growor®

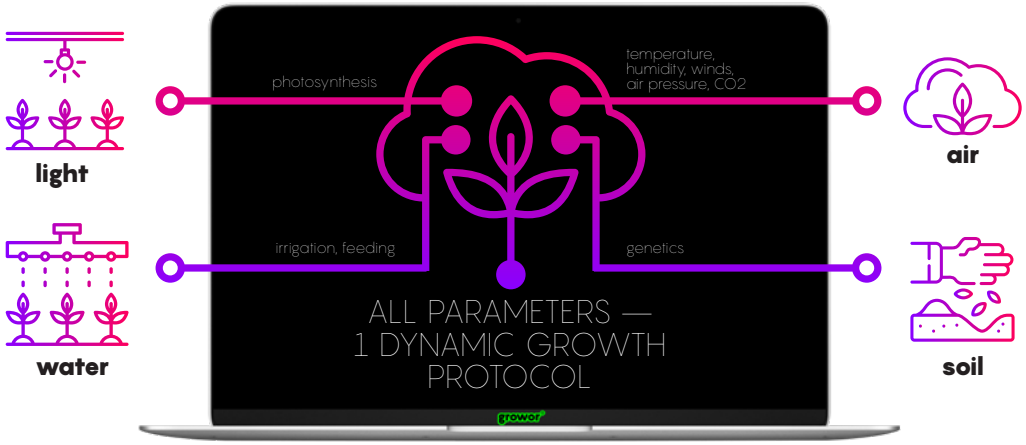
GROW WHAT YOU LOVE
LOVE WHAT YOU GROW

WE ARE GROWOR

growor develops and manufac-tures a high-tech growing solution for indoor cultivation, including the LED lighting system, the control panel, the monitoring system and the unique growth protocols.

gr500 - LED lighting system
grRC10 - remote control
grS4 - monitoring system
gr APP- application, cloud software

Light library - unique growing protocols
IP- patented technology
New Farming Standard simple rules , dynamic tech-nology, efficient cultivation



BREAK FARMING LIMITS

EXPERTISE OF THE LEADING INTERNATIONAL PROFESSIONALS + R&D OF INNOVATIVE GROWTH TECHNOLOGIES + LABORATORY TESTS ON A VARIETY OF PLANT CROPS = A UNIVERSAL FORMULA FOR EFFECTIVE FARMING!

www.growor.com; Israel: +972 33 76 1111; USA / Canada:+1 302 213 81 17; Europe:+39 366 486 3739

LIGHT FOR GROWERS

to help growers, we hacked the biochemistry of plants and engineered a custom-built solution — gr®kit biology

Easy integration with the existing management systems.

40%
in yield increase

70%
in health improvement

100%
results consistency

70%
in energy savings

40%
in quality enhancement

growor®

growortech

Unique integrated management solution for indoor cultivation

grsystem

State-of-the-art lighting technology augmented by self-evolving algorithms

grsoft

AI software offers fine tuning of the cultivation protocols and high degree of automation

groworapi

A master platform for integration of all technologies under master / slave model

let there be light

gr500® is a professional photosynthetic lighting solution for indoor cultivation. The proprietary technology precisely regulates the wavelength and the radiation intensity conducive to the optimal plant's development. **A fully configurable 4 channel spectrum** offering incremental wavelength ranges between 0 - 100% power for optimal photosynthesis at every stage of the plant's maturation.

targeted spectrum for each growth stage; balanced photon flux; dynamic feedback loop; full system integration

GROWOR LIGHTING KIT

vegetative module
Generates an optimum intensity spectrum that is conducive to healthy plant development in the ultimate time frame.

flowering module
Regulates biochemical reactions by focusing on pigments, which facilitates formation of fruit characteristics and regulates ripening or blooming.

a complete solution from veg to bloom

easy installation and compatibility
The system is easy to install and is compatible with traditional cultivation media.

