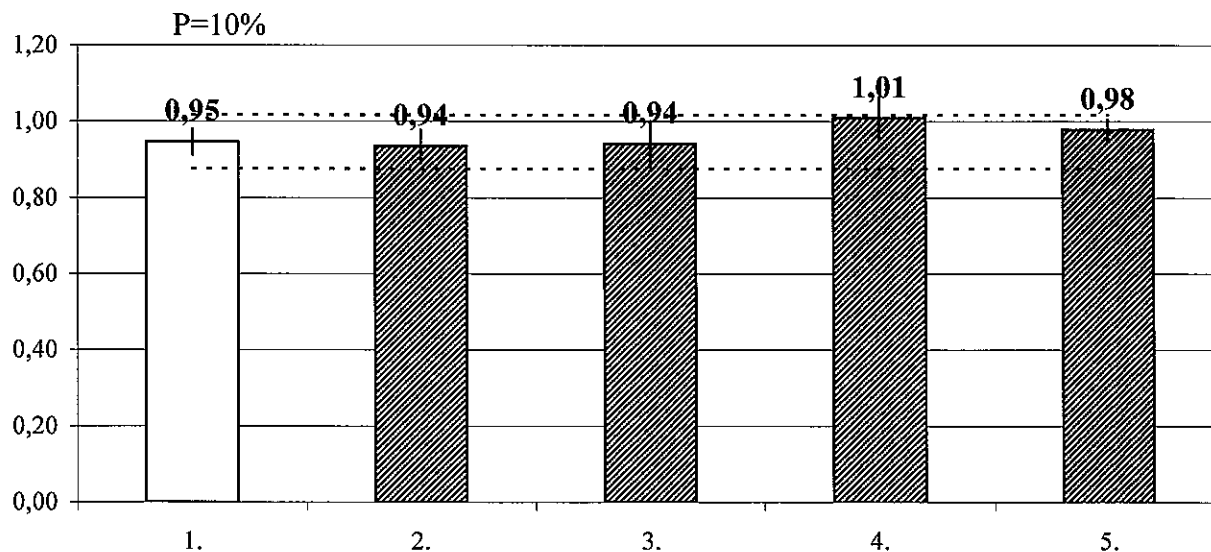
Mode of evaluation:

*TABLE OF RESULTS*

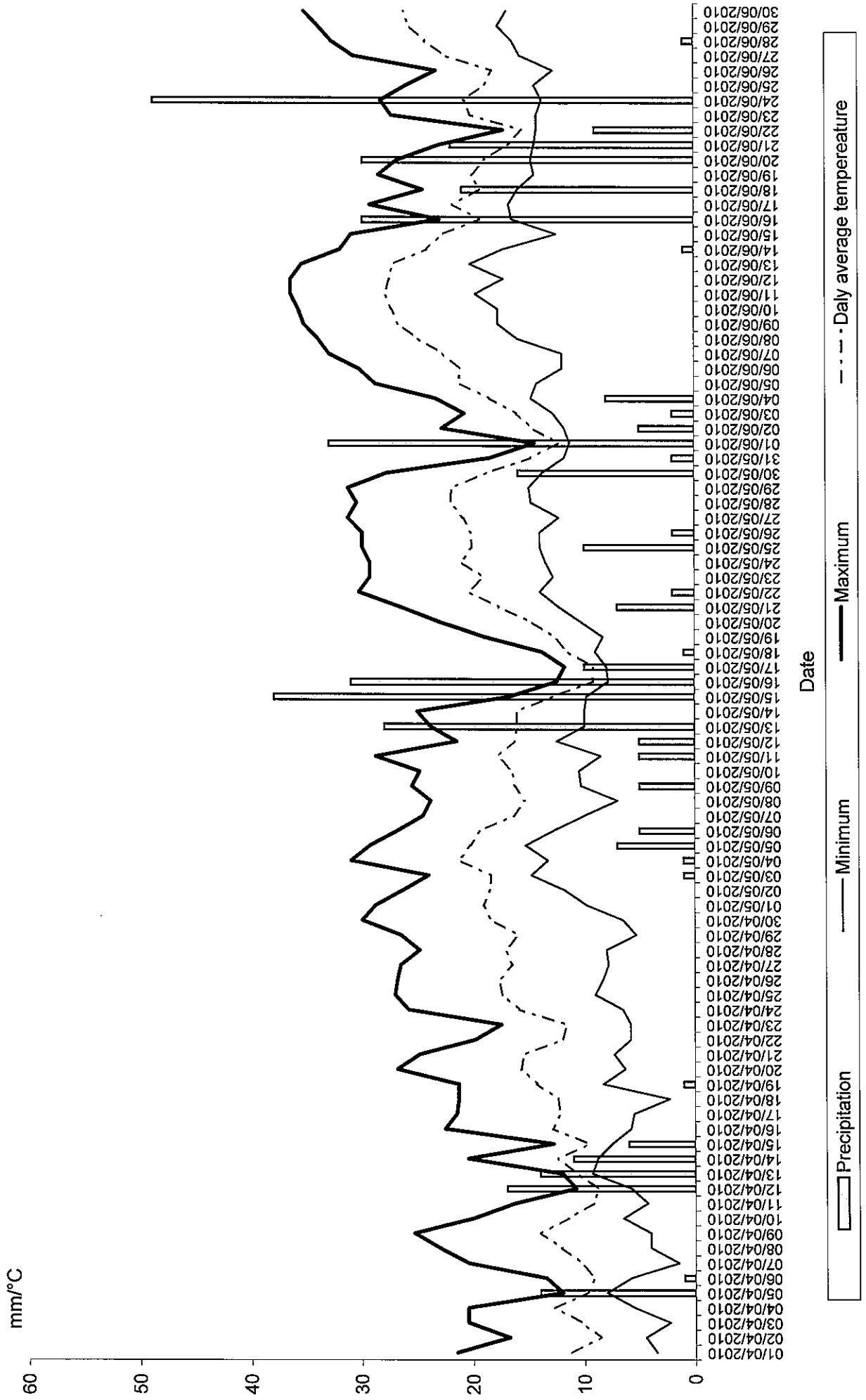
No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average g/100 g	Control 100%
1.	Untreated control	-	-	-	0,95	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 60	0,94	98,8
3.	Floracell	0,6	15/07/2010	BBCH 60	0,94	99,5
4.	Floracell	1,0	15/07/2010	BBCH 60	1,01	106,5
5.	Floracell	1,2	15/07/2010	BBCH 60	0,98	103,3
<i>SzD</i> <sub>10%</sub> = *					0,07	7,5
<i>SzD</i> <sub>5%</sub> = **					0,09	9,0
<i>SzD</i> <sub>1%</sub> = ***					0,12	12,3

