



GREEN
VALLEY
STEVIA

Revealing Nature's Secrets... for your health

stevia

A MIRACLE PLANT

FOR
AGRI STARTUPS

BY RAJPAL SINGH GANDHI
GREEN VALLEY STEVIA FARM



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Stevia : An Overview

- Importance of Stevia
- System of Stevia Crop Growth
- Development of markets for Stevia Products





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STATUS OF FARMER & FARMING

- Farming a Inherited occupation
- Traditional farming
- Active for M.S.P. & Marketing supported crops only
- No risk taking capacity
- Continuously under debt
- Lack of proper Govt. policies
- **RESULTING FARMING IS NOT LUCRATIVE**



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STEVIA FARMING- One Solution

- History
- Health Benefits
- Benefits to farmers
- Environmental benefits
- Foreign Exchange
- Demand & Supply Scenario
 - Market commentators estimate , Stevia likely to gain 20-25% of the global sweetener market , which is estimated at ~\$ 80 bn.
- Approvals (By Japan (1970) , USA (2008)
EUROPE (2011) , INDIA (Nov' 2015) , AUSTRALIA ,
NEW ZEALAND, SWITZERLAND,ETC



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A WEALTHY FARMER AND A HEALTHY CONSUMER IS WHAT A NATION NEEDS

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A LITTLE LEAF WITH A BIG ADVANTAGES



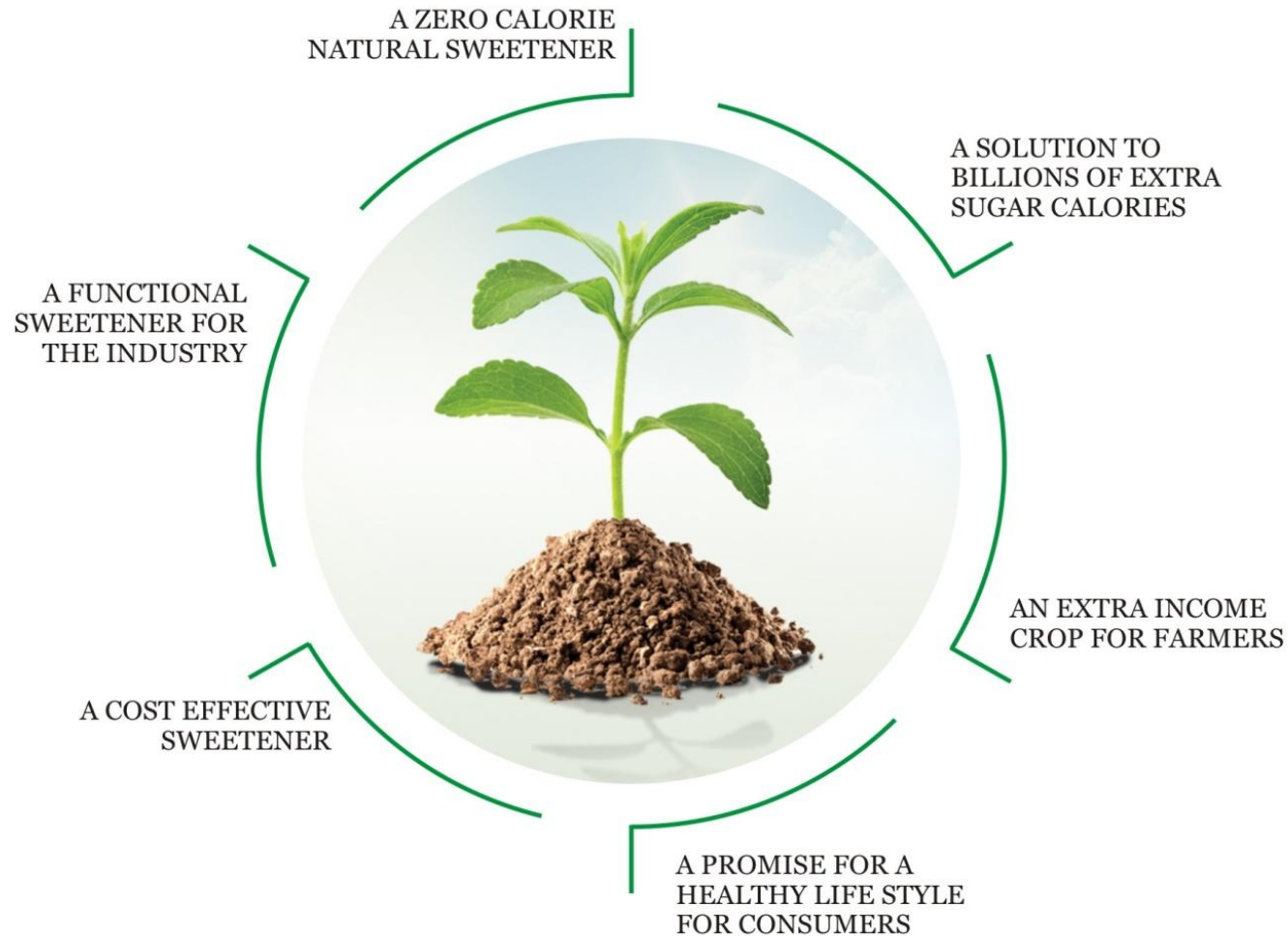
- ✔ **STEVIA IS NOT JUST A NATURAL SWEETENER, ITS POWER PACKED SWEET REVOLUTION.**
- ✔ **A CROP WITH NOT JUST A PROMISE BUT A COMMITMENT TO DELIVER .**