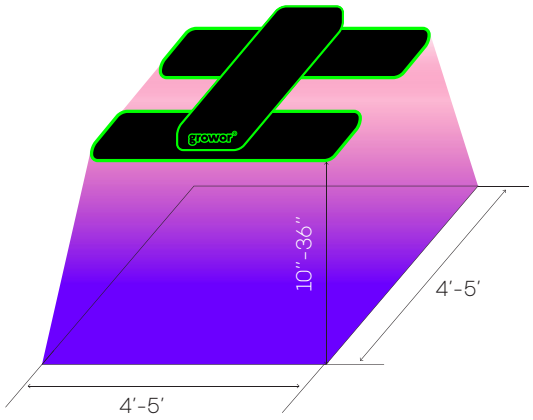
optimum light height
growor® lights are designed to be positioned at 10"(25.4 cm) above the canopy, insuring stability and uniformity of the lighting while preventing damage to the plants.

GR500® KEY PARAMETERS

Configuration	4 LED modules 60 diodes
Nominal Power	550 W
PPF per fixture	1125 umol/s
Targeted coverage area	4' x 4'-5' x 5'
Height from the canopy	10"- 36"
Curves of light distribution	90°
Full spectrum	380-780nm
Efficiency	2,3 umol/J
Passive Cooling	
Dust / Water Resistance	IP 65
Overall dimensions	27,7"x 30,3" x 5,4"
Weight	39,7lbs
Certifications	UL, CE, FCC, DLC pending, RoHS

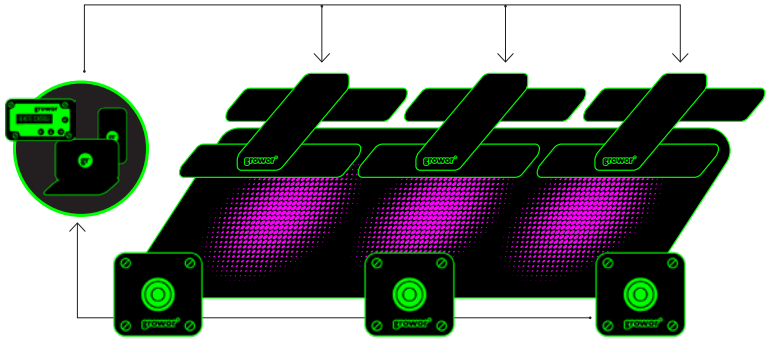
grS4® sensor array
4 climate control sensors
Temperature (°C/°F),
CO2 Concentration (ppm),
Humidity Sensor (H%)
Pressure (Pa)
Application
24/7 360° Environmental monitoring. Early warning detection system.

grRC®10 remote control
Control system with sensor setting support for the automated mode or for manual operations. Records environmental conditions for the entire growing cycle.



SYSTEM APPLICATION

Our lighting design and the management platform take into consideration a multitude of factors: plant species, cultivars phenotype, cultivation method, climate control design, cultivation space layout, etc. All parameters are calculated in advance and integrated in the management software, which is governed by a self-evolving algorithm. A network of sensors provides real-time information to the feedback loop and it triggers an immediate response from the system to any developmental or environmental anomalies.



AI software and a mobile app — full advantage of the cultivation process remotely

default mode
Offers several pre-set universal protocols for Veg and Flowering stages that guarantee results.

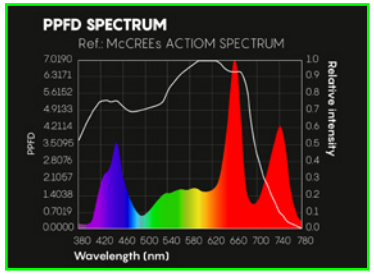
smart mode
Offers customization of the software algorithm for creating design-built protocols. It's a powerful tool for more advanced cultivators.

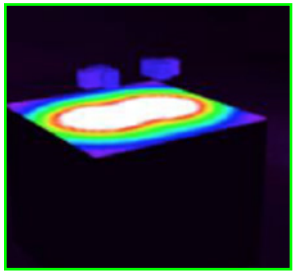
spectrum range
Strategic modulation of the spectrum intensity and range effectively reduces the duration of the veg cycles, while it optimizes the photon flux for flowering.

