

## FINAL TRIAL REPORT

# EFFICACY INVESTIGATION OF PANNONIA BIO GROW ORGANIC FERTILISER IN SUNFLOWER IN 2022.

## PROTOCOL NO: 100CPRHU22GE02

SPONSOR TRIAL NO: CPRHU22-355-100GE CPR EUROPE TRIAL NO: CPRHU22-355-100GE

Date of Issue: 4 November 2022

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## CPR Europe Kft. TRIAL REPORT 1 GEP COMPLIANCE STATEMENT

The test facility CPR Europe Kft. has been officially recognised as an organisation for efficacy testing in plant protection products in Hungary (GEP Accreditation No.: PE/NV/00330-10/2022).

## Statements of Confidentiality

This report is the property of the Sponsor and contains confidential and trade secret information. Except as required by law, this report should not be partially or fully (i) photocopied or released in any form to an outside party without the prior written consent of the Sponsor or its affiliates, or (ii) used by a registration authority to support the registration of any other product without the prior written consent of the Sponsor or right relating to the Report that would have been available to or claimed by the Sponsor if the Report had not been submitted under Regulation 1107/2009/EC.

## **GEP Compliance Statement**

The trial was performed in accordance with GEP. All assessments and applications were done in accordance with the study protocol provided by the sponsor's representative, **Pannonia Bio Zrt.**, unless otherwise specified.

EPPO guidelines:

No.	Guideline	Description
1.	PP 1/135(4)	Phytotoxicity assessment
2.	PP 1/152(4)	Design and analysis of efficacy evaluation trials
3.	PP 1/181(5)	Conduct and reporting of efficacy evaluation trials including GEP

Principal Investigator:

József Ritecz

Date: 4 November 2022

piter mit

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Managing Director:

Tibor Barasits

## 2 TRIAL VALIDATION

Please answer the following questions and provide more detail/explanation where required:

Was the crop stand/establishment even across the trial area? Yes.

Were there any factors that caused difficulty during any assessment? No.

**Did any extreme weather event occur that could have affected the validity of this trial?** No.

Were there any other factors that could affect the validity of the trial data? No.

Did the standard product(s) perform as expected? Yes.

Was the trial performed in accordance with GEP and protocol?  $\ensuremath{\mathsf{Yes}}$  .

Have major protocol deviations been noted and scientifically explained? No.

Can the trial be considered accurate, reliable and valid? Yes.

#### 3 **TRIAL TREATMENTS**

#### 3.1 **Treatment Table**

Trt	Treatment	Form	Form	Form	Lot		Rate	Other	Other	Appl	Appl	Appl	Amount	Comment
No.	Name	Conc	Unit	Туре	Code	Rate	Unit	Rate	Rate Unit	Timing	Code	Amount	Unit	1
1	Untreated Check										A			
2	Pannonia Bio Grow					1000	kg/ha				A			
3	Competitor					1000	kg/ha				A			

Additional Treatment Information Rate Unit

kg/ha = Kilograms Dry Product per Hectare (US=kg/A)

Replications: 6, Untreated treatments: 1, Conduct under GLP/GEP: Yes (GEP with no protection), Design: Randomized Complete Block (RCB), Treatment units: Treated 'Plot' experimental unit size, Dry Form. Unit: %, Treated 'Plot' experimental unit size Width: 3 meters, Treated 'Plot' experimental unit size Length: 10 meters, Application amount: 200 L/ha, Mix size: 3.6 L, Format definitions: G-All7.def, G-All7.frm

#### 3.2 **Plot Layout**

#### **Trial Map Treatment Description**

Trt	Code	Description
1	CHK	Untreated Check
2		Pannonia Bio Grow 1000 kg/ha
3		Competitor 1000 kg/ha

601	602	603
2	3	1
501	502	503
3	1	2
401	402	403
1	2	3
0.0.4		
301	302	303
2	3	1
301	302	303
2	3	1
201	202	203
3	1	2

## \_\_\_\_

## Objectives

The objective of the trial was to evaluate efficacy and selectivity of Pannonia Bio Grow at rate 1000 kg/ha and Competitor at rate 1000 kg/ha applied once.

## **Trial Conditions**

Location of the trial was South-West of Hungary in Somogy county near Gyékényes. The trial was set up on sunflower (cv. SY Excellio), cultivated according to the local agricultural practice. Crop stand and development was homogenous across the trial. During the trial disease or pest was not appeared. A randomized complete block design (included untreated control) was performed with six replicates per treatments, involving six replications of untreated plots. Net plot size was 30 m<sup>2</sup>, which were 3 meters wide and 10 meters long.

One application was carried out on 2<sup>nd</sup> May.

The products were spread and incorporated into the soil one day before sowing.

Assessments were conducted six times according to the protocol. The following assessments were made: differences in emergence, NDVI index, plant height, fresh grain weight, moisture content, yield, TKW and oil content.

The weather data and the description of weather conditions could be found at "Weather Comment" section.

## **Results and Discussion**

## Efficacy

Differences in emergence could not be observed between the treatments and the control plots at the time of the first assessments. The treatments and untreated plots gave exactly the same NDVI results (0.79). At BBCH 65 of the crop the average plant height was 204.5 cm in the untreated. Both test products could increase this result (207.5-211.7 cm) but significant differences did not occur. At harvest the yield measured from the control was 2.52 t/ha in average. The treatments provided better results (2.64-2.73 t/ha) but significant differences could not be observed. Thousand Kernel weights were between 51.8 and 52.6 g. Oil contents were between 45.4 and 46.1 %. The products provided slightly better results than the control in case of these quality parameters but significant differences could not be found between them. No effects on non-target organisms were observed.



# Graph 1 – showing the NDVI index scale at 44 DA-A (15.06.2022.) (Column 3)

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.



# Graph 2 – showing the HEIGHT at 67 DA-A (08.07.2022.) (Column 4)

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.



# Graph 3 – showing the YIELD at 127 DA-A (06.09.2022.) (Column 7)

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.



Graph 4 – showing the YIELD parameters (Thousand Kernel Weight and Oil Content) at 128 and 140 DA-A (07.09.2022 and 19.09.2022)

#### (Column 8 and 9)

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Phytotoxicity

Phytotoxicity was not observed during the trial. All treatments were safe to the crop. Effects on non-target organisms were not observed.

CPR Europe Kft. TRIAL REPORT **Conclusions** 

It was concluded that under these trial conditions the tested products Pannonia Bio Grow at rate 1000 kg/ha and Competitor at rate 1000 kg/ha could not increase the assessed qualitative and quantitative parameters of sunflower statistically. It could be observed that the products slightly increased the plant height and yield and had positive effects on yield quality parameters. It could be also observed that the products had no effects on plant emergence and NDVI index.

