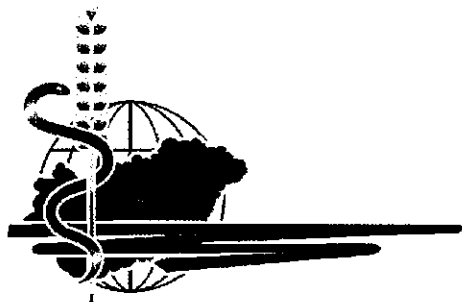


Code number: H/10/CELLADAM/0722/6

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



**REPORT ON
PLANT CONDITIONER TRIAL**

2010



Product: Floracell

Plant: Sunflower

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

1. Product:

1.1. Name: **Floracell**

1.2. Active ingredient, composition:

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

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

2. Plant:

2.1. Species (English): **Sunflower** Species (Latin): **Helianthus annuus**
Variety: **Neoma**

2.2 Date and mode of sowing (planting): **28/04/2010**

2.3. Seed volume: - Germ number: **60 thousand plants/ha**

2.4. Depth of sowing: **5-6 cm**

2.5. Preceding: **corn**

2.6. Weed control of preceding: **Laudis**

2.7. Space and row of plants: **75 cm x 20 cm**

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

2.9. Date and mode of harvest: **23/09/2010**

3. Experimental site:

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

3.2. Soil type: **Calcic chernozem**

3.3. Physical soil type: **loam**

K_A: **41**
pH_{KCl}: **7,3**
organic matter content: **2,6**

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

	N	P₂O₅	K₂O
basic	-	-	-
in spring	80	-	-
summary	80	-	-
total in two previous years	160	40	60
manure in three years	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	10/07/2010	BBCH 57	Foliar	250
3. Floracell	0,6	10/07/2010	BBCH 57	Foliar	250
4. Floracell	1,0	10/07/2010	BBCH 57	Foliar	250
5. Floracell	1,2	10/07/2010	BBCH 57	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	Rain in a day	
	°C	m/s	Time after the treatment (hours)	Amount (mm)
10/07/2010	20,3	0,3	-	-

5. Plant protection and other agricultural works: -

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	12,86	64	7
May	17,26	176	18
June	21,47	211	12
July	25,45	52	5
August	22,5	118	12
September	14,86	153	14

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

Examinations on field:

Yield measurement

23/09/2010

Laboratóriumi vizsgálatok

Determination of oil content

07/10/20140

8. Trial conditions:

Assesment:

The trial was set in the trial garden of the Agricultural Office of County Fejér Plant Protection and Soil Conservation Directorate on the Calcic chernozem type of soil. There was only a weed control done on the trial area, other plant protection works were not necessary.

Treatments were done after the vegetative peak formation.

There were no visible changes observed during the growing season on the area treated with the trial products.

Although there were some differences between yields at harvest (1,6-3,1%), but because of the standard deviation (CV) of partial results these deviations are not significant.

In case of the oil content higher differences were observed.

The 1,0 l/ha dosage of Froracell resulted 5,6% oil content increase, the 1,2 l/ha dosage caused 4,8% oil content increase.

Phytotoxic effect:

There were not phytotoxic symptoms observed.

Suggestion:

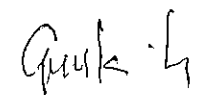
Taking into account economic aspects the 1,0 l/ha dosage of Floracell is suggested for the increasing of oil content of sunflower.

Product is suggested to applied in 250-300 l/ha spray volume, under 3 bar pressure, using TeeJet or something like this nozzles..

Velence, 30/November/2010


dr. Ottó Pálmai
Director




Balázs Gyulai
Study director

Attachment 1

Yields (t/ha)
calculated on the 14% moisture content

Treatment	Dosage l/ha	Replicates						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	3,3	3,1	2,9	3,6	3,4	2,8	3,18
2. Amalgerol premium	5,0	3,5	3,2	3,0	3,4	3,2	3,0	3,22
3. Floracell	0,6	3,6	3,3	2,9	3,5	3,1	3,0	3,23
4. Floracell	1,0	3,7	3,4	3,0	3,3	3,2	3,1	3,28
5. Floracell	1,2	3,5	3,7	3,1	3,3	3,2	2,9	3,28

