



Natural Ingredients Promote the Production of Terpenes in Cannabis

ACTIVE INGREDIENTS: Corn Oil	49%
Cornmint oil	0.2%
INERT INGREDIENTS:	50.8%
Total = 100%	

Patent 11,638,422 B1
Non-GMO

Factors Affecting Terpene & Cannabinoid Production in Cannabis

Negative Factors

- Ultraviolet Light reduces THC, CBD, CBC and cola size and has variety dependent effect on terpenes.
- Low Light Intensity reduces yield and all quality parameters
- Excessive Light Intensity reduces photosynthesis, can burn leaves, and reduce all quality parameters
- Drought Stress reduces yield and severe drought stress during late flowering can dramatically reduce CBD and THC
- Salinity stress reduces THC, CBD, CBC and terpenes
- Excessive heat can reduce yield and all quality parameters
- Nutrient deficiencies during vegetative growth and early flowering can reduce yield and all quality parameters

Positive Factors

- Balanced nutrition, irrigation management and lighting throughout vegetative growth and early flowering.
- Nitrogen deficiency towards the end of flowering increases THC, CBD, CBC and CBG.
- Phosphorous deficiency towards the end of flowering increases THC and CBD
- Potassium deficiency towards the end of flowering increases THC, CBD, CBC and CBG
- [Biostimulants such as triacontanol and ascorbic acid have been shown to increase THC, CBD, and terpenes.](#)
- [Antioxidants reduce plant stresses from environmental extremes.](#)

You manage the plant husbandry, pest management, fertility, irrigation, and those environmental conditions you can control, while

TerpsPro provides:

Antioxidants to reduce plant stresses from six of the seven negative terpene production factors (shown in green above).

Biostimulants proven to increase production of terpenes in multiple crops and to reduce plant stresses.

Fatty acids are components of cell membranes, shown to reduce plant stresses, and an energy source used for growth and terpene synthesis

TerpsPro is manufactured from patented non-GMO biostimulant corn oil with natural ingredients by Circadian Crop Sciences, LLC, 22880 Pine Lake Drive, Colfax, CA 95713.

Benefit to Plants of Select Components of TerpsPro

	mg/kg
Amino Acid	
Alanine, ALA, A	14.12
Beta-alanine	0.00
Sarcosine, SAR	0.00
Glycine, GLY, G	5.51
Valine, VAL, V	4.47
Alpha-Aminobutyric acid, ABA	0.00
Beta-Aminoisobutyric acid, bAiB	0.00
Leucine, LEU, L	7.64
Isoleucine	2.46
Allo Isoleucine	2.46
Serine, SER, S	1.02
Proline, PRO, P	42.94
Asparagine, ASN, N ***	1.42
Aspartic acid, ASP, D ***	23.21
Methionine, MET, M	0.00
Glutamic acid, GLU, E **	5.91
Phenylalanine, PHE, F	5.84
Alpha-Amino adipic acid, AAA	0.00
Ornithine, ORN, O	0.00
Lysine, LYS, K	4.19
Histidine, HIS, H	0.00
Tyrosine, TYR, Y	2.73
Tryptophan, TRP, W	0.96
Cystein-Cystein, C-C	0.00

■ Heat Resistance ■ Salinity/Drought Res ■ Insect Defense
■ Cold Resistance ■ Heavy metal ■ Pathogen Defense

Triacontanol ■ ■ ■ ■ ■
 Carrageenan ■ ■ ■



Noticeable results with as few as three applications during vegetative growth



Usage Rate

Apply weekly as a spray from cutting stage through early flowering, at rates of 1/2 to 2 ounces of concentrate per gallon of water in sufficient volume to moisten foliage.

Or

Apply weekly in irrigation from the start of vegetative phase up until two weeks before harvest at rates of 1/4 to 1 oz per 100 gallons of water in sufficient volume to cause water to leach from containers equivalent to 10% of the container volume.

1 gal container leach 13 oz 10 gal container leach 128 oz

Properties of our patented, crude, non-GMO corn oil in ProLifix

Antioxidant capacity rivals that of blueberries. 128 mmol Trolox/kg in our corn oil versus 150 mmol Trolox/kg in blueberries versus **0 mmol Trolox/kg other horticultural oils.**

Principle antioxidants: Lecithin 24,000 mg/kg phytosterols 12,000 mg/kg
 tocopherols 1200 mg/kg carotenoids 7.41 mg/kg zeaxanthin 7.89 mg/kg

Fatty acids in vegetable oils are a concentrated energy source for plants.

Linoleic 54% Oleic 30% Palmitic 12% Stearic 2%

Primary phenolic acids. Protects plants from diseases and insect feeding

Hesperidin 24 mg/kg Gallic acid 16 mg/kg Rutin 14 mg/kg

Other Plant Beneficial Constituents: Vitamin E 8 mg/kg Thiamine 8 mg/kg
 Panthenic acid 11 mg/kg Riboflavin 2 mg/kg 1-Triacontanol 10 mg/kg