

Code number: H/10/CELLADAM/0722/4

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



**REPORT ON  
PLANT CONDITIONER TRIAL**

**2010**



**Product: Floracell**

**Plant: Soybean**

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

1. The trial was carried out: **Agricultural Office of County Fejér Plant Protection & Soil Conservation Directorate, Velence, Országút 23.**

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): **Soybean** Species (Latin): **Glicine soya**  
Variety: **Rustica**

2.2 Date and mode of sowing (planting): **29/04/2010**

2.3. Seed volume: **360 kg/ha** Germ number: **1,1 million/ha**

2.4. Depth of sowing: **4 cm**

2.5. Preceding: **winter wheat**

2.6. Weed control of preceding: -

2.7. Space and row of plants: **24 cm x 3 cm**

2.8. Other crop characteristics, homogeneity, infection, infestation: **Even, healthy plant vegetation**

2.9. Date and mode of harvest: **21/September/2010**

3. Experimental site:

3.1. County, location, farm: **Fejér county, Kápolnásnyék; Trial garden**

3.2. Soil type: **Calcic chernozem**

3.3. Physical soil type: **loam**

**K<sub>A</sub>:** 43  
**pH<sub>KCl</sub>:** 7,2  
**organic matter content:** 2,9  
**CaCO<sub>3</sub> content:** 11,5

3.4. 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>summary</b>	-	-	-
<b>total in two previous years</b>	<b>80</b>	-	-
<b>manure in three years</b>	year:	volume:	

4. Experimental conditions:

4.1. Plot size: **3 m x 10 m**

4.2. Replicates: **6**

4.3. Lay-out (blocking out):

1	2	3	4	5
2	3	4	5	1
3	4	5	1	2
4	5	1	2	3
5	1	2	3	4
1	2	3	4	5

4.4. Treatment data:

Treatments	Dose L; kg/ha	Date	Growth stage	Mode	Spray volume
1. Untreated control	-	-	-	-	-
2. Amalgerol Prémium Standard control	5,0	15/07/2010	BBCH 60	Foliar	250
3. Floracell	0,6	15/07/2010	BBCH 60	Foliar	250
4. Floracell	1,0	15/07/2010	BBCH 60	Foliar	250
5. Floracell	1,2	15/07/2010	BBCH 60	Foliar	250

Mode of treatment:

**foliar treatment**

Equipment for applications:

**PP 02-WP plot sprayer working with pressured air**

Type of nozzles:

**Tee Yet 11004 DG VS**

Spray volume (l/ha)

**250 l/ha**

Pressure (bar):

**3,0**

4,5. Meteorological data at the time of application:

Date	Temperature	Wind	Cloudy	Rain in a day	
	$^{\circ}C$	m/s	%	Time after the treatment (hours)	Amount (mm)
15/07/2010	22,3	1,6	-	-	-

5. Plant protection and other agricultural works: -

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

Weather conditions during trial period

Month	Mean temperature ( $^{\circ}C$ )	Rain (mm)	Number of rainy days
June	21,5	211	12
July	26,0	52	5
Augustus	22,5	118	12
September	16,27	152	14

7. Examined parameters, method and date of measuring or sampling:

**Examinations on field:**

Yield measurement 21/09/2010

**Laboratory examinations**

Determination of protein content 11/10/2010

8. Trial conditions:

**Assessment:**

The trial was carried out in the trial garden of the Agricultural Office of County Fejér Plant Protection and Soil Conservation Directorate, on the Calcic chernozem type of soil with a good nutrient supply.

There was only the weed control done on the trial area before emergence, other plant protection works were not necessary.

Older ages of soybean were in the pods appear growth stage (BBCH 69), younger began to flowering (BBCH 60) in the date of he treatment.

Visible changes were not observed after the treatment during vegetation period.

Total plots were harvested.

2,4-5,4% extra yield results were measured but only the 1,0 l/ha dose of Floracell gave on 10% probability significant result.