## CPR Europe Kft. 10 TRIAL REPORT 5 MATERIAL AND METHODS / TRIAL INFORMATION

## 5.1 Site Description

		General Trial Information							
Study Director: Tibor Bara Investigator: József Rite	sits Title: cz Title:	Managing Director Field Research Biologist							
Discipline:D	fertilizer	Data Location: ARM Assessment Data							
Status:F	one-year/final	<b>Poliability:</b> GOOD good quality							
Initiation Date:2-	Aav-2022	Reliability.GOOD good quality							
Completion Date:4-h	Completion Date: 4-Nov-2022								
Trial Location									
City:Gyékényes	Country	y:HUN Hungary							
State/Prov.:Somogy									
Postal Code:H-8851	Postal Code:H-8851 Climate Zone:EPPOSE EPPO South East								
Latitude of LL Corner '	:46,245107	Ν							
Longitude of LL Corner	16,973337	E							
Allitude of LL Come	.124,00 111								
Test Facil GEP Accreditation Numb GEP Accreditation L	ty:CPR Europ er:PE/NV/003 nk:http://gepce	be Kft. 30-10/2022 ertibase.eu/documents/2653_PE_NV_00330_10_2022 hatarozat_GEP_CPR_Europe_Kft_alairt.pdf							
Conducted Under GLP:N									
Conducted Under GEP:Y	es Study	Rules: Default							
No. Guideline Discip	line Dhutetov	Description							
<b>1.</b> PP 1/135(4) GS <b>2.</b> PP 1/152(4) GS	Design a	and analysis of efficacy evaluation trials							
3. PP 1/181(5) GS	Conduct	and reporting of efficacy evaluation trials, including GEP							
		Contacts							
Study Director: Tibor Bara	study director sits	Title: Managing Director							
Organization:CPR Europ	be Ltd.								
Address 1:Török Igna	ic str. 30.	Phone No.:+36202404402 Mobile No.:+36202404402							
City:Szombathe	iungary ely	Postal Code:H-9700							
Role:INVEST in	vestigator								
Investigator: József Ritec	Z Itd	Title:Field Research Biologist							
Address 1:Török Ignác	str. 30.	Phone No.:+36204834984 Mobile No.:+36204834984							
Country:HUN Hu	ingary	E-mail:jritecz@cprp.eu							
City:Szombathely Pole:TECINT	technician/int	Postal Code:H-9/00							
Contact Name 5:Géza En	her	Title:Technician							
[									
Crop 1.C HELAN H	elianthus annu	US Sunflower BBCH Scale BSUN							
Entry Date:6	Sep-2022	Stage Scale:BBCH							
Variety:S Planting Date:3	Y Excellio	Planting Rate 60000 S/ha							
Depth:5	cm	r lanting hate:00000 Onla							
<b>D</b>		Planting Method:SEEDED seeded							
Row Spacing:/ Spacing within Row:2	ocm 2 cm	Seed Bed:FINE fine							
Soil Temperature:1	D C	Soil Moisture:NORMAL normal, adequate							
Emergence Date:1	2-May-2022	Harvest Equipment 7 jun 150							
Moisture Meter:L	iebherr FMS	Harvested Width:1,5 m							
% Standard Moisture:9		Harvested Length:10 m							
Weighing Equipment:Z	URN DK 800								

### 100CPRHU22GE02 / CPRHU22-355-100GE

Site and Design
Treated Plot Width:3 m Site Type:FIELD field
Treated Plot Length:10 m Experimental Unit:1 PLOT plot
Treated Plot Area:30,0 m2 Tillage Type:CONTIL conventional-till
Replications:6 Treatments:3 Plots:18 Study Design:RACOBL Randomized Complete Block (RCB)
Untreated Arrangement:INCLUDED single control randomized in each block
Block Arrangement:BUPPSS all blocks lying upon each other, plots side by side
Distance between Blocks:1 m
Previous
No. Crop Year
. TRZAW 2021
Maintenance
Maintenance Rate
No. Date lype Product Name Rate Unit
. 23-May-2022 MAINT I-Maza 1 L/ha
. 4-Jul-2022 MAINT Propulse 1 L/ha
Soil Description
% Sand:40 % OM:2 Texture:L loam
% Slitta0
% Clay:20 Fert. Level:G good
<b>PH</b> :/,38
Soil Drainage: G good
Analization Description
Application Description
n Direction Data 2 May 202
ppilotauti Date 2-triay-2022
ppi. Start Time 11.00 de.
ppi. stop me 12.00 uu.
ppicauon metrodo SPDING
ppication riacement rLU1
ppied by USERIDEI
ppi. Citity Date or-Sep-20/2
realiner source WSGOV
roberns with Application ? IN; no
Com Chan At First Arriter
Crop Stage At Each Application
A Code DECH Seele HELAN: DCLINI
HUP I GUUE, DOOT SCALE TELAIN, DOUN
Days aller Emergence - 10
Application Equipment
Natan
Notes
VUIREAL Date Dy NUIRES
ארויט עיסבריבעצב אינדי אונגע אינטווומונכמוין מעפט איז ארויו. דומו סומנט עעמנפט נט ס ענווווץ נוומו נופמוטוו.

CPR Europe Kft. TRIAL REPORT

 STATUS
 6-Sep-2022
 József Ritecz
 Automatically added by ARM: Trial Status changed to: E: changed by (XSYRIJ).

 STATUS
 6-Sep-2022
 József Ritecz
 Automatically added by ARM: Trial Status updated to: E: changed by (XSYRIJ).

 STATUS
 6-Sep-2022
 József Ritecz
 Automatically added by ARM: Trial Status updated to: E: changed by (XSYRIJ).

 STATUS
 6-Nov-2022
 József Ritecz
 Automatically added by ARM: Status changed to: F: changed by (XSYRIJ).

Additional Information (Validation List Comments) D. fertilizer = fertilizer F, one-year/final = one-year/final|6 Somogy, SO = HUN EPPOSE, EPPO South East = EPPO N = North E = East m = meters Europe/Budapest = HUN|+01:00|+02:00 N = N=no X = X=yes Default = Standard validation for ARM GDMDef trials PP 1/135(4), GS, Phytotoxicity assessment = EPPO|General Standards PP 1/152(4), GS, Design and analysis of efficacy evaluation trials = EPPO|General Standards PP 1/181(5), GS, Conduct and reporting of efficacy evaluation trials, including GEP = EPPO|General Standards STYDIR, study director = study director INVEST, investigator = investigator SPONSR, sponsor = sponsor COOPER, cooperator = cooperator TECINT, technician/intern = technician/intern C = EPPO species (Bayer) codes HELAN, BSUN, Helianthus annuus, sunflower = US BBCH = BBCH uniform plant stages S/ha = seeds per hectare cm = centimeter SEEDED, seeded = seeded PP, plot planter = plot planter FINE, fine = fine C = Celsius NORMAL, normal, adequate = B m = meter FIELD, field = field PLOT, plot = plot CONTIL, conventional-till = conventional-till RACOBL, Randomized Complete Block (RCB) = Randomized Complete Block (RCB) INCLUDED, single control randomized in each block = single control randomized in each block BUPPSS, all blocks lying upon each other, plots side by side = the default ARM randomization layout pattern TRZAW = BCER|Triticum aestivum|Winter wheat|US MAINT = Original GDM Maintenance treatment list L/ha = liters product per hectare L, loam = loam G, good = good G, good = Good / medium / adequate drainage with aeration not likely to harm crop growth SLIDRY, slightly dry = slightly dry km = kilometer mm = millimeter SPDINC = spreading and incorporation PRCRES = before crop establishment PLOT = plot WSGOV = Weather Station - Government N no = no MANSPR = manual spreading STATUS = Trial Status

## 5.2 Assessment Details

Date	Days after Application	BBCH Crop Growth Stage	Assessment Type
12-May- 2022	10 DA-A	10- first leaf through coleoptile	EMERG1
18-May- 2022	16 DA-A	12- 2 leaves unfolded	EMERG2
15-June- 2022	44 DA-A	32- 2 visible extended internodes	NDVI
8-July- 2022	67 DA-A	65- Full flowering: disc florets in mid-third of flower bloom	HEIGHT
6-Sep- 2022	127 DA-A	89- Fully ripe: seeds on inner third dark and hard, back brown, seeds 85 % dry matter	WEIFRE, MOICON, YIELD
7-Sep- 2022	128 DA-A	99- Harvested product	TKW
19-Sep- 2022	140 DA-A	99- Harvested product	OILCON