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WHAT IS stevia?





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WHY IT IS NOT IN USE TILL NOW BEING SO GOOD ?

REGULATORY APPROVALS WERE A MAJOR CHALLENGE
FINALLY APPROVED IN MAJORITY OF COUNTRY :



USA
2008

EUROPE
2011

INDIA
NOV'15

APPROVAL BODIES

- ✓ FOOD SAFETY STANDARD AUTHORITY OF INDIA (FSSAI)
- ✓ U.S. FOOD AND DRUG ADMINISTRATION (USFDA)
- ✓ JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES (JECFA)
- ✓ HEALTH CANADA
- ✓ CODEX ALIMENTARIUS COMMISSION (CAC)
- ✓ EUROPEAN FOOD SAFETY AUTHORITY (EFSA)
- ✓ EUROPEAN COMMISSION
- ✓ FOOD STANDARDS AUSTRALIA NEW ZEALAND (FSANZ)



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WHY IT IS NOT IN USE TILL NOW BEING SO GOOD ?

- 🍃 NEW PRODUCTS FORMULATIONS
- 🍃 CONSUMER ACCEPTANCE
- 🍃 QUALITY AND QUANTITY AVAILABILITY
- 🍃 CONSISTENCY
- 🍃 BEING COMMERCIALIZED FOR FIRST TIME GLOBALLY