**Also in laboratory only the 1,0 l/ha dose of the Floracell cause protein content increase. This increase is proved by calculations on 1% probability level.**

***Phytotoxical effect:***

**There were not phytotoxical symptoms observed during the growing season after the treatments.**

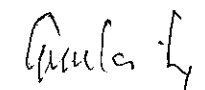
***Suggestion:***

**The 1,0 dose of Floracell positively affect the quality of a soybean.  
Product is suggested to apply in the start of generative phase, in 200-300 l/ha spray volume, under 3 bar pressure, using TeeJet 11004 or something like these nozzles.**

Velence, 30/November/2010

  
dr. Ottó Palmay  
Director



  
Balázs Gyulai  
Study director

Attachment 1

**Yield results  
(t/ha)**

Treatment	Dosage l/ha	Replicates						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	3,4	3,6	3,4	3,1	3,7	3,3	3,42
2. Amalgerol premium Standard control	5,0	3,5	3,6	3,5	3,1	3,8	3,5	3,50
3. Floracell	0,6	3,3	3,6	3,2	3,4	3,7	3,7	3,48
4. Floracell	1,0	3,6	3,5	3,4	3,6	3,8	3,7	3,60
5. Floracell	1,2	3,4	3,3	3,2	3,8	3,7	3,8	3,53

**Crude protein content  
%**

Treatment	Dosage l/ha	Replicates						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	46	45	44	42	46	43	44,33
2. Amalgerol premium Standard control	5,0	45	47	46	44	46	45	45,50
3. Floracell	0,6	44	46	45	43	46	47	45,17
4. Floracell	1,0	48	46	44	47	48	47	46,67
5. Floracell	1,2	46	44	43	47	47	45	45,33

**Results of soil examinations  
(Kápolnásnyék, 01/07/2010)**

<b>Measured parameter</b>	<b>Sample I.</b>
pH <sub>KCl</sub>	7,20
Texture K <sub>A</sub>	43,00
Salt content %	0,02
CaCO <sub>3</sub> %	11,50
Organic matter content%	2,9
(NO <sub>2</sub> +NO <sub>3</sub> )-N mg/kg	13,90
P <sub>2</sub> O <sub>5</sub> mg/kg	208,00
K <sub>2</sub> O mg/kg	210,00
Na mg/kg	40,00
Mg mg/kg	150,00
SO <sub>4</sub> -S mg/kg	9,00
Mn mg/kg	40,00
Zn mg/kg	2,00
Cu mg/kg	2,60

**Yield***TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average t/ha	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	3,4	3,6	3,4	3,1	3,7	3,3	3,42	100,0
2.	Amalgerol Prémium (St. control)	5	3,5	3,6	3,5	3,1	3,8	3,5	3,50	102,4
3.	Floracell	0,6	3,3	3,6	3,2	3,4	3,7	3,7	3,48	102,0
4.	Floracell	1	3,6	3,5	3,4	3,6	3,8	3,7	3,60	105,4
5.	Floracell	1,2	3,4	3,3	3,2	3,8	3,7	3,8	3,53	103,4

*ANALYSIS OF VARIANCE*

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	1,28						
Replicate	0,53	5			2,25	10%	0,18
Treatment	0,11	4	0,027	0,86	2,87	5%	0,21
Error	0,64	20	0,032		4,43	1%	0,29

F-test: No signifikant



### Yield

Date of evaluation: 12/09/2010

Mode of evaluation: harvested of whole plot

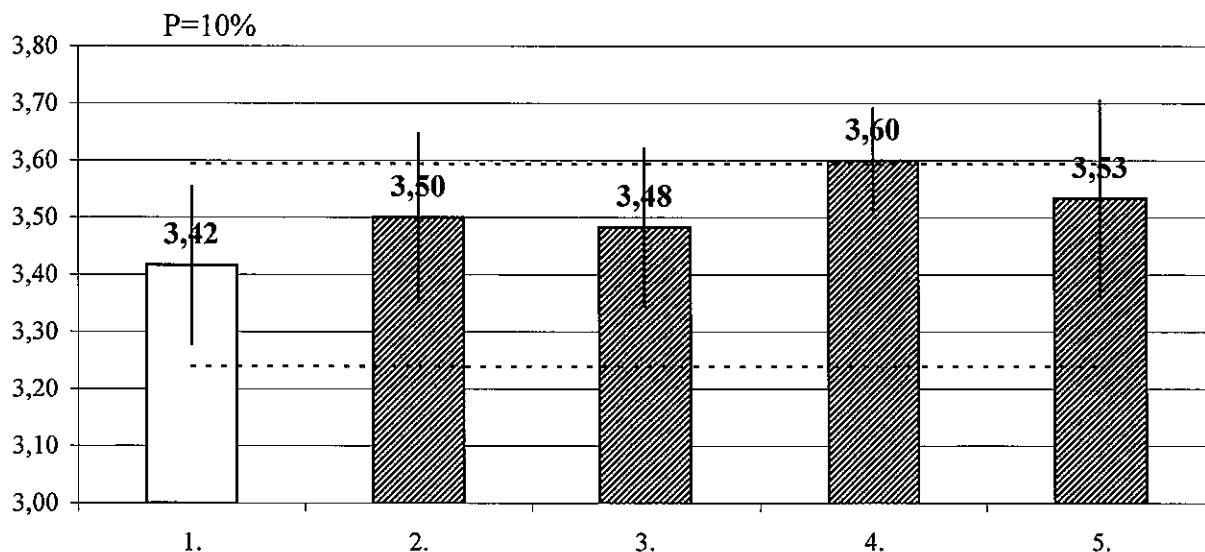
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average t/ha	Control 100%
1.	Untreated control	-	-	-	3,42	100,0
2.	Amalgerol Prémium (St. control)	5	15/07/2010	BBCH 60	3,50	102,4
3.	Floracell	0,6	15/07/2010	BBCH 60	3,48	102,0
4.	Floracell	1	15/07/2010	BBCH 60	3,60	105,4 *
5.	Floracell	1,2	15/07/2010	BBCH 60	3,53	103,4
<i>SzD</i> 10% = *					0,18	5,2
<i>SzD</i> 5% = **					0,21	6,3
<i>SzD</i> 1% = ***					0,29	8,6