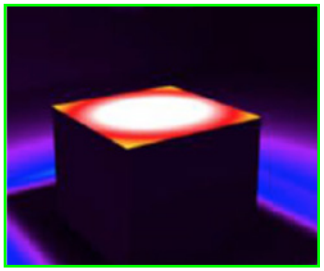
light distribution simulation
In-house lights layout design software calculates optimal fixture positions for uniform and effective light distribution.

gr principal

I, mA	Blue Chanel 1	Red Chanel 2	Deep Blue Chanel 3	Far Red Chanel 4
off	0	0	0	0
50%	142 µmol	160 µmol	110 µmol	131 µmol
75%	190 µmol	238 µmol	148 µmol	184 µmol
100%	246 µmol	315 µmol	191 µmol	252 µmol







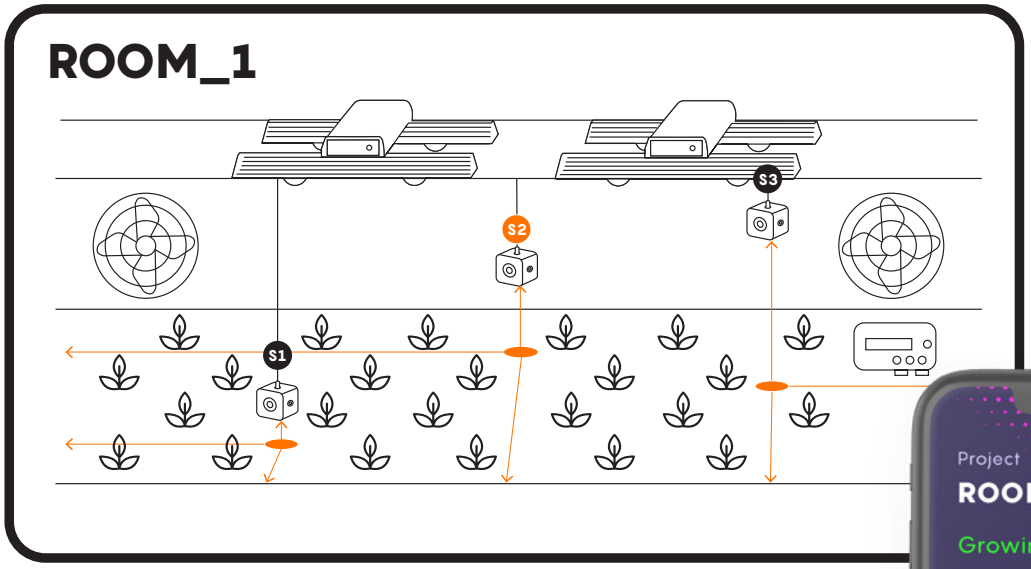
grRC10® remote control

The grRC10 Remote Control allows the grower to set specific cultivation program parameters, sensor alarms as well as choose automatic protocols. Growers can set these preferred parameters which are monitored by the sensors. Using the recorded real time data, growers are able to map out the environmental conditions for subsequent climate and cost optimisations. The grRC10 Remote Control comes with a universal default mode compatible with all plant species. The default mode manages the entire cultivation cycle automatically, from veg to harvest, with the grower only having to input the required amount of days.