## Assessment Description

EMERG1 = emergence at 50% in untreated|%PROPORTION EMERG2 = emergence at 100% in untreated|%PROPORTION NDVI = normalized difference vegetation index HEIGHT = height WEIFRE = weight - fresh MOICON = moisture content|%PROPORTION YIELD = yield TKW = weight thousand kernel OILCON = oil content

## 5.3 Statistics Information

Software for analysis of the results was ARM Revision 2022.5 from Gylling Data Management. Data were analysed using analysis of variance (ANOVA) on untransformed data and on transformed ones when the Levene's test indicated so. Regardless of the result of the Levene's test, the transformation was performed only if requested and approved in advance by the client. If transformation did not improve the distribution, original values were used and therefore significant differences reported should be interpreted with caution. The probability of no significant differences occurring between treatment means was calculated as the F probability value (Treatment Prob(F)). Student-Newman-Keuls (S-N-K) tests were applied when treatment differences were identified on the basis of the ANOVA test. Mean comparison performed only when AOV Treatment P(F) is significant at level selected. Results obtained where indicated by a letter-treatment means with no letters in common are significantly different in accordance with a S-N-K conducted at a 90% confidence level. Where data have been transformed, letters are included in the transformed data.

#### **Result Tables – Mean Plot Data - Efficacy** 6.1

Crop Type, Code	C; HELAN	C; HELAN	C; HELAN	C; HELAN	C; HELAN	C; HELAN	C; HELAN
BBCH Scale	BSUN	BSUN	BSUN	BSUN	BSUN	BSUN	BSUN
Crop Scientific Name	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>
Crop Name	sunflower	sunflower	sunflower	sunflower	sunflower	sunflower	sunflower
Crop Variety	SY EXCELLIO	SY EXCELLIO	SY EXCELLIO	SY EXCELLIO	SY EXCELLIC	SY EXCELLIC	SY EXCELLIO
Description							9%
Rating Date	12-May-2022	18-May-2022	15-Jun-2022	8-Jul-2022	6-Sep-2022	6-Sep-2022	6-Sep-2022
Part Rated	PLANT C	PLANT C	PLANT C	PLANT <sup>.</sup> C	GRAIN <sup>.</sup> C	GRAIN <sup>.</sup> C	GRAIN C
Rating Type	EMERG1	EMERG2	NDV	HEIGHT	WEIERE	MOICON	YIFI D
Rating Unit/Min/Max	%· 0· 100	%· 0· 100	0_1.0.1	cm: 0:	ka: 0:	%· 0· 100	T-MET
Sample Size	1 PI OT	1 PI OT	1 PLOT	10 PI ANT	15 m <sup>2</sup>	1 PL OT	1 hs
Collection Resis	1 0 0	1 01 01	1 01 01				
Collection Basis	I PLUI	I PLUI	I PLOI	I PLOI	I PLUI	1 PLOT	1 PLU1 1 bo
Reporting Basis	1	1	1	1	1	I FLUI	1 110
Number of Subsamples							
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	10; -; -	12; -; ·	32; -; -	65; -; -	89; -; -	89; -; -	89; -; -
Assessed By	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz
Data Entry Date	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022	
Rating Timing	A1	A2	A3	A4	H1	H1	H1
Days After First/Last Applic.	10; 10	16; 16	44; 44	67; 67	127; 127	127; 127	127; 127
Trt-Eval Interval	10 DA-A	16 DA-A	44 DA-A	67 DA-A	127 DA-A	127 DA-A	127 DA-A
Plant-Eval Interval	9 DP-1	15 DP-1	43 DP-1	66 DP-1	126 DP-1	126 DP-1	126 DP-1
Davs After Emergence	0 DE-1	6 DE-1	34 DE-1	57 DE-1	117 DE-1	117 DE-1	117 DE-1
ARM Action Codes	P	P	+	+	+	F	TY1
Number of Decimals		•	2		2	. 1	
Trt Treatment Rate Appl	1	2	3	4	5	6	7
No Namo Pato Unit Codo	'	L	5	7	5	0	'
No. Name Rate Offic Code							
1 Check A	100,0a	100,0a	0,79a	204,5b	3,87a	11,1a	2,52a
2 Depressio Die Crew 1000kg/be A	100.00	100.00	0.70a	011.70	4 100	11.10	0.720
2 Pannonia Bio Grow Tuuukg/na A	100,0a	100,0a	0,79a	211,7a	4,19a	11,1a	2,73a
3 Competitor 1000kg/ha A	100,0a	100,0a	0,79a	207,5ab	4,06a	11,1a	2,64a
LSD P=.10			0,013	4,70	0,264	0,31	0,175
Standard Deviation	0,00	0,00	0,013	4,49	0,253	0,29	0,167
CV	0,0	0,0	1,63	2,16	6,25	2,66	6,35
Levene's F <sup>^</sup>			0,889	0,128	1,194	0,479	1,131
Levene's Prob(F)			0,432	0,881	0,33	0,629	0,349
Shapiro-Wilk^			0,9604	0,9851	0,9771	0,9522	0,9842
P(Shapiro-Wilk)^			0,6084	0,9875	0,9155	0,4613	0,983
Skewness^			0,4047	0,092	0,1002	-0,2858	0,0713
P(Skewness)^			0.4948	0.8758	0.8649	0.6285	0,9036
Kurtosis^			1 4317	-0.0577	0,2313	-0,8844	0 2241
P(Kurtosis)^			0 2193	0,9596	0,8302	0,4416	0.8441
	1	•	0,2193	0,3530	0,0392	0,4410	0,0441
Replicate F	0.000	0 000	0 759	1 709	3 067	0 110	2 070
Replicate Prob(F)	1 0000	1 0000	0,730	0,700	0.007	0,113	2,973 0 0669
Trootmont E	1,0000	1,0000	0,0994	0,2202	0,0019	0,9002	0,0000
Treatment Prob (E)	0,000	0,000	0,038	3,850	2,484	0,019	2,420
Treatment Prod(F)	1,0000	1,0000	0,5488	0,0576	0,1331	0,9811	0,1390

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL. Could not calculate LSD (% mean diff) for columns 1,2 because error mean square = 0. ^Calculated from residual.

Crop Type, Code	C: HELAN	C: HELAN
BBCH Scale	BSUN	BSUN
Crop Scientific Name	Helianthus annu>	Helianthus annu>
Crop Name	sunflower	sunflower
Crop Variety	SY EXCELLIC	SY EXCELLIO
Description		
Rating Date	7-Sep-2022	19-Sep-2022
Part Rated	GRAIN; C	GRAIN; C
Rating Type	TKW	OILCON
Rating Unit/Min/Max	g; 0; ·	%; 0; 100
Sample Size	1000 Kernel	1 PLOT
Collection Basis	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	
Number of Subsamples	1	1
Crop Stage Scale	BBCH	BBCH
Crop Stage Majority/Min/Max	99; -; -	99; -; -
Assessed By	J.Ritecz	J.Ritecz
Data Entry Date	7-Sep-2022	25-Oct-2022
Rating Timing	H1	H1
Days After First/Last Applic.	128; 128	140; 140
Trt-Eval Interval	128 DA-A	140 DA-A
Plant-Eval Interval	127 DP-1	139 DP-1
Days After Emergence	118 DE-1	130 DE-1
ARM Action Codes	+	+
Number of Decimals	1	1
Trt Treatment Rate Appl	8	9
No. Name Rate Unit Code		
1 Untreated Check A	51,8a	45,4a
2 Pannonia Bio 1000kg/ha A	52,6a	45,7a
Grow 1000 a // a A	50.0-	40.4
3 Competitor 1000kg/na A	52,2a	46,18
LSD P=.10	1,88	1,02
Standard Deviation	1,79	0,98
	3,43	2,14
	0,439	0,765
Levene's Prob(F)	0,653	0,483
Shapiro-Wilk^	0,9775	0,9449
P(Shapiro-Wilk)*	0,9204	0,3509
Skewness'	0,3833	0,4876
P(Skewness)^	0,5175	0,4121
Kurtosis^	0,3639	0,9324
P(Kurtosis)^	0,7497	0,4177
Replicate F	0,232	0,408
Replicate Prob(F)	0,9395	0,8328
Treatment F	0,264	0,736
Treatment Prob(F)	0,7734	0,5033

Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL. Could not calculate LSD (% mean diff) for columns 1,2 because error mean square = 0. ^Calculated from residual.