CV= 5,1 %

### Yield

yield  
t/ha



**Protein content***TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average %	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	46	45	44	42	46	43	44,33	100,0
2.	Amalgerol Prémium (St. control)	5,0	45	47	46	44	46	45	45,50	102,6
3.	Floracell	0,6	44	46	45	43	46	47	45,17	101,9
4.	Floracell	1,0	48	46	44	47	48	47	46,67	105,3
5.	Floracell	1,2	46	44	43	47	47	45	45,33	102,3

*ANALYSIS OF VARIANCE*

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	71,20						
Replicate	16,40	5			2,25	10%	1,37
Treatment	16,87	4	4,217	2,22	2,87	5%	1,66
Error	37,93	20	1,897		4,43	1%	2,26

F-test: No signifkant

### Protein content

Date of evaluation: 11/10/2010

Mode of evaluation: 500 g/plot

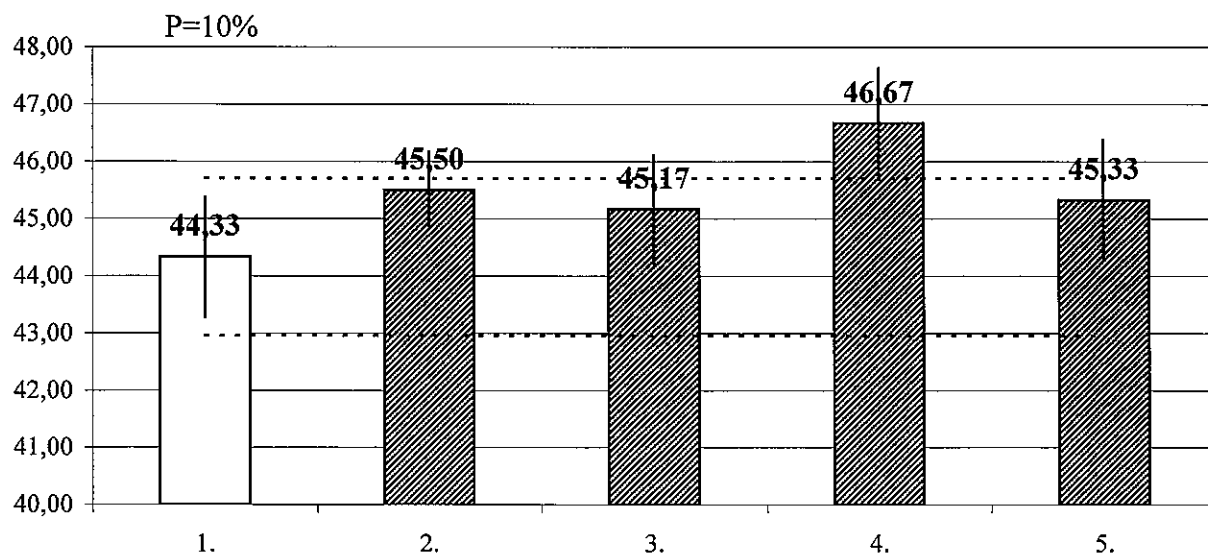
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average %	Control 100%
1.	Untreated control	-	-	-	44,33	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 60	45,50	102,6
3.	Floracell	0,6	15/07/2010	BBCH 60	45,17	101,9
4.	Floracell	1,0	15/07/2010	BBCH 60	46,67	105,3 ***
5.	Floracell	1,2	15/07/2010	BBCH 60	45,33	102,3
<i>SzD</i> 10% = *					1,37	3,1
<i>SzD</i> 5% = **					1,66	3,7
<i>SzD</i> 1% = ***					2,26	5,1