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OVERVIEW

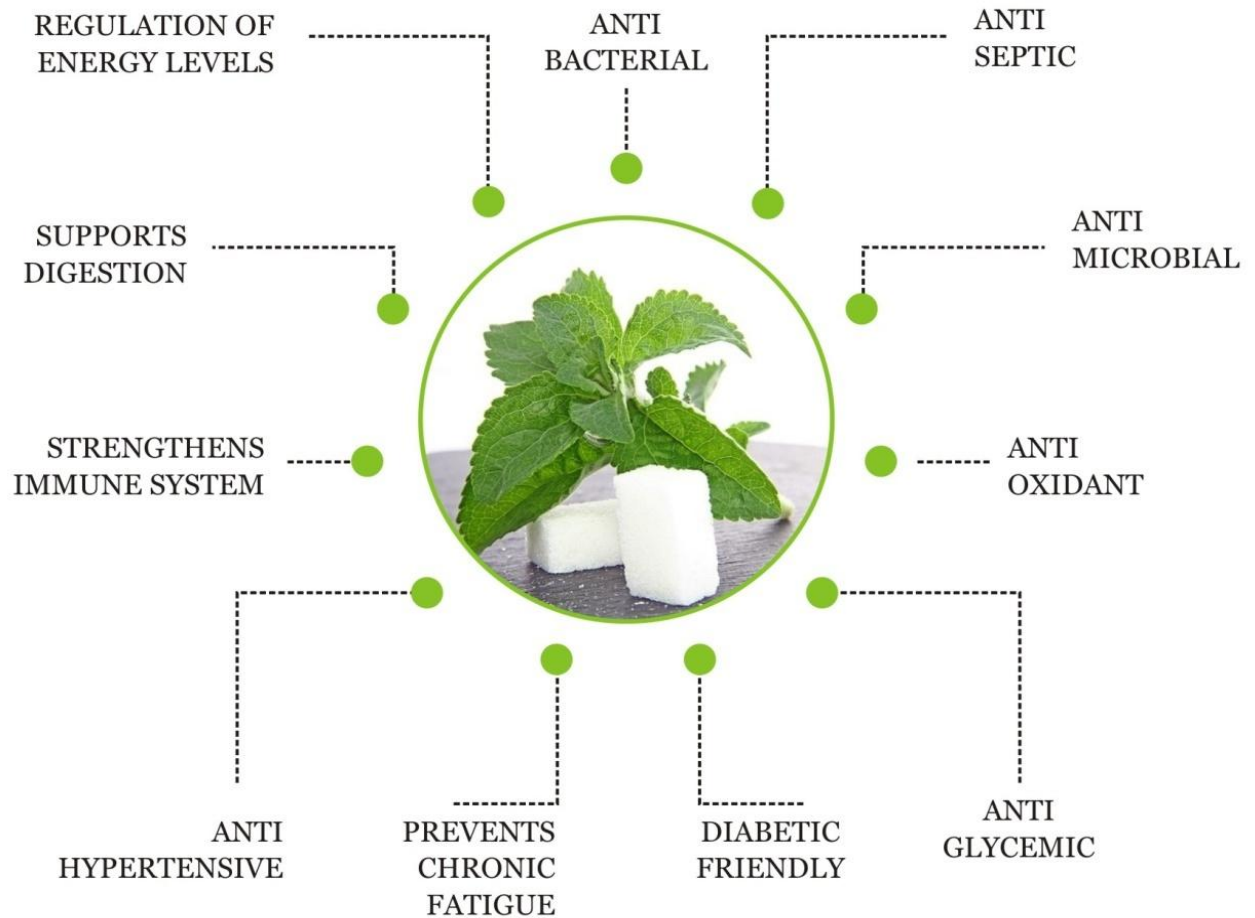
- ✔ History of more than 1500 years for its use
Approved for use by USFDA (USA), JECFA (EUROPE),
FSSAI (INDIA) & many other countries across the globe.
- ✔ Market commentators estimate, Stevia likely to gain 20-25% of the global sweetener market , which is estimated at ~\$ 80 bn.
- ✔ Used in Japan since 1970.
- ✔ Just in US, more than 400 Stevia Sweetened products launched with in first seven months of its approval in 2010



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HEALTH BEFITS OF STEVIA





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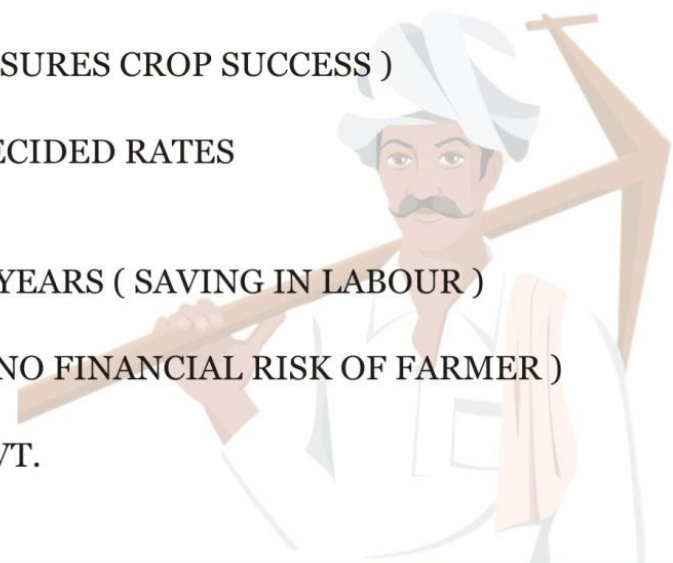
BRIEF DETAILS ABOUT STEVIA AS A CROP :