grAPP® mobile application

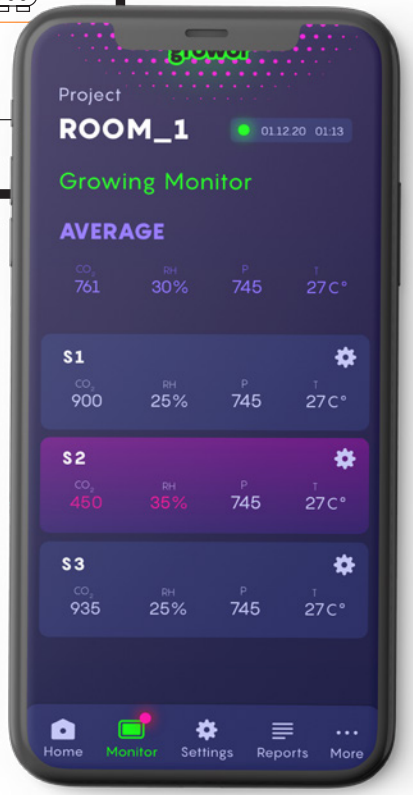
The gr®APP is a user-friendly application with intuitive controls. Home page displays your project and project name. Users can see the current selected mode, start and end times of growing cycles as well as the status of each cycle, allowing growers to quickly make informed decisions.
Select between manual, automatic and custom schedule modes with the option to configure up to 10 spectrum changes per day. Access the gr®Library of light schedules straight from your finger tips and select the desired protocol for your growing needs. The climate monitor allows to control energy consumption. A built in early warning monitoring system immediately alerts when climate parameter thresholds have been breached, whether it's water temperature or CO_2 concentration, the user receives a notification straight to his smart device. Experience years of research through a convenient, automated and reliable interface giving growers confidence and complete control over the project.

MONITORING SYSTEM



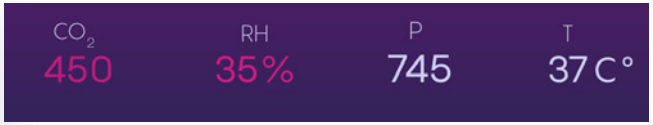
Monitoring and controlling temperature, humidity, pressure and CO2 levels are imperative metrics to manipulate growth and achieve increases in yield of up to 40%.
For optimum climate control, sensors are placed at different levels of the garden, accurately showing the different environmental conditions. The remote control identifies the location of each sensor and analyses the parameters online using AI integrated gr®Software.

The cultivation report produced, based on daily data collection, provides insights into cost optimisation; extra growing days, unnecessary CO_2 level maintenance, excess water use, excessive cooling loads among various other relevant metrics that affect yield, quality and economy.



case study
TORONTO / CANADA 2020

Canadian client, experiencing tired and stressed plants with poor yield results incorporated our monitoring system. A high increase in temperature at night and very low humidity levels in the morning were recorded. Early warning monitoring feature alerted the grower that specific climate parameter thresholds have been breached. Using the data collected, climate controls on the gr®APP were configured to the correct conditions. .



GROWOR WORKS ON:

Indoor

Greenhouses

Containers

Any urban application

Aeroponic

Hydroponic

Racks

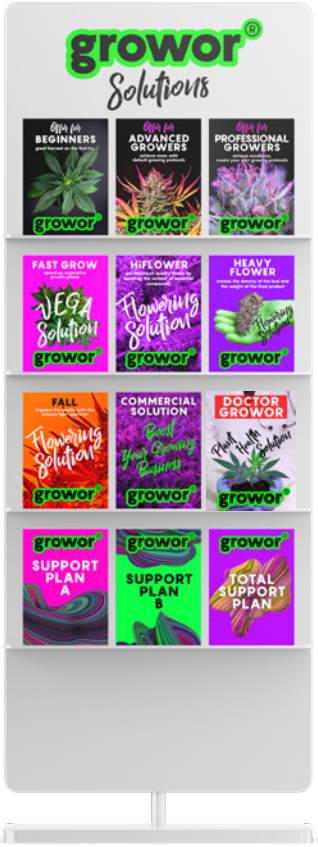
Vertical field

Table cultivation

Rockwool

Soil

Substrates



LIGHT RECIPES LIBRARY

growor® technology is the culmination of our prolonged studies and empirical research into dynamics of light spectrum absorption during the photoactive period of various crops. This led to the development of unique light wave protocols for every phase of the plant's growth. A comprehensive growor® solution is created for growers of all levels. From beginners to professionals, an all encompassing growor® solution is offered, ranging from unique equipment to software and services.