<u>Crop Type, Code</u> C = EPPO species (Bayer) codes HELAN, BSUN, Helianthus annuus, sunflower = US Part Rated PLANT = plant GRAIN = grain C = Crop is Part Rated Rating Type EMERG1 = emergence at 50% in untreated %PROPORTION EMERG2 = emergence at 100% in untreated |%PROPORTION NDVI = normalized difference vegetation index HEIGHT = height WEIFRE = weight - fresh MOICON = moisture content/%PROPORTION YIELD = yield TKW = weight thousand kernel OILCON = oil content Rating Unit/Min/Max %, 0, 100 = percent|PERCENT 0-1, 0, 1 = 0-1 index/scale|BINOMIAL cm, 0, = centimeter|LENGTH kg, 0, = kilogram|WEIGHT T-MET, , = ton (metric=1000 kg)|WEIGHT g, 0, = gram|WEIGHT PLOT = total plot PLANT = plant/plant biomass/shrub m2 = square meter ha = hectare Kernel = kernel PLOT = total plot PLOT = total plot ha = hectare Crop Stage Scale BBCH = BBCH uniform plant stages Crop Stage Majority/Min/Max 10 = Cotyledons completely unfolded BSUN 12 = 2 leaves (first pair) unfolded|BSUN 32 = 2 visibly extended internodes|BSUN 65 = Full flowering:disc florets in mid-third of flower bloom (stamens/stigmata vis.)|BSUN 89 = Fully ripe: seeds on inner third dark and hard, back brown, seeds 85% dry matter|BSUN 99 = Harvested product/BSUN Rating Timing A1 = 1st Assessment According to Trial Schedule A2 = 2nd Assessment According to trial Schedule A3 = 3rd Assessment According to Trial Schedule A4 = 4th Assessment According to Trial Schedule H1 = 1st Harvest Plant-Eval Interval 9 DP-1 = 1 HELAN 3-May-2022 15 DP-1 = 1 HELAN 3-May-2022 43 DP-1 = 1 HELAN 3-May-2022 66 DP-1 = 1 HELAN 3-May-2022 126 DP-1 = 1 HELAN 3-May-2022 127 DP-1 = 1 HELAN 3-May-2022 139 DP-1 = 1 HELAN 3-May-2022 ARM Action Codes TY1 = 0.666666667\*[5]\*(100-[6])/91

Additional Treatment Information <u>Rate Unit</u> kg/ha = Kilograms Dry Product per Hectare (US=kg/A)]

## 7 APPENDICES

## 7.1 Appendix 1 – Protocol and Amendment

## Protocol

## CPR Europe Kft.

## Pannonia Bio Grow organic fertiliser efficacy study in sunflower. Hungary, 2022.

## 1. Formulations and active ingredients:

Product name	Pannonia Bio Grow
Composition	Organic manure

## 2. Trial plant

Crop: sunflower

**Species:** variety grown in our country

**Specifications of the experiment:** Pre-planting application of organic manure is not allowed in the trial area

## 3. Setting up the trial

Arrangement: random block or completely random arrangement Plot size: small plot (3×10) Number of treatments: 3 Number of replicates: 6 Total number of plots: 3 treatments x 1 soil type x 1 crop x 6 replicates = 18

## 4. Treatments:

	Treatments	Dose	Phenophase	Method
1.	Kontroll	-		
2.	Pannonia Bio Grow	1000 kg/ha	Applied to the soil surface and rotated into the soil at pre-sowing soil preparation.	rotated into the soil at pre-
3.	Competitor	1000 kg/ha	Applied to the soil surface and rotated into the soil at pre-sowing soil preparation.	sowing soil preparation.

## 5. Application and handling information:

Apply the preparation evenly to the soil and turn into the soil immediately after application. Apply immediately after application and immediately after application.

### 6. Assessments:

- Soil sample (per treatment) before application and at harvest
- germination % at 50 % emergence and BBCH 12 (2 true leaf stage)
- NDVI activity measurement (with Greenseeker)
- height measurement at flowering
- at harvest measurement of average crop weight per plot
- thousand kernel weight
- sunflower oil content

The time of occurrence of the main phenophases (for the whole trials) is given in a table.

Photographs of the experiment should be taken and included in the report!

## 7. Meteorological data:

From the first treatment to harvest: in tables and graphs, average temperature and precipitation by week.

#### 8. Report:

Digital, in English and Hungarian.