Oil content
%

Treatment	Dosage l/ha	Replicates						Average
		1.	2.	3.	4.	5.	6.	
1. Untreated	-	42	43	40	40	44	42	41,83
2. Amalgerol premium	5,0	43	43	44	40	43	44	42,83
3. Floracell	0,6	40	42	44	43	42	43	42,33
4. Floracell	1,0	43	45	45	44	45	43	44,17
5. Floracell	1,2	43	44	43	46	44	43	43,83

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

Measured parameter		Sample I.
pH _{KCl}		7,30
Texture K _A		41,00
Salt content %		0,02
CaCO ₃ %		10,50
Organic matter content%		2,6
(NO ₂ +NO ₃)-N	mg/kg	10,90
P ₂ O ₅	mg/kg	211,00
K ₂ O	mg/kg	220,00
Na	mg/kg	40,00
Mg	mg/kg	140,00
SO ₄ -S	mg/kg	12,20
Mn	mg/kg	37,00
Zn	mg/kg	2,10
Cu	mg/kg	2,60

Yield
calculated to 14% moisture

TABLE OF DATA

No.	Treatments	Dose l/ha	Replicates						Average t/ha	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	3,3	3,1	2,9	3,6	3,4	2,8	3,18	100,0
2.	Amalgerol Prémium (St. control)	5,0	3,5	3,2	3,0	3,4	3,2	3,0	3,22	101,0
3.	Floracell	0,6	3,6	3,3	2,9	3,5	3,1	3,0	3,23	101,6
4.	Floracell	1,0	3,7	3,4	3,0	3,3	3,2	3,1	3,28	103,1
5.	Floracell	1,2	3,5	3,7	3,1	3,3	3,2	2,9	3,28	103,1

ANALYSIS OF VARIANCE

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	1,83						
Replicate	1,34	5			2,25	10%	0,15
Treatment	0,05	4	0,011	0,50	2,87	5%	0,18
Error	0,45	20	0,023		4,43	1%	0,25

F-test: No signifikant

Yield calculated to 14% moisture

Date of evaluation: 07/10/2010

Mode of evaluation: harvested of whole plot

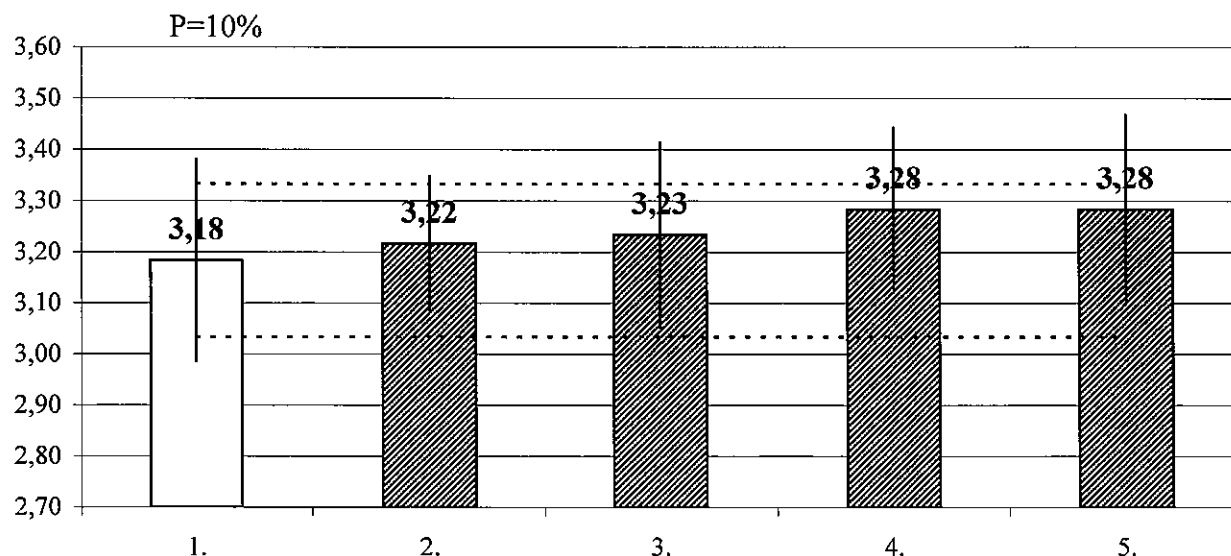
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average t/ha	Control 100%
1.	Untreated control	-	-	-	3,18	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 57	3,22	101,0
3.	Floracell	0,6	15/07/2010	BBCH 57	3,23	101,6
4.	Floracell	1,0	15/07/2010	BBCH 57	3,28	103,1
5.	Floracell	1,2	15/07/2010	BBCH 57	3,28	103,1
<i>SzD</i> 10% = *					0,15	4,7
<i>SzD</i> 5% = **					0,18	5,7
<i>SzD</i> 1% = ***					0,25	7,7