CV= 7,4 %

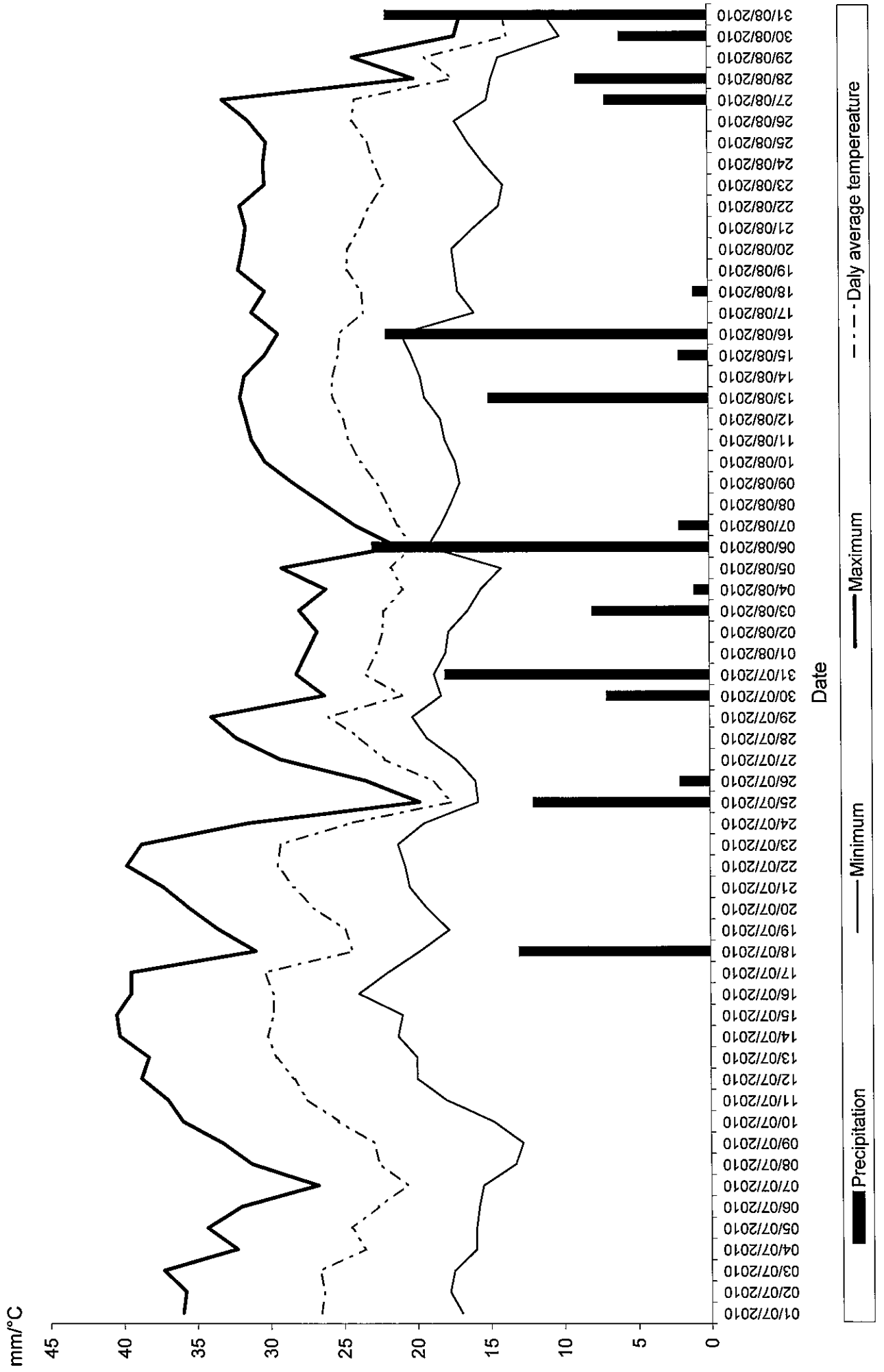
3 figure

**Acid content**acid content  
g/100 g

Meteorological data  
2010/April-June



**Meteorological data  
July-Augustus/2010**





**Central Agricultural Office  
Coordination and Audit Division**

✉ 1149 Budapest, Tábornok u. 2., Hungary  
☎ 1/460-6300; Fax: 1/222-6065

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30 March 2010

**No.:** 02.7/23/10/2010

**Subject:** Certificate of Official Recognition  
of Efficacy Testing Facilities  
or Organisations in Hungary

At the request of Agricultural Office of County Fejér, Directorate of Plant Protection and Soil Conservation Pest Diagnostic Laboratory (H-2481 Velence, Ország út 23., Hungary), I, acting as the food chain control body of first instance, make the following

**DECISION.**

I hereby certify that the testing facility of the Agricultural Office of County Fejér, Directorate of Plant Protection and Soil Conservation, Pest Diagnostic Laboratory located in H-2481 Velence, Ország út 23., Hungary is officially recognised as being competent to carry out efficacy trials in compliance with the principles of Good Experimental Practices (GEP). The above testing facility may carry out efficacy trials of authorization in the following categories of products and cultivation in Hungary:

- product categories: herbicides, fungicides, bactericides, zoocides, growth regulators and yield enhancing substances, additives;
- cultivation categories: field crops, vegetables, fruits, grapevines, ornamental plants, forest, public place, others.

**This certificate is valid for 2 years from its entry into force.**

No further complaint shall be lodged against the present decision through state administration. With reference to infringement of law, judicial review of the decision may be requested. Within 30 days of the communication of the decision a complaint may be lodged against it, addressed to the head of Budapest Court but submitted to the authority having issued the decision of first instance (Central Agricultural Office Coordination and Audit Division) or sent to the same body by registered mail.

Submission of the complaint has no delaying force on the implementation of this decision.

**R E A S O N**

According to Article 22 paragraph (5) of the *Decree 89/2004 (V. 15.) FVM on the authorization of placing on the market and use, as well as on the packaging, labelling, storage and transport of plant protection products (hereinafter: Ministerial Decree)*, the Central Agricultural Office made an official inspection in the above testing facility and concluded that the Agricultural Office of County Fejér, Directorate of Plant Protection and Soil Conservation, Pest Diagnostic Laboratory meets the requirements concerning the efficacy trials specified in the Ministerial Decree. Statements made during the local inspection are reported in the protocol No. 02.7/23/4/2010.