## 7.2 Appendix 2 – Location Map



## 100CPRHU22GE02 / CPRHU22-355-100GE

## CPR Europe Kft. TRIAL REPORT

## 7.3 Appendix 3 – Individual Plot Data

Crop Type, Code	C; HELAN	C; HELAN	C; HELAN	C; HELAN	C; HELAN	C; HELAN
BBCH Scale	BSUN	BSUN	BSUN	BSUN	BSUN	BSUN
Crop Scientific Name	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>	Helianthus annu>
Crop Name	sunflower	sunflower	sunflower	sunflower	sunflower	sunflower
Crop Variety	SY EXCELLIO	SY EXCELLIO	SY EXCELLIC	SY EXCELLIC	SY EXCELLIC	SY EXCELLIO
Description						
Rating Date	12-May-2022	18-May-2022	15-Jun-2022	8-Jul-2022	6-Sep-2022	6-Sep-2022
Part Rated	PLANT; C	PLANT; C	PLANT; C	PLANT; C	GRAIN; C	GRAIN; C
Rating Type	EMERG1	EMERG2	NDV	HEIGHT	WEIFRE	MOICON
Rating Unit/Min/Max	%; 0; 100	%; 0; 100	0-1; 0; 1	cm; 0; ·	kg; 0; ·	%; 0; 100
Sample Size	1 PLOT	1 PLOT	1 PLOT	10 PLANT	15 m2	1 PLOT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis					.	1 PLOT
Number of Subsamples	1	1	1	1	. 1	1
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	10; -; -	12; -; -	32; -;	65; -; -	89; -; -	89; -; -
Assessed By	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz	J.Ritecz
Data Entry Date	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022	7-Sep-2022
Rating Timing	A1	A2	A3	A4	H1	H1
Days After First/Last Applic.	10; 10	16; 16	44; 44	67; 67	127; 127	127; 127
Trt-Eval Interval	10 DA-A	16 DA-A	44 DA-A	67 DA-A	127 DA-A	127 DA-A
Plant-Eval Interval	9 DP-1	15 DP-1	43 DP-1	66 DP-1	126 DP-1	126 DP-1
Days After Emergence	0 DE-1	6 DE-1	34 DE-1	57 DE-1	117 DE-1	117 DE-1
ARM Action Codes	P	Р	+	+		P
Number of Decimals			2		2	1
Trt Treatment Rate Appl						
No. Name Rate Unit Code Plo	1	2	3	4	5	6
1 Untreated Check A 10 <sup>-</sup>	l 100,0	100,0	0,79	202,0	4,37	11,3
20	100,0	100,0	0,78	211,0	3,89	10,8
30	100.0	100 0	0.80	197 (	3 / 1	11.5
40		,.	- ]	101,0	3,41	,•
40	1 100,0	100,0	0,77	206,0	4,17	11,0
50	100,0 100,0	100,0 100,0	0,77 0,79	206,0 207,0	4,17 3,62	11,0 11,1
50.	100,0 100,0 100,0	100,0 100,0 100,0	0,77 0,79 0,78	206,0 207,0 204,0	4,17 3,62 3,74	11,0 11,1 10,9
	100,0 100,0 100,0 100,0 100,0	100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79	206,0 207,0 204,0 204,5	4,17 3,62 3,74 3,87	11,0 11,1 10,9 11,1
-0 60 Mean 2 Pannonia Bio Grow 1000kg/ha A 100	1 100,0 100,0 100,0 100,0 100,0 100,0	100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,79 0,80	206,0 207,0 204,0 204,5 204,5 215,0	4,17 3,62 3,74 3,87 4,56	11,0 11,1 10,9 11,1 10,8 11,1 10,8
	1 100,0 1 100,0 1 100,0 1 100,0 1 100,0 1 100,0 1 100,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,78 0,79 0,80 0,79	206,0 207,0 204,0 204,5 204,5 215,0 221,0	3,41 4,17 3,62 3,74 3,87 4,56 3,98	11,0 11,1 10,9 <u>11,1</u> 10,8 11,1 10,8
	1 100,0 2 100,0 3 100,0 4 100,0 4 100,0 1 00,0 1 00,0 1 00,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,77	206,0 207,0 204,0 204,5 215,0 221,0 221,0 211,0	4,17 3,62 3,87 4,56 3,98 4,56 3,98 4,32	11,0 11,1 10,9 11,1 10,8 11,4 11,4 11,1
40 50 60 Mean 2 Pannonia Bio Grow 1000kg/ha A 10 20 30 40	1 100,0 2 100,0 3 100,0 4 100,0 5 100,0 1 00,0 1 00,0 1 00,0 1 00,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,77 0,81	206,0 207,0 204,0 204,0 204,5 215,0 221,0 221,0 211,0 208,0	4,17 3,62 3,74 4,56 3,87 4,56 3,98 4,32 3,80	11,0 11,1 10,9 11,1 10,8 11,4 11,4 11,1 11,2
-0 50 60 Mean 2 Pannonia Bio Grow 1000kg/ha A 10 20 30 40 50	1 100,0 2 100,0 3 100,0 4 100,0 5 100,0 1 100,0 1 100,0 1 100,0 1 100,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,77 0,81 0,79	206,0 207,0 204,0 204,0 204,5 215,0 221,0 221,0 211,0 208,0 210,0	3,41 4,17 3,62 3,74 4,56 3,98 4,32 3,80 4,32 3,80 4,04	11,0 11,1 10,9 11,1 10,8 11,4 11,4 11,2 10,8
	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,81 0,77 0,81 0,78	206,0 207,0 204,0 204,5 215,0 221,0 221,0 210,0 208,0 210,0 205,0	3,41 4,17 3,62 3,74 3,87 4,56 3,98 4,32 3,80 4,04 4,04	11,0 11,1 10,9 11,1 10,8 11,4 11,2 10,8 11,2 10,8 11,2 10,8 11,2
	1 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,77 0,81 0,79 0,80 0,80 0,80	206,0 207,0 204,0 204,5 215,0 221,0 221,0 211,0 208,0 210,0 205,0 211,7	4,17 3,62 3,74 4,56 3,98 4,32 3,80 4,32 3,80 4,04 4,44	11,0 11,1 10,9 11,1 10,8 11,4 11,1 11,2 10,8 11,2 10,8 11,2 11,1
	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,81 0,77 0,81 0,79 0,80 0,79 0,80	206,0 207,0 204,0 204,5 215,0 221,0 211,0 205,0 211,7 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 207,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,0 205,00	4,17 3,62 3,74 4,56 3,98 4,32 3,80 4,32 3,80 4,04 4,44 4,19 4,56	11,0 11,1 10,9 11,1 10,8 11,4 11,1 11,2 10,8 11,2 11,2 11,1 11,0
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	1 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,C 100,	100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0 100,0	0,77 0,79 0,78 0,79 0,80 0,79 0,81 0,79 0,80 0,79 0,80 0,79 0,80 0,71 0,80	206,0 207,0 204,0 204,5 215,0 221,0 221,0 211,0 208,0 210,0 205,0 211,7 204,0 211,7 204,0 211,0 212,0 214,0 212,0 205,0	4,17 3,62 3,74 3,87 4,56 3,98 4,32 3,80 4,04 4,44 4,19 4,56 3,89 4,56 3,89 4,56 3,89 4,56 3,89 4,56 3,89 4,56 3,89 4,56	11,0 11,1 10,9 11,1 10,8 11,4 11,1 11,2 10,8 11,2 11,1 11,0 11,3 10,7 10,9
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## 100CPRHU22GE02 / CPRHU22-355-100GE

## CPR Europe Kft. TRIAL REPORT

Crop Type, Code	C; HELAN	C; HELAN	C; HELAN
BBCH Scale	BSUN	BSUN	BSUN
Crop Scientific Name	Helianthus annu>	Helianthus annu>	Helianthus annu>
Crop Name	sunflower	sunflower	sunflowe
Crop Variety	SY EXCELLIO	SY EXCELLIO	SY EXCELLIC
Description	9%		
Rating Date	6-Sep-2022	7-Sep-2022	19-Sep-2022
Part Rated	GRAIN; C	GRAIN; C	GRAIN; C
Rating Type	YIELD	TKW	OILCON
Rating Unit/Min/Max	T-MET; -; -	q; 0; ·	%; 0; 100
Sample Size	1 ha	1000 Kernel	1 PLOT
Collection Basis	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 ha	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Scale	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	89	99	99
Assessed By	J Ritecz	J Ritecz	J Ritecz
Data Entry Date	0.1 41002	7-Sep-2022	25-Oct-2022
Rating Timing	H1	H1	20 00( 2022 H1
Davs After First/Last Applic	127.127	128 128	140 140
Trt-Eval Interval	127 DA-A	128 DA-A	140 DA-A
Plant-Eval Interval	126 DP-1	127 DP-1	139 DP-1
Davs After Emergence	117 DF-1	118 DF-1	130 DF-1
ARM Action Codes	TY1	+	100 012
Number of Decimals	2	1	1
	2		
Int ireatment Rate Appi	7	0	0
No. Name Rate Unit Code Plot	/	8	9
1 Untreated Check A 101	2,84	49,0	44,5
202	2,54	52,5	40,4
303	2,21	53,5	46,3
401	2,72	52,0	45,1
502	2,30	5U,3	40,0
603	2,44	53,5	44,0
	2,52	51,8	45,4
2 Pannonia Bio Grow 1000kg/ha A 102	2,98	51,5	45,2
203	2,58	53,0	44,3
301	2,81	52,5	45,6
402	2,47	51,0	46,5
503	2,64	53,5	45,8
601	2,89	54,0	46,9
Mean =	2,73	52,6	45,7
B Competitor 1000kg/ha A 103	2,97	55,0	45,2
201	2,53	51,0	47,9
302	2,68	50,5	45,9
403	2,46	53,0	45,6
501	2,41	51,5	46,7
602	2,80	52,0	45,3
Mean =	2,64	52,2	46,1

