GOVIND – THE GREEN FODDER MAKER

YU Technologies Pvt. Ltd.

Registered Office:

315, A1, 22, Manishanagar, Off Sahyadrinagar,
Sangli – 416 416, Maharashtra, India.

HO & Works:

B 8/5, MIDC, Miraj, 416 410, Distt: Sangli,
Maharashtra, India.

T: + 91 233 6451803 – 6; F: +91 233 2644042

E: info@yutech.in

W: www.yutech.in

Servicing the Industry since 1978

GOVIND – THE FRESH GREEN FODDER MAKER

Save Fuel, Reduce Carbon Footprint, Make the World Greener

And Yet, Make MONEY!

Agenda: Need for Change in Farming Techniques to Strike a Balance in the Changing Environment!

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Challenges:

- Global Warming, Less Rainfall and Seasonal Changes
- Growing Population

Impact:

- Scarcity of Land and Water and a Tussle for their Alternate Uses
- Resultant Adverse Impact on Cattle

Solution:

- Govind – The Green Fodder Maker

Technical Advantage:

Economic Benefits:

Environmental Challenge: Global Warming and Inconsistent Seasons

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Global Warming and Green House Effects are changing our Season Patterns

Himalayas in 1970s and Now. Depleting Glaciers are a matter of Concern.

Environmental Challenge:

Longer Dry Seasons and Lesser Rains

Less and Irregular Rainfall dries out the Farm Lands leading to Drought like Conditions.

➡

Very Less or No Fodder available to feed Cattle.

Less Rains and Long Dry Seasons are Drying Out Natural Water Sources like Rivers and Ground Water

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Drying Riverbeds

Depleting Ground Water Levels are Drying out Wells

There is a need for Forestation and Wildlife Protection to maintain Ecological Balance

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Cattle cannot graze in the Forest Land as Wild Life Needs Protection

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Challenge - Growing Population:

Land is Utilized for:

- Agricultural Development
- Industrial Development
- Infrastructure Development
- Urbanization

Agricultural Land is used for Growing Food and Cash Crops which are basic need of Humanity

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Development is claiming more Land for Roads, Urbanization and Industrialization

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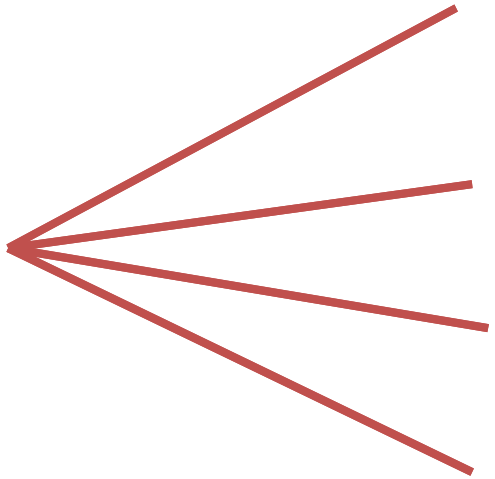
Our Needs



- Grow Agriculture make India Self Sustained
- Increase Industrial Growth
- Keep up with Development
- Conserve Forests & Wildlife

However Healthy Cattle and Livestock are Integral to Fulfillment of our Needs!

What is Deprivation of Grassland and Water Shortage doing to Cattle?

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Leading to Untimely Deaths, High Mortality among Cattle in general and especially Cows

Scarcity of Water and Fodder leads to Malnutrition and Unhealthy Cattle Severely impacting Milk Production and Procreation

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So Can we now keep up with our Nation Building and Development Agenda and still Protect, Sustain and Develop our Cattle Population?

Govind – The Green Fodder Maker!
Hydroponic Fodder Growing System

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Yes Govind Can!

Govind – The Green Fodder Maker!
Hydroponic Fodder Growing System

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Fodder Grown in Govind
7 Day Fodder Growth Cycle

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Day – 1 (1 Kg)

Day - 2

Day - 3

Day - 4

Day - 5

Day – 6 (4-5Kg)

Day – 7

Grows Corn, Barley, Wheat or any other Grain

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Govind - Hydroponic Fodder Growing System
Technical Specifications

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Tray Area: 3.85 Sq ft
Tray Size: 480 mm x 750 mm
Material PP: Copolymer / Injection Molded

System Production Capacity in Kg / Day	Water Pump HP	Water Consumption /Day	Approx. Electricity Units/Day	Power Connection
50	0.25 HP DC	150 lit.	5 Units	Solar Powered
100	0.25 HP	250 lit.	5-7 units	230 VAC 1 Phase
250	0.5 HP	750 lit.	12-15 units	230 VAC 1 Phase
500	1.0 HP	1500 lit.	30-40 units	230 VAC 3 Phase

