NUTRITION
PLANT HEALTH

VALENVERAS

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Experience the future of cannabis cultivation with our innovative Nutrition Plant Health

Proper fertilization is crucial for maximizing cannabis yields, promoting plant health, and boosting pest resistance. This plant tissue model provides a framework for optimizing nutrient delivery, leading to:

- **Increased production and potency of medicinal compounds.**

- **Stronger, more resilient plants.**

- **Enhanced natural pest control.**

By implementing this model, cannabis growers can cultivate healthier, more productive plants with higher levels of the desired cannabinoids and terpenes.

Reveal the individual nutritional requirements of each plant

Traditionally, plant nutrition has been a one-size-fits-all approach, applying fertilizers with a broad spectrum of nutrients based on plant type or soil analysis. However, Valenveras revolutionizes this by **revealing the individual nutritional requirements of each plant.** This goes beyond generic needs and delves into the specific needs of every single plant within your crop.

In conclusion, revealing the individual nutritional requirements of each plant with **Valenveras is a game-changer**. It allows for precision farming, optimizing plant growth, maximizing yield, and promoting sustainable agricultural practices.

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Increased Production

Proper fertilization ensures optimal plant growth, improving the yield and quality of medicinal compounds such as cannabinoids and terpenes. Research indicates that improved fertilization can significantly increase THC and CBD levels in flowers.

Plant Health

A correct nutrient balance prevents deficiencies that can weaken plants and make them more susceptible to diseases and pests. Balanced fertilization ensures plant vigor and resistance to abiotic factors like water stress and extreme temperatures.

Pest Prevention

Well-nourished plants produce more aromatic compounds (terpenes) that help repel insects and pathogens. Optimal nutrient levels also strengthen the plant's natural defenses.

ICP-MS vs. Valenveras

Factor	ICP-MS	Valenveras	
Initial Equipment Cost	High	Low	✔
Operational Costs	High	Low	✔
Cost per Analysis	Medium-High	Low	✔
Analysis Time	Fast	Very Fast	✔
Accuracy and Sensitivity	High	High	=
Ease of Use	Medium	Very easy	✔
Size	Big	Very light	✔

Scan Result

|	
N	4.01 %
P	0.81 %
K	2.12 %
Ca	2.76 %
Mg	0.88 %
Fe	98.02 ppm
Mn	92.32 ppm
Zn	40.71 ppm

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Target Values for Growth

Parameter	Minimum	Maximum	Average
N (%)	2.8	6.0	4.4
P (%)	0.3	0.7	0.5
K (%)	1.5	3.5	2.5
Ca (%)	1.8	6.0	3.9
Mg (%)	0.3	1.5	0.9
Fe (ppm)	80	250	165
Mn (ppm)	80	250	165
Zn (ppm)	20	70	45

Target Values for Flowering

Parameter	Minimum	Maximum	Average
N (%)	3.0	4.3	3.7
P (%)	0.5	0.9	0.7
K (%)	2.1	3.2	2.7
Ca (%)	5.1	7.4	6.2
Mg (%)	0.8	1.2	1.0
Fe (ppm)	89	199	144
Mn (ppm)	113	226	170
Zn (ppm)	40	67	54

Potassium Tissue Ranges

Data represents recommended potassium ranges for weeks 1-8 of flowering

Potassium - Leaf Tissue Targets for Cannabis (ppm)
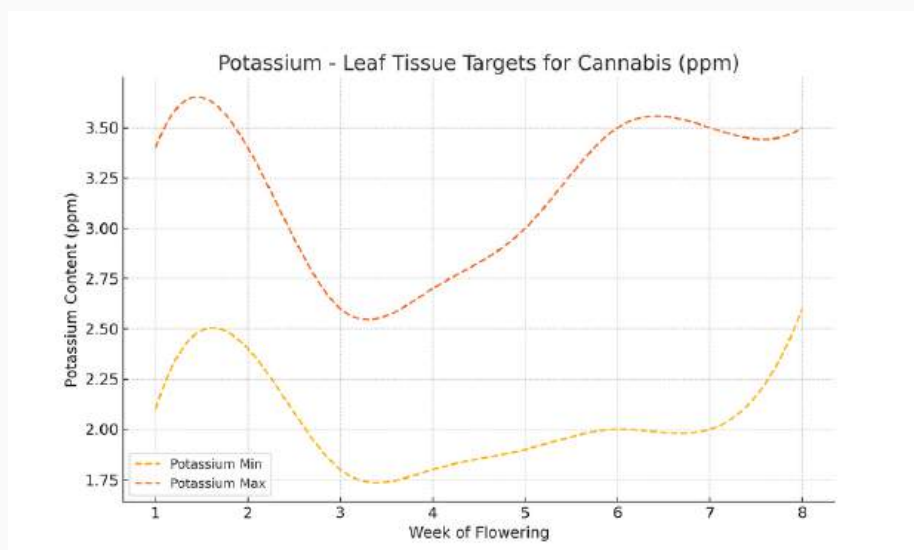
For detailed guidelines and personalized support, contact Sostanza