<u>Crop Type, Code</u> C = EPPO species (Bayer) codes HELAN, BSUN, Helianthus annuus, sunflower = US Part Rated PLANT = plant GRAIN = grain C = Crop is Part Rated Rating Type EMERG1 = emergence at 50% in untreated %PROPORTION EMERG2 = emergence at 100% in untreated |%PROPORTION NDVI = normalized difference vegetation index HEIGHT = height WEIFRE = weight - fresh MOICON = moisture content/%PROPORTION YIELD = yield TKW = weight thousand kernel OILCON = oil content Rating Unit/Min/Max %, 0, 100 = percent|PERCENT 0-1, 0, 1 = 0-1 index/scale|BINOMIAL cm, 0, = centimeter|LENGTH kg, 0, = kilogram|WEIGHT T-MET, , = ton (metric=1000 kg)|WEIGHT g, 0, = gram|WEIGHT PLOT = total plot PLANT = plant/plant biomass/shrub m2 = square meter ha = hectare Kernel = kernel PLOT = total plot PLOT = total plot ha = hectare Crop Stage Scale BBCH = BBCH uniform plant stages Crop Stage Majority/Min/Max 10 = Cotyledons completely unfolded BSUN 12 = 2 leaves (first pair) unfolded|BSUN 32 = 2 visibly extended internodes|BSUN 65 = Full flowering:disc florets in mid-third of flower bloom (stamens/stigmata vis.)|BSUN 89 = Fully ripe: seeds on inner third dark and hard, back brown, seeds 85% dry matter|BSUN 99 = Harvested product/BSUN Rating Timing A1 = 1st Assessment According to Trial Schedule A2 = 2nd Assessment According to trial Schedule A3 = 3rd Assessment According to Trial Schedule A4 = 4th Assessment According to Trial Schedule H1 = 1st Harvest Plant-Eval Interval 9 DP-1 = 1 HELAN 3-May-2022 15 DP-1 = 1 HELAN 3-May-2022 43 DP-1 = 1 HELAN 3-May-2022 66 DP-1 = 1 HELAN 3-May-2022 126 DP-1 = 1 HELAN 3-May-2022 127 DP-1 = 1 HELAN 3-May-2022 139 DP-1 = 1 HELAN 3-May-2022 ARM Action Codes TY1 = 0.666666667\*[5]\*(100-[6])/91

Additional Treatment Information <u>Rate Unit</u> kg/ha = Kilograms Dry Product per Hectare (US=kg/A)]

## 7.4 Appendix 4 – Weather Data

Weather conditions on the trial site













N.,	D. (	Moisture	11.14	_Min	Max	Temp
No.	Date	Total	Unit	Temp	Temp	Unit
1.	2-May-2022	0,1	mm	11,6	22,3	C
2.	3-May-2022			9,5	22,3	C
3.	4-May-2022			6,3 7.4	24,2	C
4. F	5-May-2022	0.7		1,4	24,6	C
5.	6-May-2022	3,7	mm	11,9	20,8	C
6.	7-May-2022	0,5	mm	13,1	18,2	C
<i>1</i> .	8-May-2022	4,5	mm	12,7	20,8	C
8. 0	9-May-2022	0,5	mm	13	23	
9.	10-May-2022	1	mm	8,b	23,9	C
10.	11-May-2022			9	20,8	
11.	12-IVIay-2022			11,7	29,9	
1Z.	13-IVIAy-2022			12,2	21	
13.	14-IVIay-2022			12,1 10.5	24,9	
14.	15-IVIAy-2022	10		10,5	20,0	
10.	10-IVIAy-2022	1,2	11111 mm	12	29,3	
10.	17-IVIAy-2022	ა,ა		10,0	24,4	
17.	10-IVIAy-2022			12,1	21,4	
10.	19-IVIAy-2022			3,9	24,3	
19.	20-IVIay-2022	<u></u>		9,4	28,8	
20. 24	2 1-1VIdy-2022	0,3	1(111)	13,1	∠0,0 04.2	
∠1. วว	22-IVIAy-2022			13,3	∠4,3 02.5	
22. 22	23-1VIdy-2022			13,0 13 5	∠3,3 28.0	ř
23. 24	24-1VIdy-2022	66	mm	13,5	⊻0,0 07.7	ř
24. 25	25-IVIAy-2022	0,0	mm	14,5	21,1	
23. 20	20-IVIAy-2022	445		13,7	24,0	
20.	27-IVIAy-2022	44,5 4 0	mm	14	21,1	
27.	28-IVIAy-2022	4,8	mm	12,7	14,4	
28. 20	29-IVIAy-2022	9,3	mm	11,2	14.0	
29. 20	30-IVIAy-2022	0,0		9,7	14,2	
3U. 24	3 1-1018y-2022			10,0	20,0	
ง I. วว	1-JUN-2022	1	<b>mm</b>	15,4	23,0	
ง∠. วว	2-JUN-2022	12	11111 mm	10,0	20,0 07.2	
აა. ეკ	3-JUN-2022	1,3		14,4	21,3	
34. 25	4-Jun-2022	074		19,8	3U 00 7	
აე. ევ	5-JUN-2022	27,1		17,5	20,1 05 5	
30. 27	0-JUN-2022	01.0		10,9	20,0 07.4	
37. 20	7-JUN-2022	21,9	11111 mm	15,0	27,1	
30. 20	0-JUN-2022	3,9 2 0	11111 mm	10,1	19,0	
39. 40	9-JUN-2022	3,9		14,4	20,3	
40.	10-Jun-2022			15,1	21,0	
41.	11-Jun-2022			10 1	24,0	
4Z. 42	12-JUII-2022	<b>o</b>		12,1	20,3	
43.	13-JUN-2022	ა		12,1	20,9 04 F	
44.	14-JUN-2022			12,1	24,3	
4). 16	10-JUN-2022			11,4	20,3	
40.	10-JUN-2022			1Z,0 1E 1	21,0	
47.	17-JUN-2022			10,1	20,2	
40. 40	10-JUII-2022			10,4	20,3	
+3. 50	20_ lun 2022	0.2	mm	1/ 0	20,4 30.7	ř
50. 51	20-JULI-2022	υ,Ζ	11111	14,9 17.6	00,1 05.2	ř
51. 52	22_1-JUI1-2022	37	mm	15.0	£0,0 26.3	ř
52. 52	22-JUII-2022	5,1	11111	13,9 18	£0,3 07	ř
55. 54	20-JULI-2022			16.2	201	ř
J4. 55	24-JUII-2022			10,3	∠ສ,4 07 0	r r
JJ. 56	20-JUII-2022			10,0	∠ <i>I</i> ,∠ 21.1	ř
JU. 57	20-JUII-2022			14, <i>1</i> 17	01,1 224	ř
50.	28 Jun 2022			186	0∠,4 22.0	ř
JO. 50	20-JUII-2022	10	mm	10,0	92,0 34.4	r r
J9. 60	23-JUII-2022	۲,۷	11111	10,1	21 /	ř
61	1- Iul-2022	11	mm	18.0	01, <del>4</del> 33.8	ř
67 67	1-JUI-2022	т, I	11111	16.2	00,0 07.5	ř
02. 62	2 101-2022			10,0	20 6	r r
03. 64	0-JUI-2022	17	mm	13,5	0U,0 22 0	ř
04. 65	4-JUI-2022	0	11111	10,0	03,0 05.0	ř
0J. 66	0-JUI-2022	5	11111	10,9 13 7	∠3,∠ 07.7	ř
00. 67		00.4	mm	13,1	∠1,1 DG 1	
01. CO		ZZ,4	TITI	13,0	∠0,I	r r
00. 60	0-JUI-2022			10,1	22,1 01 1	ř
09. 70	3-JUI-2022			14,4	∠4,4 02.4	
1U. 74	10-JUI-2022			14,1	∠3,I	
/1.	11-Jul-2022			ŏ, <i>۱</i>	23,2	U I