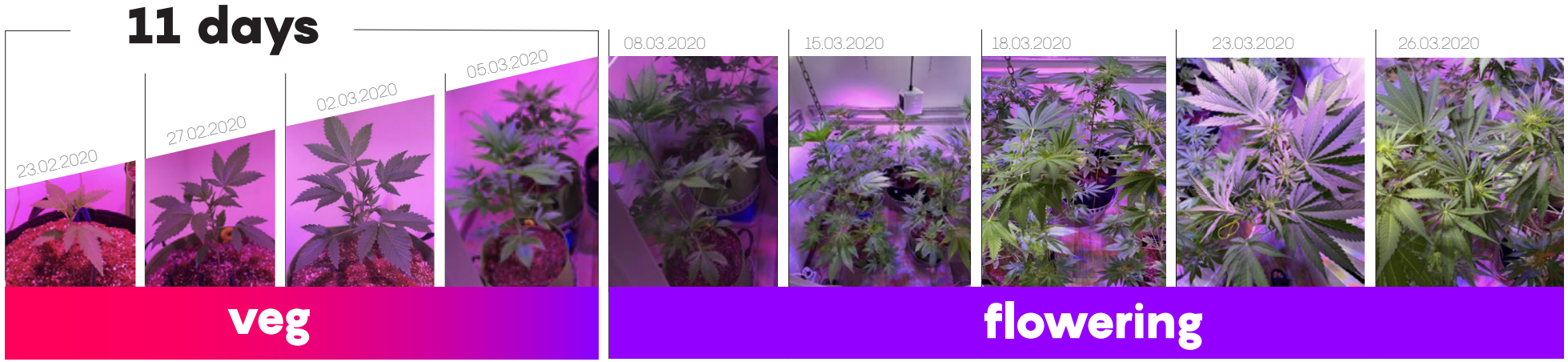
case study

FAST GROWING DENMARK 2020

Vegetative growth is the basis for the future harvest. Success depends on many factors, but the main ones are a properly developed root system, vigor of the stem, branched leaf area and high resistance to disease. Ensuring all of the above requirements, Fast Grow reduces the time and cost of the vegetative stage.

standard growing regime for the strain:
veg: 3-4 weeks,
flowering: 9-12 weeks,
yield: 1 lbs. per 9 ft.

growor® technology:
veg: 1-1.5 weeks
flowering: 8-9weeks
yield: 1.4-1.6 lbs per 9 ft.



case study

FALL

This is a dream light recipe for many growers. For the last 10 days of flowering, we create a natural feeling of late autumn arriving through several innovative solutions. The light protocol automatically starts to reduce day light hours while increasing night time hours. Simultaneously, temperature levels decrease and plants stay unwatered for the last 3 days. Collectively, these conditions result in the plants' transferring all their strength and accumulated juices from the leaves to the fruits.

"Autumn leaves
Red, Gold and Brown,
growor is here to take the Crown"

Last 7 days

Last 3 days

flowering

GROWOR FOR GROWERS

With you every step of the way:

1. Preliminary GrowRoom Layout:
upon receipt of surface blueprint, the area is analysed for optimum configuration.

2. Light Distribution Project:
taking into account the room size, crop canopy and target light intensity, the number of lighting fixtures required along with the best hanging strategy which ensures light uniformity is formulated.

3. grRecommendations:
building from the knowedge accumulated through practical experience, all the details of the project at all stages are carefully addressed to facilitate a smooth and fast transition from proposal to implementation.

1. Installation:
each project will receive a tailored case specific installation manual and the supporting technical drawings for an effortless installation process.

2.Assembly & Set up:
online support with a growor technician supervising the entire assembly and set up process.

3.Training:
online training with personnel to familiarise them with the growor system, technology and application.

4.Test Run: optional supervised first run of the entire system.

1. Growing Support:
support to growers for up to 2 growing cycles.

2. grLight Library:
configuration of customisable dynamic spectrums.

3. Analytical Reports:
using collected data from the in-stalled grSensors, analytical reports are provided with insightful information into cost optimisation.

Service Support:
24/7 consulting & technical support.

