

The background of the slide is a close-up photograph of red fern fronds, creating a textured, organic pattern in shades of deep red and maroon.

# RED BUD

A process to trigger and accelerate the flower cycle of any short-day plant



# Far red light conversion of inactive phytochrome



Notice: This presentation is in itself not an offer to sell securities; it is a presentation of the Red Bud Lighting Business Plan, and as such, is subject to change. Financial projections are provided for illustrating the Red Bud Lighting Business Plan. Actual performance may be different.

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## The Situation...

Traditional growing methods utilize Mother Nature's natural process for moving "short day plants" from vegetative into their flowering and growth cycle.

"Short-Day plants have developed a biochemical mechanism regulated by the Phytochrome compound that changes form based on the number of hours of darkness or light but even more specifically based on the wavelengths of light the plant is exposed to."

- Outdoors, this natural process typically begins at sunset when the ambient solar day length reaches 12 hours and the plants require 12 hours of darkness to allow for adequate conversion of (Pfr) to (Pr).
- Indoors, conventional culture deploys either light deprivation systems or a simple turning off of the lights after 12 hours to simulate sunset and begin the conversion process. However, this does not expose the plant to the necessary Far Red wavelengths.

RBL has a new Patented Process for the Early Trigger of this Process to Improve Yields





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# The Invention Summary...

## A Biomass Yield Improvement Process

Red Bud Lighting has a patented process for “tricking” the plants into accelerating their phytochrome system which will speed the flower cycle of any short day plant.

- United States Patent No. US 11,576,247 B2
- Our invention uses widely accepted plant science to induce flowering by manipulating the conversion rate of the inactive (Pfr) to the active (Pr) by exposure of the plants to a flash of far red light.
- This flash of far red light is performed at sunset, when there are more than 12 hours of sunlight, allowing us to trigger flowering before Mother Nature.
- This additional daylight will allow the plant to develop larger biomass, with results showing increases of 10-23%.
- Our patented process can be implemented either as a license or a service:

Red Bud Lighting utilizes this Science to accelerate the Plants transition into the flowering phase



Red Bud Lighting's patented process is specific to Short Day plants:

- Cotton and Tobacco
- Rice, Onions, Soyabeans and Strawberries
- Chrysanthemums, Poinsettias and Christmas Cactus.
- **But of particular interest here are all the commonly grown forms of Cannabis.**

#### *The Red Bud Process*

- Outdoors, the application of a burst of "far red light between 730-780nm wavelengths"" at sunset beginning when the ambient solar day length reaches *14-15 hours*, allowing for the full conversion of (Pfr) to (Pr) in only 9-10 hours of darkness.
- Indoors, this same application after *14-15 hours* of lighting, then turning off the lights for 9-10 hours, is used.

A Proven Process with Demonstrable Results





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Results in a Most Difficult Growing Region

# Proven Results

In 2022, Wiseacre Farm, Inc. grew a 5000 Square Foot plot and used the Red Bud Lighting process on the entire crop. The results were the best Cannabis year this farm has ever seen, growing 810 lbs. or 367.5 KG of wet biomass in a 5000 sq ft field in NW MA. (73.5 grams per square foot)

A group of 10 control plants were subjected to either far red light (5) or no far red light exposure (5). The control plants with far red light yielded 15275 grams, while the control plants with no exposure yielded 13,680 grams.

This was a true 11.65% biomass increase !



## Confirmed Benefits from Using RBL Process

Red Bud Lighting's patented process addresses other key industry concerns:

- Harvest Staging – Control harvest timing to deploy labor and resources more effectively.
- Climate Concerns – Increase biomass yields to reduce necessary acreage, irrigation and fertilization requirements.
- Tropical varieties – Our process allows tropical cannabis sativa varieties to finish in otherwise unthinkable northern latitudes.



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## Example of Cannabis Value Proposition

Square Feet of Grow			100000
Yield per Square Foot ( grams)			40
Total yield lbs.			8830
Price per lbs.			\$1,000
Total Revenue			\$8,830,022
Yield Improvement			16%
Added Profit			\$1,412,804





# Target Market Potential

USA Cannabis	35.0M Sqft, 6.0M Lbs., \$6.0 Billion 40 grams per Sqft, \$1,000 wholesale price Mostly indoor grown	WW - \$42.0B
Canada Cannabis	93.0M Sqft, 10.0M Lbs., \$10.0Billion 20% greenhouse, 80% outdoors	
USA Cotton	7.0B Lbs., \$4.0 Billion 14M bales @500 Lbs, wholesale price \$0.58	WW - \$38.0B
USA Rice	2.8M Acres, 20.0B Lbs., \$5.8 Billion 2% of world production, wholesale price of \$0.24 AK,CA,LA,MS,MO,TX	WW - \$290.0B
USA Tobacco	13.0B Lbs, \$29.0 Billion 4.6% of world production, wholesale price \$2.24	WW - \$940.0B

# RED BUD



Gary Rawson

- President and Founder of Technologies North America, Inc.
- Expertise in Scientific, Biotechnology, Pharmaceutical, Semiconductor and Cannabis markets.
- 45 years experience in capital equipment and consumer products.



Jon Piasecki ASLA, FAAR

- Graduate of Cornell Agriculture School and Harvard Graduate School of Design.
- Professional cannabis cultivator for over 40 years.
- Multiple award winner including the High Times Cup in 2022.



William Townsend

- 25 years as a Business Unit exec in Fortune 100 companies.
- 19 years as an entrepreneur working in startups, early stage, and growth phase privately held companies.
- Successful exits and M&A experience.



David L. Jadow

- Venture capital investor focusing on cannabis and climate change startups.
- Background in law and commercial real estate.
- Series A lead and Board Member of The Climate Service culminating in sale to S&P Global.



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## SUMMARY



Red Bud Lighting  
is seeking:

1. Strategic Partnerships or
2. The Sale or License of our patent to a single industry leader.

Contact for more Information  
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