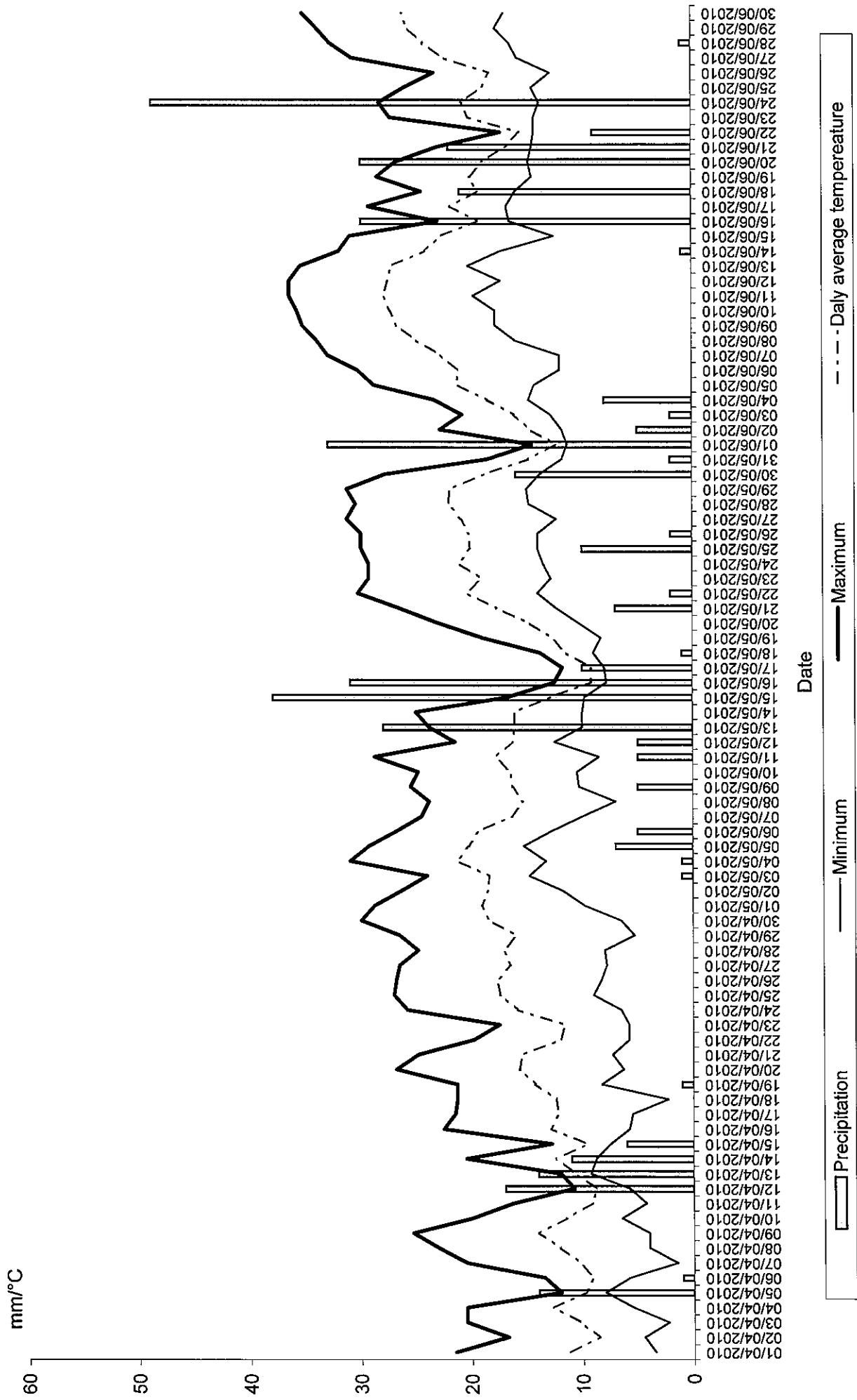
CV= 3,0 %

### Protein content

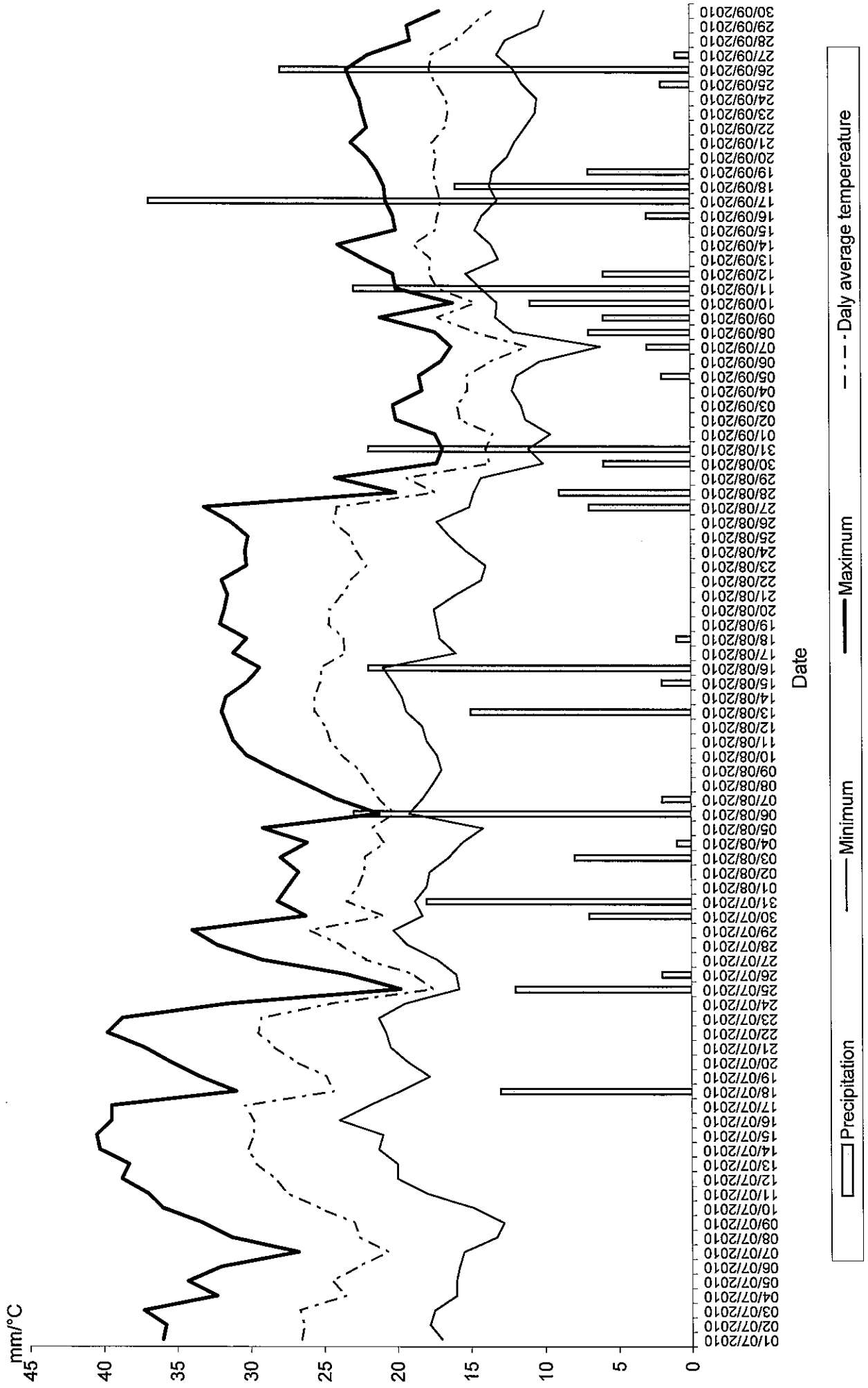
protein content %



Meteorological data  
2010/April-June



Meteorological data  
July-September/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.

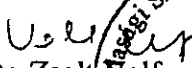
If during the official inspection it is found that the testing facility does not meet the relevant GEP requirements, the competent authority may suspend the activity related to the category specified in this decision for maximum 2 months or may revoke the GEP-certificate. If during the official inspection 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 Gólford  
head of division