CV= 4,6 %

Yield calculated to 14% moisture

yield
t/ha



Oil content*TABLE OF DATA*

No.	Treatments	Dose l/ha	Replicates						Average %	Control 100%
			I	II	III	IV	V	VI		
1.	Untreated control	-	42,0	43,0	40,0	40,0	44,0	42,0	41,83	100,0
2.	Amalgerol Prémium (St. control)	5,0	43,0	43,0	44,0	40,0	43,0	44,0	42,83	102,4
3.	Floracell	0,6	40,0	42,0	44,0	43,0	42,0	43,0	42,33	101,2
4.	Floracell	1,0	43,0	45,0	45,0	44,0	45,0	43,0	44,17	105,6
5.	Floracell	1,2	43,0	44,0	43,0	46,0	44,0	43,0	43,83	104,8

ANALYSIS OF VARIANCE

Factors	SQ	FG	MQ	F-value		P=	SzD
				calculated	table		
All	68,00						
Replicate	6,80	5			2,25	10%	1,37
Treatment	23,33	4	5,833	3,08	2,87	5%	1,66
Error	37,87	20	1,893		4,43	1%	2,26

F-test: P5% signifikant

Oil content

Date of evaluation: 07/10/2010

Mode of evaluation: 500 g samles/plot

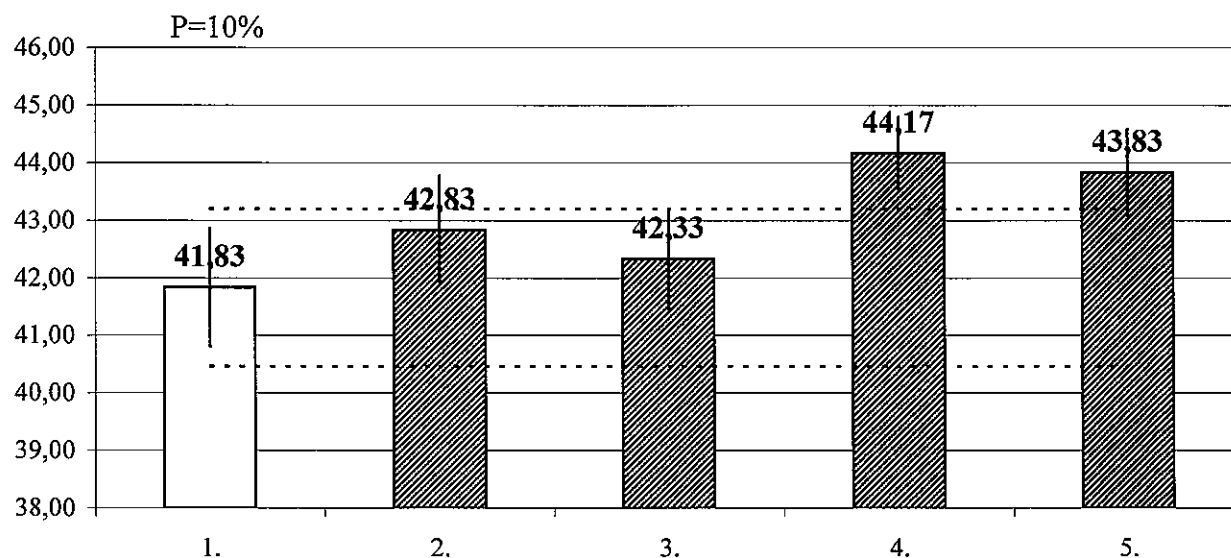
TABLE OF RESULTS

No.	Treatments	Dose l/ha	Date of treatments	Stage of fenologi	Average %	Control 100%
1.	Untreated control	-	-	-	41,83	100,0
2.	Amalgerol Prémium (St. control)	5,0	15/07/2010	BBCH 57	42,83	102,4
3.	Floracell	0,6	15/07/2010	BBCH 57	42,33	101,2
4.	Floracell	1,0	15/07/2010	BBCH 57	44,17	105,6 ***
5.	Floracell	1,2	15/07/2010	BBCH 57	43,83	104,8 **
<i>SzD</i> 10% = *					1,37	3,3
<i>SzD</i> 5% = **					1,66	4,0
<i>SzD</i> 1% = ***					2,26	5,4

