

NAIK ZÖKO Research Station of Szeged

In 2017 NAIK ZÖKO Research Station of Szeged and Water&Soil set up an experiment in spicy pepper production in the field of the Research Station of Szeged (land register reference: 01357/1), on an area of half a hectare (5000 m²), where there were 2500 m² treated and 2500 m² untreated (control) parcels, in extensive circumstances.

On the treated area we used the product of Water&Soil, the water retainer in the required dose. The aim of the experiment is to examine the difference between the treated and untreated areas concerning the height of the plants, the number of fruit sets and the total amount of crop.

Description of the experiment:

- Variety of spicy pepper: Szeged – 80
- Producing seedlings: we used the seed of NAIK ZÖKO Research Station of Szeged and we grew traditional rotten root seedlings under unheated plastic tunnel.
- Time of sowing: 30 March
- Time of planting in the field: 24-25 May
- First treatment: 30 June; dose: 1ml/m²
Application was made with knapsack sprayers passing between the rows making sure that the substance does not reach the surface of the plants.
- First data collection: 20 July
We measured the height of and counted the fruit sets on the plants in the treated and untreated parcels.
- Second treatment: 27 July, 0.5 ml/m²
- Application was made with knapsack sprayers passing between the rows making sure that the substance does not reach the surface of the plants.
- Second data collection: 3 August
We measured the height of and counted the fruit sets on the plants in the treated and untreated parcels.
- Third data collection: 30 August.
We measured the height of and counted the fruit sets on the plants in the treated and untreated parcels.

(The measured data are shown in the table below.)

**The Vegetable Crop Research Department of National Agricultural Research and
Innovation Center
NAIK ZÖKO Szeged**

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The spicy pepper crop was harvested on 28 and 29 of September in the traditional way, selecting the peppers by hand into raschell bags, separating the crop from the treated and untreated area. After picking the peppers were taken to be prepared for sale, where they were measured by the quintal. On the treated parcel 13.7 q (quintal) raw spicy peppers were harvested, whereas on the untreated area it was 11.3 q.

We can definitely confirm that the difference between the parcels can be attributed to the application of the substance 'Water Retainer' produced by Water&Soil. An additional repeated experiment could be useful to get more profound knowledge about the product.

Róbert Bráj
research station manager
NAIK ZÖKO Szeged

(the seal of the institute)

5.8. Meteorological data of the Szeged monitoring station

Month	Average	Maximum	Minimum	Precipitation, mm	Number of sunshine hours
	temperature, °C				
2017 Jan	-5.2	4.7	-18.3	15	123
Feb	2.9	20.1	-6.7	18	99
March	9.5	24.3	-2.2	15	217
Apr	10.9	24.7	-0.2	39	208
May	17.2	32.0	2.6	35	313
June	22.2	34.5	9.5	94	329
July	23.3	36.9	11.0	34	384
Aug	24.1	39.3	8.4	17	347
Sep	17.0	34.4	5.1	51	202
Oct	12.0	25.6	1.7	34	213
Nov	6.5	15.7	-3.7	39	112
Dec	2.9	13.9	-7.0	47	107
Jan-Dec	11.9	39.3	-18.3	438	2645

Data Collection 1

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 20 July 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 30 June 2017
Dose: 1 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Height of the plant	38	33	1
	37	31	2
	38	36	3
	43	39	4
	42	39	5
	48	39	6
	46	38	7
	46	40	8
	43	38	9
	44	43	10
	44	41	11
	38	35	12
	45	40	13
	47	38	14
	44	40	15
	39	39	16
	42	39	17
	42	40	18
	41	40	19
	41	39	20
	40	40	21
	42	35	22
	48	36	23
	43	40	24
	44	42	25
Average	42.6	38.4	
treated/untreated %	110.94%		

Data Collection 1

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 20 July 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 30 June 2017
Dose: 1 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Number of fruit sets	10	11	1
	10	11	2
	15	13	3
	8	13	4
	12	12	5
	14	13	6
	16	12	7
	16	17	8
	12	13	9
	17	19	10
	18	10	11
	14	10	12
	16	12	13
	15	8	14
	16	12	15
	12	14	16
	18	11	17
	16	13	18
	19	15	19
	16	12	20
	20	14	21
	17	12	22
	18	13	23
	15	15	24
	16	12	25
Average	15.04	12.68	
treated/untreated %	118.61%		