- ✔ **COMMERCIALLY GROWN FOR MORE THAN 40 YEARS**
- ✔ **SUITABLE CLIMATE FOR IDEAL GROWTH IS 20 TO 35 DEGREE CELSIUS**
- ✔ **IT CAN SURVIVE IN TEMPERATURES FROM 0 TO 48 DEGREE CELSIUS.**
- ✔ **IT IS A PERENNIAL CROP AND CAN GIVE 15-20 HARVESTS IN THREE TO FIVE YEARS**
- ✔ **IT IS LOW WATER , FERTILIZER , PESTICIDES AND INSECTICIDES REQUIREMENT CROP CAN BE EASILY GROWN ORGANICALLY.**
- ✔ **GLOBAL DEMAND FOR LEAVES**



BENEFITS TO FARMERS

- ✔ CONTRACT FARMING MODEL – BUY BACK ASSURANCE TO FARMERS
- ✔ NET INCOME IS FROM 1.2 LAKHS TO 1.6 LAKHS PER ACRE PER ANNUM (HIGHLY REMUNERATIVE)
- ✔ HARVEST AFTER EVERY 2~3 MONTHS (CASH CROP BENEFITS)
- ✔ TECHNICAL GUIDANCE TO FARMERS (ASSURES CROP SUCCESS)
- ✔ CROP PURCHASE AGREEMENT AT PRE DECIDED RATES (NO FARMER EXPLOITATION)
- ✔ CROP LIFTING FROM FARM FOR INITIAL YEARS (SAVING IN LABOUR)
- ✔ INSTANT PAYMENTS ON CROP LIFTING (NO FINANCIAL RISK OF FARMER)
- ✔ PROVISION OF SUBSIDY BY CENTRAL GOVT. (ADDITIONAL SUPPORT TO FARMER)





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HEALTH BENEFITS TO CONSUMER

- ✔ ZERO CALORIE
 - ✔ NATURAL ORIGIN
 - ✔ THERAPEUTIC VALUES
 - ✔ NO SIDE EFFECTS
 - ✔ NO ACCUMULATION IN BODY
 - ✔ NON- CARCINOGENIC
 - ✔ HELPS IN WEIGHT MANAGEMENT
 - ✔ HELPS IN REGULATION OF BLOOD SUGAR LEVEL
 - ✔ SAFE FOR CHILDREN
-



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ENVIRONMENT BENEFIT

- ✔ **SUITABLE FOR KANDI AREA**
- ✔ **LOW REQUIREMENT OF WATER – WATER SAVING CROP !**
(1 KG OF RICE REQUIRES 4000 LITERS OF WATER)
- ✔ **LOW REQUIREMENT OF CHEMICAL FERTILIZERS**
- ✔ **LOW REQUIREMENT OF PESTICIDES & INSECTICIDES – SAFE PRODUCTS**
- ✔ **LOW NUTRIENT REQUIREMENT – BETTER SOIL HEALTH**



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STEVIA CHARACTERISTICS

- ✔ NATURAL & GREEN : EXTRACTED FROM STEVIA LEAVES
- ✔ SAFE : APPROVED GLOBALLY (USFDA , JECFA , FSSAI)
- ✔ HIGH INTENSITY : 300 TIMES SWEETER THAN SUGAR
- ✔ VIRTUALLY CALORIE FREE
- ✔ HEALTHY
- ✔ STABLE : HEAT STABLE (UPTO 200 DEGREE CELSIUS),
ACID, ALKALI AND LIGHT STABILITY
- ✔ NON FERMENTABLE



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CHALLENGES WITH STEVIA FARMING

- ✔ WEEDS IN THE SOIL
- ✔ MECHANIZATION
- ✔ CERTIFIED VARIETIES
- ✔ TECHNICAL KNOW HOW
- ✔ LABOUR SHORTAGE

IT IS IMPORTANT TO KNOW THE CHALLENGES SO AS TO TAKE NECESSARY ACTIONS BEFORE HAND .