Validity of this certificate is determined according to Article 22 paragraph (6) of the Ministerial Decree.

The deadline of the administrative procedure is 14 May 2010.

I call your attention that the present certification is without prejudice to either the licences concerning the operation/follow-up of activity laid down in other provisions of legislation or the obligation for obtaining them.

Furthermore I call your attention that you are obliged to notify the Central Agricultural Office, within 15 days, about any important changes concerning the certified activity of the testing facility.

Respect of the provisions laid down in the legislation on GEP certification and in this Decision shall be randomly controlled by my competent authority according to Article 22 paragraph (9) of the Ministerial Decree.

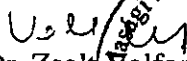
If during the official inspection it is found that the testing facility does not meet the relevant GEP requirements, the competent authority may suspend the activity related to the category specified in this decision for maximum 2 months or may revoke the GEP-certificate. If during the official inspection it is found that some details are missing in relation to a trial, the competent authority responsible for authorization may exclude the trial, depending on the extent of missing details, from those that may be accepted for authorization.

Acting according to Article 22 paragraph (1) of the Ministerial Decree, I made the present Decision in compliance within my jurisdiction laid down in 13 paragraph (5) and, Article 2 paragraph (3) of *Government Decree 274/2006 (XII. 23.) concerning the establishment and operation of the Agricultural Office.*

I made this decision in compliance with Articles 71 paragraph (1) and Article 72 paragraph (1) of *Act 140 of 2004 on general rules of administrative official procedure and service (hereinafter: Act 140/2004).*

I excluded the possibility of appeal in compliance with Article 39 paragraph (4) point o) of Act 46 of 2008 on food chain and its official control. I provided the possibility of judicial review in compliance with Article 109 paragraph (1) of Act 140/2004 and Article 330 paragraph (2) of Act III of 1952 on Civil Procedure.

on behalf of László Lukács  
president

  
Dr. Zoltán Pál  
head of division