72.	12-Jul-2022			12,3	24,2	С
73.	13-Jul-2022			10,8	28,1	С
74.	14-Jul-2022			12,3	30,4	С
75.	15-Jul-2022	1.4	mm	14.7	25	С
76.	16-Jul-2022	,		15.4	28.3	C
77	17-Jul-2022			15.8	26.2	Ĉ
78	18-Jul-2022			9.8	28.3	C.
79	19-Jul-2022			11.3	31.3	C.
80	20- Jul-2022			12.3	323	Č
00. 81	20-Jul-2022			12,5	3/ 6	ĥ
01. 02	21-Jul-2022			15,2	25 1	c c
0Z. 02	22-JUI-2022	10		13,7	200,1	
0J. 04	23-JUI-2022	4,Z		10.4	20,0	
04. 05	24-Jul-2022			10,4	00,0	
83. 00	25-JUI-2022	0.0		15,3	32,4	
86.	26-JUI-2022	9,3	mm	16,9	25,9	C
87.	27-Jul-2022	2,6	mm	15,5	29,8	C
88.	28-Jul-2022			15,9	30,4	C
89.	29-Jul-2022	10,4	mm	15,4	32,4	C
90.	30-Jul-2022	4,1	mm	17	23,4	С
91.	31-Jul-2022			15,8	28,2	С
92.	1-Aug-2022			14,3	30,7	С
93.	2-Aug-2022	0,9	mm	15,5	29,4	С
94.	3-Aug-2022			15,3	31,5	С
95.	4-Aug-2022			13	33,2	С
96.	5-Aug-2022			14,3	34,8	С
97.	6-Aug-2022			15,8	30,8	С
98.	7-Aug-2022			17,9	28,1	С
99.	8-Aug-2022	1.3	mm	19.1	25.7	С
100.	9-Aug-2022	,-		15.3	28.3	C
101.	10-Aug-2022			17.7	29.3	C
102	11-Aug-2022			11.5	28.5	Ċ
103	12-Aug-2022	16	mm	12.1	28.8	Ĉ
104	13-Aug-2022	11.5	mm	16.1	19.2	Ĉ
104.	14-Aug-2022	11,0		14.7	29.1	Č
106	15-Aug-2022			14.2	30.9	C C
100.	16-Aug-2022			15.1	31.1	ř
107.	17 Aug 2022			14.0	22.2	r r
100.	18 Aug 2022			16.3	25.2	r r
109.	10-Aug-2022	0.0		10,5	00,2	6
110.	19-Aug-2022	2,2		10 10 0	20	
111.	20-Aug-2022	1,9	mm	10,2	20,2	
11Z.	21-Aug-2022	8,4	mm	10,9	24,8	
113.	22-Aug-2022	3,4	mm	15,9	17,3	
114.	23-Aug-2022			15,3	20,7	C
115.	24-Aug-2022			16,1	26,9	C
116.	25-Aug-2022			16,6	28,6	C
117.	26-Aug-2022			16,6	31,9	С
118.	27-Aug-2022			17	33,1	С
119.	28-Aug-2022	0,1	mm	16,7	29,1	С
120.	29-Aug-2022			18,6	27,5	С
121.	30-Aug-2022			14,5	29,1	С
122.	31-Aug-2022	20,3	mm	12,8	29,2	С
123.	1-Sep-2022	2,2	mm	14,6	17,3	С
124.	2-Sep-2022			14	22,9	С
125.	3-Sep-2022			10	25.2	С
126.	4-Sep-2022	1		12.6	26.3	C
127.	5-Sep-2022			12	27.1	Ċ
128	6-Sep-2022			13	28.9	č
	- 00P 2022	1	1		-0,0	~

#### Comment:

#### Weather conditions in general

In April the average temperature was 8,9 °C, which is also colder, than the 30 years average and the rainfall was a little bit more than usual. In May the average temperature was 17,5 C, which was normal, but the rainfall was less than usual. In June the temperature and rainfall was normal. The temperature of July was higher and the precipitation was less than in an average year. In August the average temperature was 22,2 °C and the precipitation was less than in an average year. In September the temperature was lower than usual and the precipitation was more than usual.

## 7.5 Appendix 5 – Photographs



Photo 1 Status of crop on the trial site on 21st June 2022.in efficacy trial with Pannonia Bio Grow



Photo 2 Status of crop on the trial site on the 8<sup>th</sup> August 2022 efficacy trial with Pannonia Bio Grow

## 7.6 Appendix 6 – GEP Certificate

Aláiró: dr. Vincze Eleonóra (2022.05.23.)



## KORMÁNYHIVATAL

Ügyirat-szám: PE/NV/00330-10/2022 Ügyintéző: Ferenczi Júlia Telefon:06-1/236-3975 E-mail: ferenczi.julia@pest.gov.hu Tárgy: CPR Europe Kft. vizsgálóhelyének GEP tanúsítása Melléklet-

A Pest Megyei Kormányhivatal (a továbbiakban: Engedélyező Hatóság) az CPR Europe Kft. (székhely: 9700 Szombathely, Török Ignác utca 30., adószám: 13710754-2-18, FELIR azonosító: AA6232182, telephelyek: 6800 Hódmezővásárhely, Kisfaludy u 127., 4030 Debrecen, Óvoda utca 26. A. ép., 8840 Csurgó, Zrínyi u 61., 8175 Balatonfűzfő, Aradi u. 23. , a továbbiakban: Ügyfél) vizsgálóhelyének Helyes Kísérleti Gyakorlat = *Good Experimental Practice* (a továbbiakban: GEP) szerinti inspekciója és elismerése iránti kérelme alapján indult eljárásban meghozta az alábbi

#### HATÁROZATOT:

Engedélyezési célú biológiai hatásvizsgálatok végzéséhez az Ügyfél vizsgálóhelyének GEPminősítését kiadom.

A GEP - minősítés 5 évig érvényes döntésem közléssel véglegessé válásától számítva.

A GEP-minősítés az alábbi minősítési kategóriákra és művelési ágakra kerül kiadásra:

 minősítési kategória: herbicidek, fungicidek és baktericidek, zoocidok, növekedésszabályozó és termésnövelő készítmények, adalékanyagok

- művelési ág: szántóföld, zöldség, gyűmölcs, szőlő, disznövény, erdő, közterület és egyéb

Jelen minősítés nem érinti a működéssel/tevékenység folytatásával kapcsolatos egyéb jogszabályban előírt engedélyeket, illetve ügyfélnek azok beszerzésére vonatkozó kötelezettségét.

Az Ügyfél a vizsgálóhelyeinek minősített tevékenységét érintő jelentős változásról 15 napon belül köteles értesíteni az engedélyező hatóságot.

A GEP-minősítéssel kapcsolatos jogszabályokban és a jelen határozatban foglaltak betartását hatóságom szúrópróbaszerűen ellenőrzi. Amennyiben az ellenőrzés során megállapítást nyer, hogy a vizsgálóhely nem tartja be a rá vonatkozó GEP - követelményeket, akkor az engedélyező hatóság a határozatban feltűntetett minősített területre vonatkozó tevékenység végzését legfeljebb 2 hónapra felfüggesztheti, illetve a kiadott GEP-minősítését visszavonhatja.

Ha az ellenőrzés során egy adott kísérlettel kapcsolatban hiányosságok kerülnek megállapításra, a kísérletet a hiányosságok mértékétől függően az engedélyező hatóság kizárhatja az engedélyezésnél elfogadhatók közül.