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ROLE OF GOVERNMENT IN STANDARDIZATION

- ✔ ACCREDITED NURSERIES FOR PLANTING MATERIAL
- ✔ PACKAGE & PRACTICES BY AGRICULTURAL UNIVERSITIES
- ✔ SUBSIDIES TO BE MADE AVAILABLE TO FARMERS WHICH ALREADY EXIST IN PLAN .
- ✔ CENTRE OF EXCELLENCE FOR STEVIA

Products launched Worldwide with Stevia



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GREEN VALLEY STEVIA : A BRIEF INTRODUCTION

- We are committed to bringing the benefits of highest quality Stevia natural sweetener to consumers in India and across the world, through our integrated supply-chain for production of high quality Stevia extract.*



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- Fully owned and managed integrated value-chain for Stevia extract (TSG 95%) production from planting material through contract farming to extraction and quality control
- Operations spread over a company owned 150 acre campus
- Nationally recognized as pioneer in Stevia cultivation
- Company developed and owned agronomy infrastructure to produce up to 30 million high Reb-A variety plants
- Company developed and owned Stevia extraction unit recognized and approved by Dept. of Biotechnology (Govt)
- In-house quality control with HPLC testing facility



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GREEN VALLEY STEVIA : A BRIEF INTRODUCTION

- 10+ years Stevia cultivation experience over 500 acres across North India
- 5+ years experience in selection and propagation of high-yield plant varieties with TSG > 15% and Reb-A > 70 % - content verified by multiple labs across India and Europe
- In-house Stevia nursery equipped with poly-house and net-house facilities spread across 20'000 sq. mts.
- In-house tissue culture lab spread over 1'100 sq. mts.
- Overall production capacity for up to 30 million Stevia plants per year or equivalent to 600 acres worth of planting material (as per North Indian agro-climatic conditions)
- Strong liaison with farmers and govt. institutions for contract farming
- Contract farming project appraised by national banks (NABARD, PNB) for farmer-level financing of Stevia cultivation
- MoU in place for Stevia contract farming on 300 acres expanding to 2500 acres by 2018

R&D driven Agronomy

- Focus on breeding high Reb-A varieties
- Production of high quality disease and virus free planting material



A Stevia nursery in net house at company site

R&D driven Agronomy : Plant Tissue Culture Lab



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Stevia Contract Farming



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- Standardization of cultivation practices
- Constant improvement in yield



Plantation in Mulch





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Stevia Contract Farming





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GVS – Stevia Extraction

Company developed and owned Stevia extraction facility established in 2014

India's 1st commercial extraction unit recognized and approved by the Govt. of India's Dept. of Biotechnology under Ministry of Science & Technology

In-house R&D and HPLC testing facility for analysis and quality control – recognized by DSIR (Govt. of India's Dept. of Scientific & Industrial Research)



GVS – Stevia Extraction



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Extraction Unit



Administrative Block, Tissue Culture Lab, HPLC and QC



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National Award for Stevia farming in India



By Hon'ble Dy. Chairman, Rajya Sabha, Sh. P.J. Kurien and Dr. M.S. Swaminathan , Father of India's Green Revolution (Chairman of Selection committee).

27 September 2014, New Delhi

State Award for promotion of Stevia cultivation in Punjab - 2014



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By Hon'ble Chief Minister, Punjab, S. Prakash Singh Badal, on the occasion of Independence Day, 15 August 2014, Patiala, Punjab



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2nd State Award for promotion of Stevia cultivation in Punjab - 2015



By Hon'ble Chief Minister, Punjab, S. Prakash Singh Badal, on the occasion of Independence Day, 15 August 2015, Mohali , Punjab



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“Nothing in this world is as powerful as an
Idea whose time has come“

- Victor Hugo

*Thank
you!*

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