Agricultural Technical Report CannaTest*

Analysis date: May 24th 2024
Conducted by: Ruben Valenzuela Moreno

Objective: This report aims to provide technical recommendations for correcting fertilization in the cultivation rooms and varieties produced by CannaTest*. Leaf nutrient analyses were carried out to identify deficiencies and excesses of nutrients in the plants.

Nutrient Analysis Results

Sample Name	N (%)	P (%)	K (%)	Ca (%)	Mg (%)	Fe (ppm)	Mn (ppm)	Zn (ppm)
DF flower 4w	2.84	1.15	1.87	1.35	1.07	73.98	36.79	0.51
ZB flower 4w	3.41	1.72	1.98	2.62	2.02	49.34	52.25	0.00
FG 2 flower 4w	2.91	0.62	1.47	3.85	0.80	98.02	90.89	35.08
FG 1 flower 4w	2.94	0.70	1.43	3.37	0.81	85.77	101.06	29.95
DF 2 mother	4.47	1.15	1.87	3.71	1.14	90.00	123.17	2.99
DF mother SC	4.44	1.22	1.88	3.29	1.18	81.05	105.58	0.00
2 mother UM	3.97	0.44	1.99	4.89	0.82	157.89	137.50	58.63
flower SC	2.91	1.69	1.93	3.25	2.31	49.17	50.77	0.00
flower 4w	2.35	1.34	1.66	2.77	1.82	67.61	46.97	0.00

Correction Needed:

Sample Name	N (%)	P (%)	K (%)	Ca (%)	Mg (%)	Fe (ppm)	Mn (ppm)	Zn (ppm)
DF flower 4w	1.91	-0.75	2.13	2.65	-0.47	51.02	28.21	36.99
ZB flower 4w	1.34	-1.32	2.02	1.38	-1.42	75.66	12.75	37.50
FG 2 flower 4w	1.84	-0.22	2.53	0.15	-0.20	26.98	-25.89	2.42
FG flower 4w	1.81	-0.30	2.57	0.63	-0.21	39.23	-36.06	7.55
DF 2 mother DF	0.28	-0.75	2.13	0.29	-0.54	35.00	-58.17	34.51
mother SC 2	0.31	-0.82	2.12	0.71	-0.58	43.95	-40.58	37.50
mother UM	0.78	-0.04	2.01	-0.89	-0.22	-32.89	-72.50	-21.13
flower SC	1.84	-1.29	2.07	0.75	-1.71	75.83	14.23	37.50
flower 4w	2.40	-0.94	2.34	1.23	-1.22	57.39	18.03	37.50

*"To protect the identity of the source, this example utilizes data from a real company under the alias CannaTest. The data itself is genuine."