A vizsgálóhely GEP szerinti inspekciója és ismételt elismerése eljárás díjköteles. A díjtétel a Nemzeti Élelmiszerlánc-biztonsági Hivatal, valamint a megyei kormányhivatalok mezőgazdasági szakigazgatási szervei előtt kezdeményezett eljárásokban fizetendő igazgatási szolgáltatási díjak mértékéről, valamint az igazgatási szolgáltatási díj fizetésének szabályairól szóló 63/2012. (VII. 2.) VM rendelet 1. sz. mellékletének 8.19.2. pontja szerint: 250.000,- Ft, amelyet az Űgyfél megfizetett.

> Élelmiszerlánc-biztonsági, Állategészségűgyi, Növény- és Talajvédelmi Főosztály Cim: 1135 Budapest, Lehel u. 43-47.; Telefon: (06-1)236-4160, KRID: 511509738 E-máil: nto@pest.gov.hu Web: http://www.kormanyhivatal.hu/hu/pest

Ezen határozattal szemben közigazgatási eljárás keretében fellebbezésnek helye nincs, ugyanakkor az Ügyfél jogszabály-sértésre való hivatkozással kérheti jelen, a közléssel véglegessé váló határozat felülvizsgálatát, a határozat közlésétől számított harminc napon belül a Fővárosi Törvényszéktől, a határozatot hozó Engedélyező Hatóság elleni kereset indításával. A keresetlevelet a Pest Megyei Kormányhivatal Élelmiszerlánc-biztonsági, Állategészségügyi, Növény- és Talajvédelmi Főosztály Növény- és Talajvédelmi Osztályához (1135 Budapest, Lehel u. 43-47.) elektronikus úton kell benyújtani.

#### INDOKOLÁS

Az Ügyfél 2022. március 02. napján érkezett levelében vizsgálóhelyének inspekcióját kérte az engedélyező hatóságtól.

Az engedélyező hatóság 2022. április 22-én az Ügyfél székhelyén, 2022. április 27-én a hódmezővásárhelyi-, 2022. április 28-án a debreceni-, 2022. április 29-én a balatonfúzfői-, illetve a csurgói telephelyen helyszíni ellenőrzést tartott, amelyeknek megállapításait a PE/NV/00330-3/2022, PE/NV/00330-4/2022, PE/NV/00330-5/2022, PE/NV/00330-6/2022, PE/NV/00330-7/2022, ügyiratszámú jegyzőkönyvekben rögzítette.

A helyszíni ellenőrzés során az engedélyező hatóság megállapította, hogy a növényvédő szerek forgalomba hozatalának és felhasználásának engedélyezéséről, valamint a növényvédő szerek csomagolásáról, jelöléséről, tárolásáról és szállításáról szóló 89/2004. (V. 15.) FVM rendelet (továbbiakban: Rendelet) 22. §-ban foglalt biológiai hatásvizsgálatokkal kapcsolatos előírásoknak a vizsgálóhely nem felelt meg hiánytalanul, és az Űgyfelet a PE/NV/00330-8/2022 ügyiratszámú végzésben a hiányosságok megszüntetésére, pótlására szólította fel.

Az Ügyfél a hiányosságokat megszüntette és annak bizonyításáról szóló dokumentációt az engedélyező hatóságnak 2022. május 19. napján napján megküldte.

A fentiek alapján megállapítottam, hogy a GEP-minősítés megadásának feltételei teljesültek, ennek megfelelően döntöttem a rendelkező részben foglaltak szerint.

A Rendelet 22. §-a értelmében "(5) Kérelem alapján az engedélyező hatóság helyszíni ellenőrzést folytat le a vizsgálóhelyen, majd határozatban dönt a vizsgálóhely GEP-minősítéséről. A határozatnak ki kell terjednie arra, hogy a vizsgálóhely milyen kategóriákra, illetve művelési ágakra szerezte meg a GEP-minősítést.

(6) A GEP-minősítés érvényességi ideje első tanúsítás esetén 2 év, a tanúsítás megújítását követően legfeljebb 5 év.

(7) A GEP-minősítési eljárásért a külön jogszabályban meghatározott díjat kell fizetni.

(8) A GEP-minősítéssel rendelkező vizsgálóhely minden, a minősített tevékenységét érintő jelentős változásról 15 napon belül köteles értesíteni az engedélyező hatóságot.

(9) Az engedélyező hatóság szúrópróbaszerűen ellenőrzi a GEP-minősítéssel rendelkező vizsgálóhelyeket. Amennyiben megállapítást nyer, hogy a vizsgálóhely nem tartja be a rá vonatkozó GEP-követelményeket, a hatóság a határozatban feltüntetett minősített területre vonatkozó tevékenységet legfeljebb 2 hónapra felfüggesztheti, illetve a kiadott GEP-minősítést visszavonhatja. Ha az ellenőrzés során egy adott kísérlettel kapcsolatban hiányosságok kerülnek megállapításra, a kísérletet a hiányosságok mértékétől függően az engedélyező hatóság kizárhatja az engedélyezésnél elfogadhatók közül."

Jelen eljárás nem tartozik a veszélyhelyzet megszűnésével összefüggő átmeneti szabályokról és a járványügyi készültségről szóló 2020. évi LVIII, törvény (a továbbiakban: Tv.) hatálya alá. A Tv. 398. § (2) bekezdése kimondja:

"E fejezet hatálya nem terjed ki:

b) azokra az ügyekre, amelyekben a kérelmezett jog Magyarország nemzetközi jogi kötelezettségei, valamint az Európai Unió kötelező jogi aktusai alapján kizárólag engedéllyel gyakorolható,

d) azokra az engedélyezésekre, amelynek tárgya valamely jogosultság mértékének megállapítása."

Az engedélyező hatóság a határozatát a földművelésügyi hatósági és igazgatási feladatokat ellátó szervek kijelöléséről szóló 383/2016. (XII.2.) Kormányrendelet 19. §-ában és az élelmiszertáncról és hatósági felügyeletéről szóló 2008. évi XLVI. törvény 33. § e) pontjában biztosított jogkörében, foglaltaknak megfelelően hozta.

Jelen határozat elleni fellebbezés lehetősége az Ákr. 116. § (1) bekezdése, (4) bekezdés d) pontja alapján került kizárásra. A keresetindítás lehetőségéről szóló tájékoztatást az Ákr. 112. § (1) bekezdése, 114. § (1) bekezdése határozza meg.

A bírósági felülvizsgálat és a kereset benyújtásának lehetőségéről és szabályairól, az Éltv. 39/A. §-a; a közigazgatási perrendtartásról szóló 2017. évi I. törvény 28. § (1)-(2) bekezdése, 29. § (1) bekezdése 38. §-a, 39. §-a, 50. §-a, 52. §-a, 77. §-a, 157. §. (1) bekezdése; a bíróságok szervezetéről és igazgatásáról szóló 2011. évi CLXI. törvény 21. § (8) bekezdése; a polgári perrendtartásról szóló 2016. évi CXXX. törvény 605. §-a; valamint az elektronikus ügyintézés és a bizalmi szolgáltatások általános szabályairól szóló 2015. évi CCXXII. törvény 9. § (1) bekezdése rendelkezik.

Budapest, 2022. május 23.

Dr. Tarnai Richárd kormánymegbízott nevében és megbízásából

> Dr. Vincze Eleonóra osztályvezető

#### A határozatot kapják:

- 1. Ügyfél
- 2. Pest Megyei Kormányhivatal Pénzügyi és Gazdálkodási Főosztálya
- 3. Irattar