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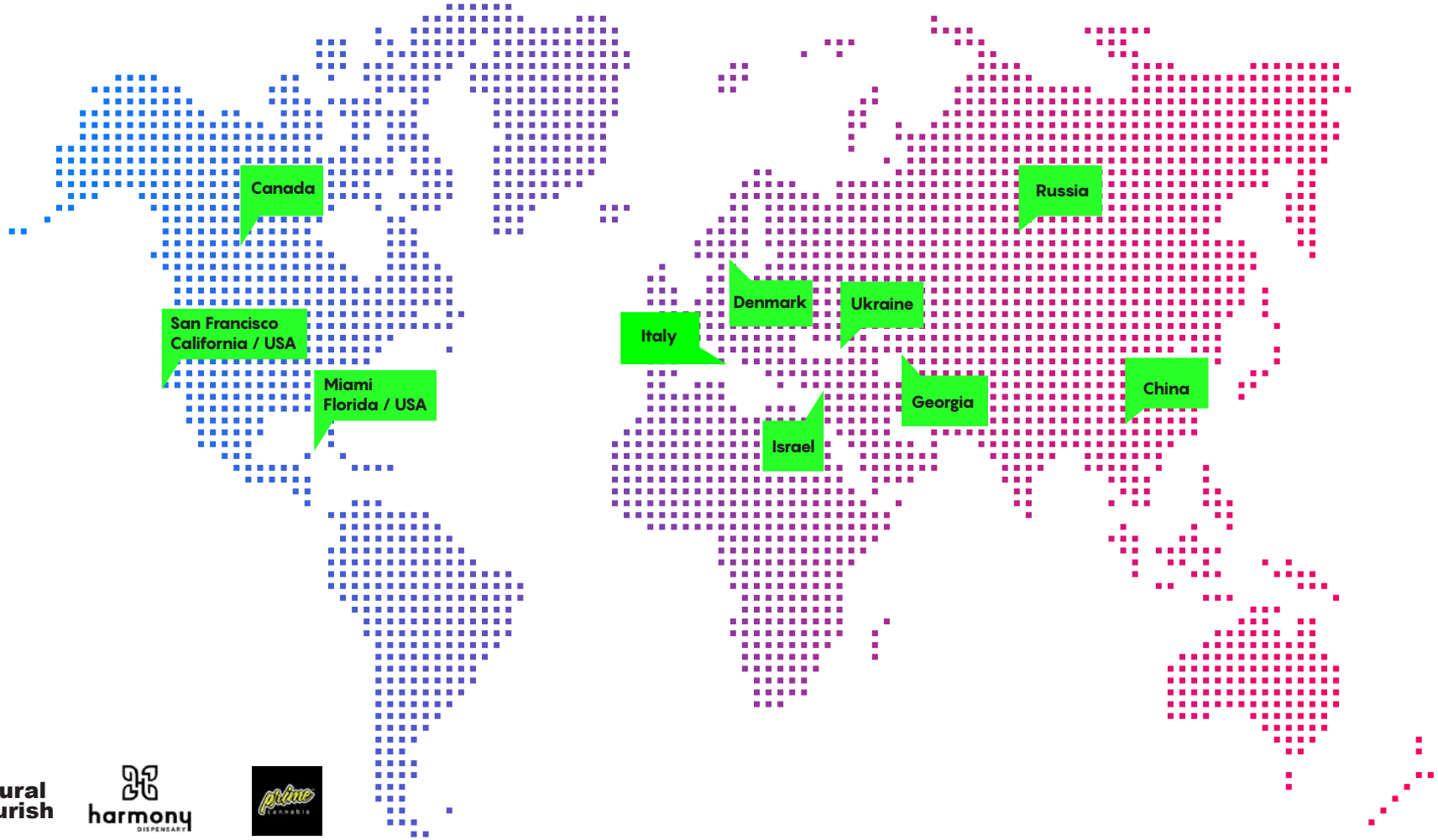
GEOGRAPHY



USA

Israel

Europe

China

MAXIMIZE YIELD, MINIMIZE COST
A NEW, REPEATABLE, STANDARD
TO THE MARKET

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