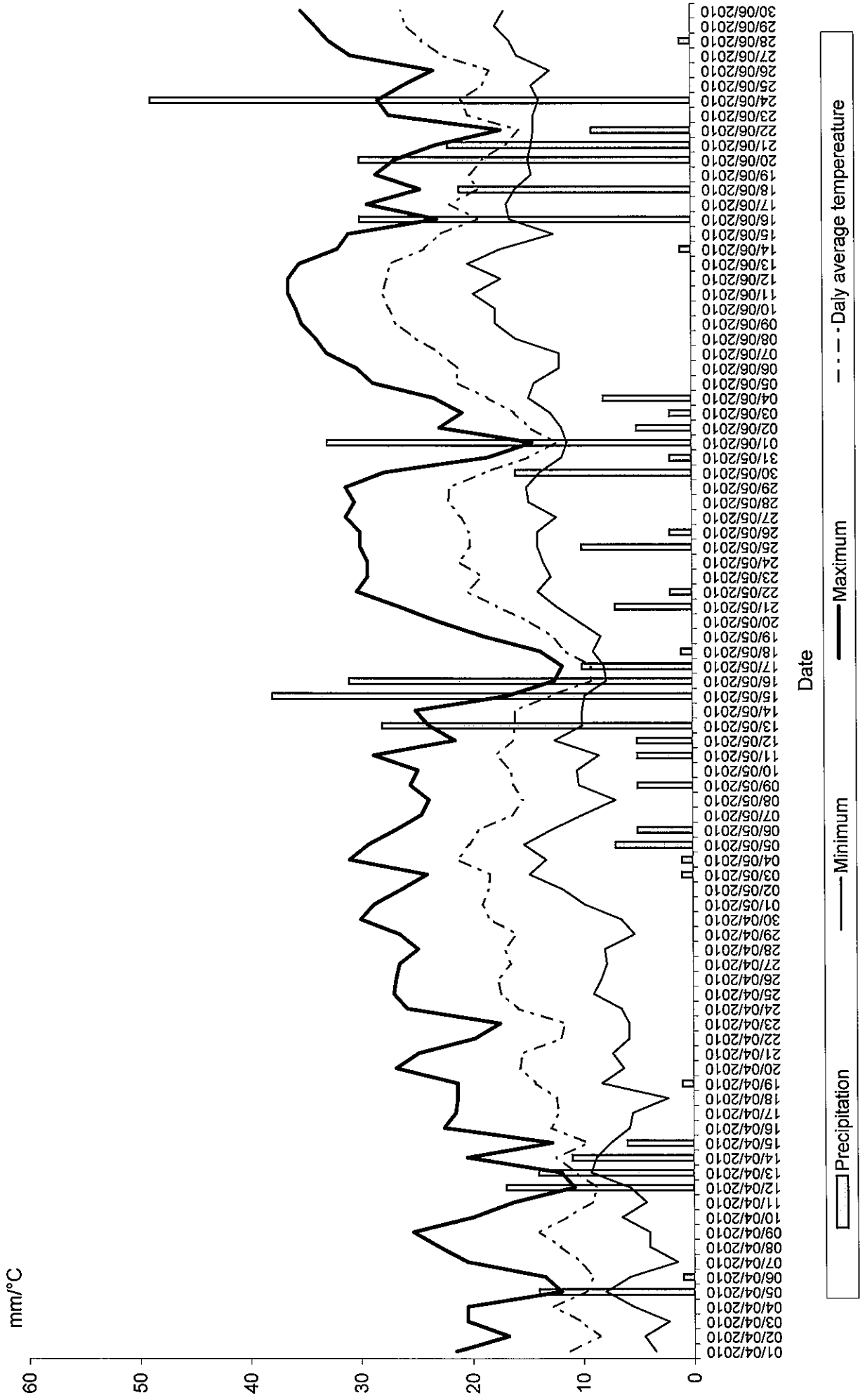
CV= 3,2 %

Oil content

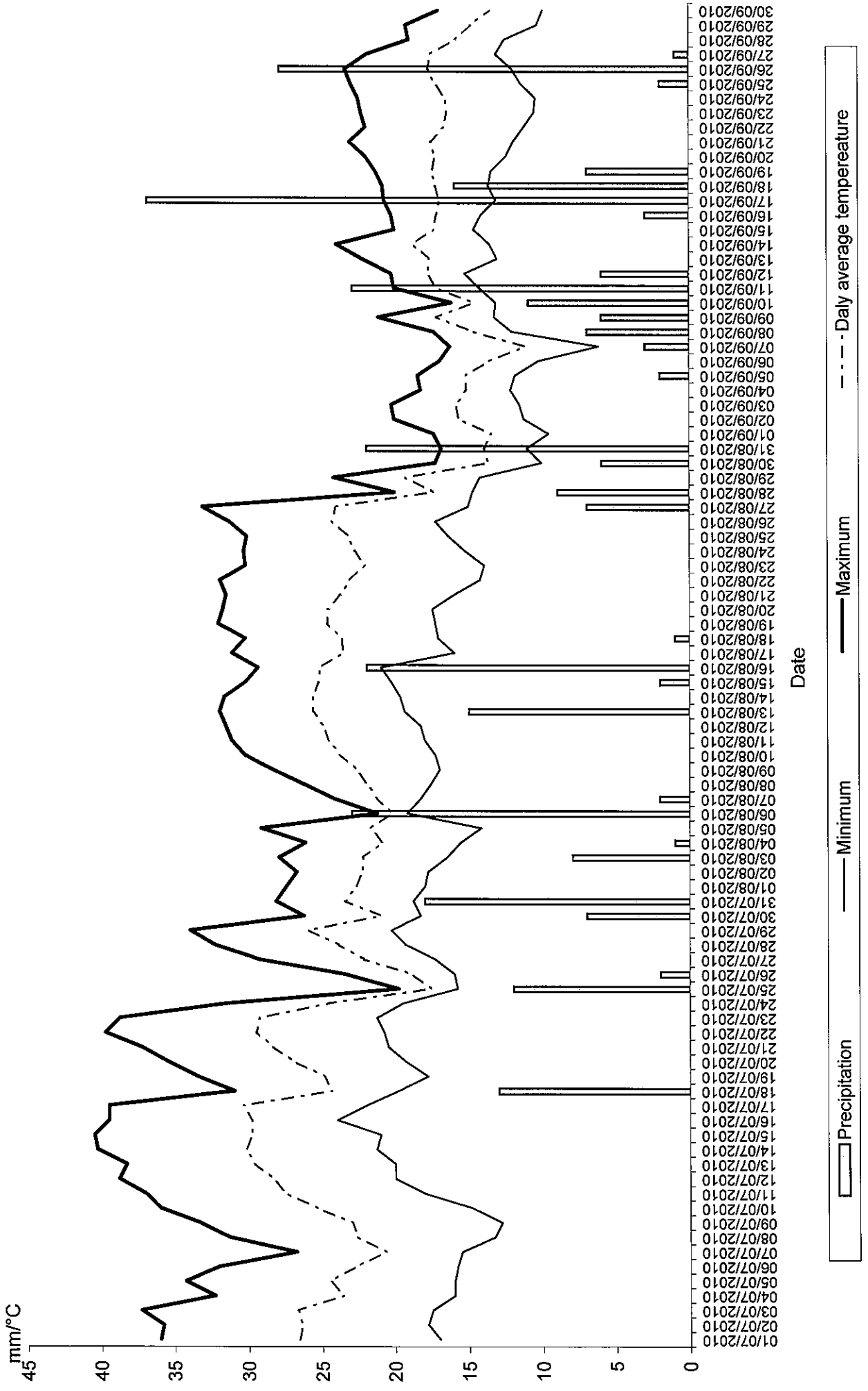
oil content %



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

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

U. S. I.
Dr. Zsolt Polford
head of division