Nutrient Correction Needed
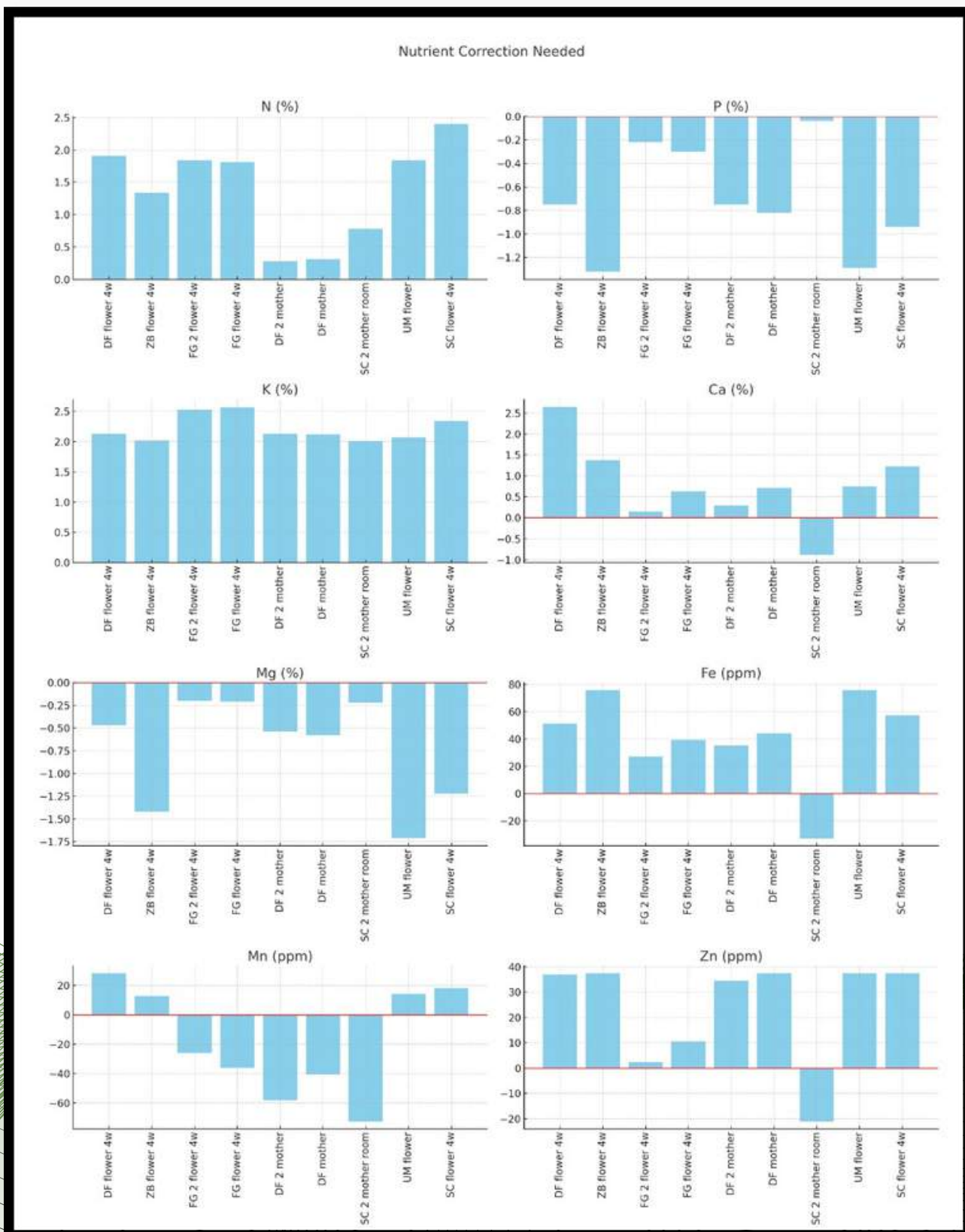
Interpretation of Results and Recommendations

- **Nitrogen (N):** Most samples need an increase in nitrogen levels.

  - Recommendation: Increase the application of nitrogen fertilizers in all samples except DF 2 mother and DF mother where a slight reduction is needed.

- **Phosphorus (P):** All samples indicate a need to decrease phosphorus levels.

  - Recommendation: Reduce the application of phosphorus fertilizers across all samples.

- **Potassium (K):** All samples show a need to increase potassium levels.

  - Recommendation: Increase the application of potassium fertilizers in all samples.

- **Calcium (Ca):** Mixed results with some samples needing an increase and others a decrease.

  - Recommendation: Increase calcium in SC 2 mother room. Decrease calcium in DF flower 4w, FG 2 flower 4w, and FG flower 4w.

- **Magnesium (Mg):** Most samples indicate a need to decrease magnesium levels.

  - Recommendation: Decrease magnesium fertilization in all samples except UM flower and ZB flower 4w where a reduction is needed.

- **Iron (Fe):** Mixed results with some samples needing an increase and others a decrease.

  - Recommendation: Increase iron in DF flower 4w, FG flower 4w, and SC flower 4w. Decrease iron in SC 2 mother room.

- **Manganese (Mn):** Most samples indicate a need to decrease manganese levels.

  - Recommendation: Decrease manganese fertilization in all samples except SC flower 4w where a slight increase is needed.

- **Zinc (Zn):** Mixed results with some samples needing an increase and others a decrease.

  - Recommendation: Increase zinc in DF flower 4w and ZB flower 4w. Decrease zinc in FG 2 flower 4w and SC 2 mother room.

Conclusion

CannaTest should review and adjust its current fertilization plan according to the above recommendations to ensure optimal nutrient levels for all samples. These changes will improve plant health, increase yield, and promote more sustainable and efficient fertilization practices.

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Contact

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