General Data Collection Sheet

Place of data collection: Szeged, Külterület 7.
Date of data collection: 20 July 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 30 June 2017
Dose: 1 ml/m²

(table filled in by hand)

Description of data	Treated	Untreated	
Height of the plant	38	33	1
	37	31	2
	38	36	3
	43	39	4
	42	39	5
	48	39	6
	46	38	7
	46	40	8
	43	38	9
	44	43	10
	44	41	11
	38	35	12
	45	40	13
	47	38	14
	44	40	15
	39	39	16
	42	39	17
	42	40	18
	41	40	19
	41	39	20
	40	40	21
	42	35	22
	48	36	23
	43	40	24
	44	42	25
Average			
treated/untreated %			

(hand-written:)

People recording data: Róbert Braj
 Richárd Vattay

Sample selection method:

10-15	21-25
6-10	
1-5	16-20

General Data Collection Sheet

Place of data collection: Szeged, Külterület 7.
Date of data collection: 20 July 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 30 June 2017
Dose: 1 ml/m²

(table filled in by hand)

Description of data	Treated	Untreated	
Number of fruit sets	10	11	1
	10	11	2
	15	13	3
	8	13	4
	12	12	5
	14	13	6
	16	12	7
	16	17	8
	12	13	9
	17	19	10
	18	10	11
	14	10	12
	16	12	13
	15	8	14
	16	12	15
	12	14	16
	18	11	17
	16	13	18
	19	15	19
	16	12	20
	20	14	21
	17	12	22
	18	13	23
	15	15	24
	16	12	25
Average	15.04	12.68	
treated/untreated %	118.61%		

Sample selection method:

10-15	21-25
	6-10
1-5	16-20

Data Collection 2

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 3 August 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 27 July 2017
Dose: 0.5 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Height of the plant	38	35	1
	36	33	2
	37	37	3
	38	36	4
	43	38	5
	40	40	6
	45	39	7
	46	42	8
	47	39	9
	39	40	10
	39	40	11
	46	38	12
	45	43	13
	44	39	14
	44	41	15
	38	37	16
	46	44	17
	40	40	18
	42	39	19
	40	38	20
	41	35	21
	44	39	22
	47	41	23
	43	40	24
	43	41	25
Average	42.04	38.96	
treated/untreated %	107.91%		

Data Collection 2

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 3 August 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 27 July 2017
Dose: 0.5 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Number of fruit sets	12	12	1
	14	13	2
	14	12	3
	10	11	4
	15	13	5
	14	13	6
	17	14	7
	15	16	8
	13	12	9
	19	16	10
	20	15	11
	15	14	12
	15	13	13
	17	14	14
	14	12	15
	15	13	16
	18	15	17
	15	16	18
	18	14	19
	18	16	20
	20	15	21
	17	14	22
	16	14	23
	19	16	24
	16	14	25
Average	15.84	13.88	
treated/untreated %	114.12%		

Data Collection 3

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 30 August 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 27 July 2017
Dose: 0.5 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Height of the plant	40	39	1
	39	38	2
	37	40	3
	42	39	4
	44	41	5
	42	38	6
	45	41	7
	48	40	8
	44	42	9
	45	42	10
	49	44	11
	44	41	12
	48	43	13
	46	40	14
	45	42	15
	40	40	16
	47	43	17
	43	42	18
	44	39	19
	46	38	20
	49	37	21
	43	39	22
	45	40	23
	43	38	24
	39	41	25
Average	43.88	40.28	
treated/untreated %	108.94%		

Data Collection 3

Place of data collection: NAIK ZÖKO 6728 Szeged, Külterület 7.
Date of data collection: 30 August 2017
Plant variety: Szeged 80 spicy pepper
Date of treatment: 27 July 2017
Dose: 0.5 ml/m²
Area:
Treated: 2500 m²
Untreated: 2500 m²

Description of data	Treated	Untreated	
Number of fruit sets	14	11	1
	15	14	2
	15	16	3
	13	13	4
	15	14	5
	16	16	6
	17	15	7
	17	14	8
	15	13	9
	20	18	10
	20	17	11
	16	15	12
	14	14	13
	16	13	14
	17	16	15
	16	15	16
	18	15	17
	16	17	18
	17	15	19
	19	18	20
	20	19	21
	18	15	22
	17	16	23
	20	16	24
	15	15	25
Average	16.64	15.2	
treated/untreated %	109.47%		