Govind - Hydroponic Fodder Growing System
Technical Specifications

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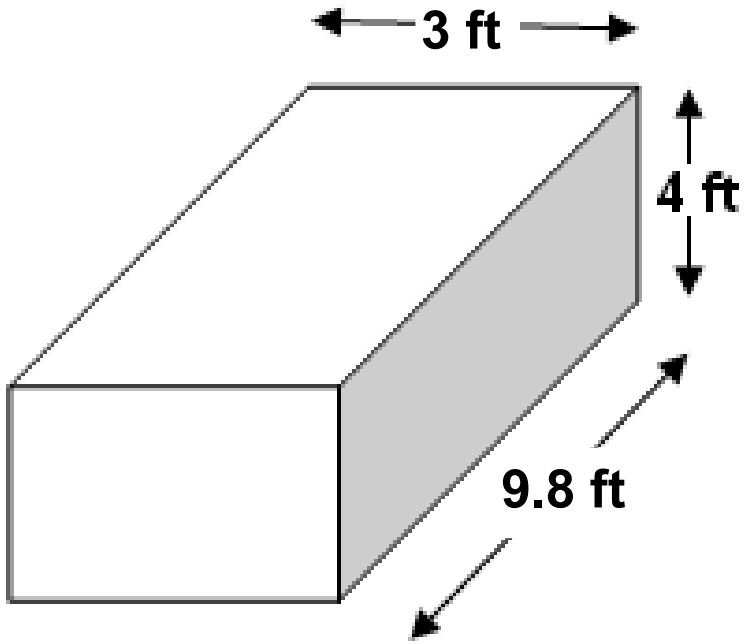
50 Kg System:



Approximate Production Capacity: 50 Kg / Day

- **Number of Tray Full of Fodder Produced: 4 per Day**
- **Total 6 days cycle inside machine hence Total 26 trays in use at a time**
- **17.6 Sq Ft / Day Area production**

Govind - Hydroponic Fodder Growing System
Technical Specifications

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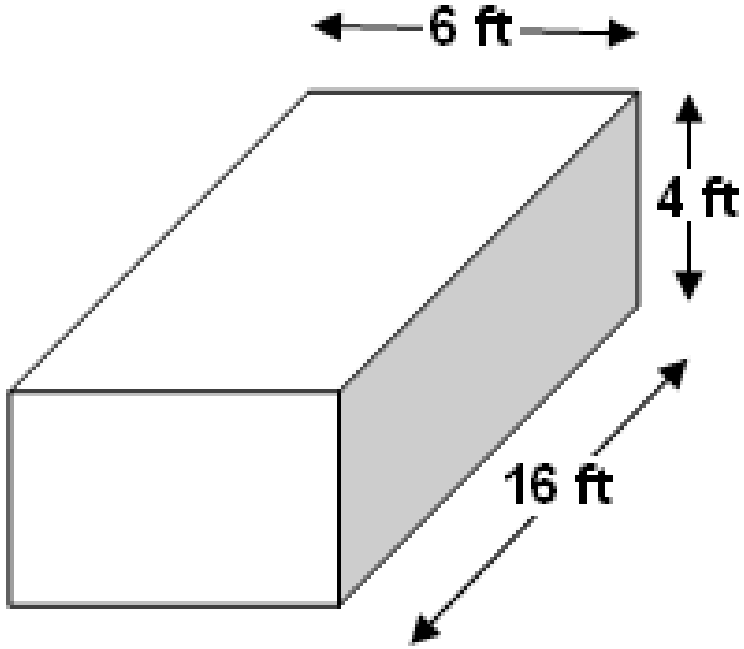
100 Kg System:



Approximate Production Capacity: 100 Kg / Day

- **Number of Tray Full of Fodder Produced: 9 per Day**
- **Total 6 days cycle inside machine hence Total 54 trays in use at a time**
- **34.65 Sq Ft / Day Area production**

Govind - Hydroponic Fodder Growing System
Technical Specifications

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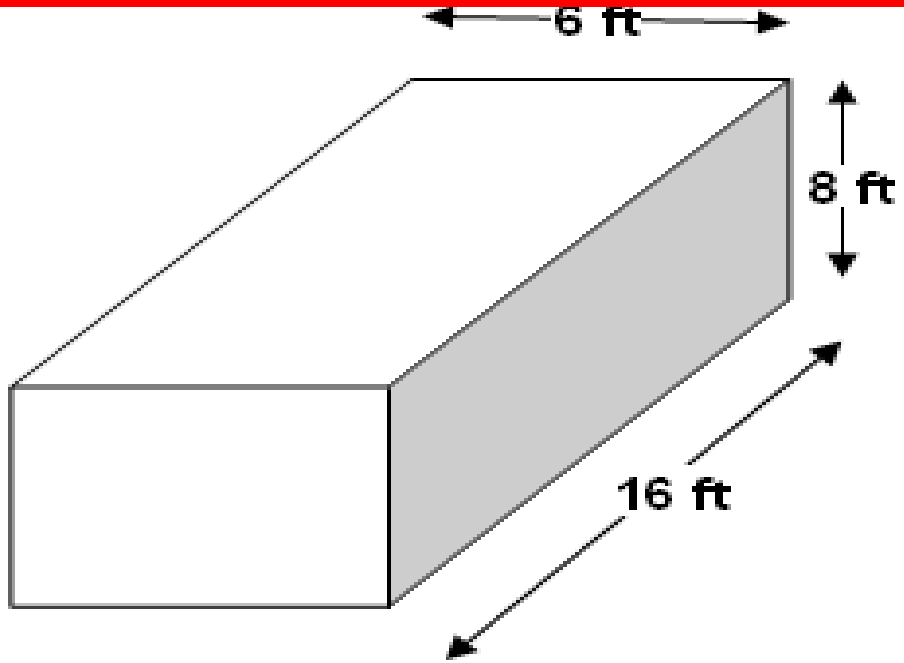
250 Kg System:



Approximate Production Capacity: 250 Kg / Day

- **Number of Tray Full of Fodder Produced: 21 per Day**
- **Total 6 days cycle inside machine hence Total 126 trays in use at a time**
- **80.85 Sq Ft / Day Area production**

Govind - Hydroponic Fodder Growing System
Technical Specifications

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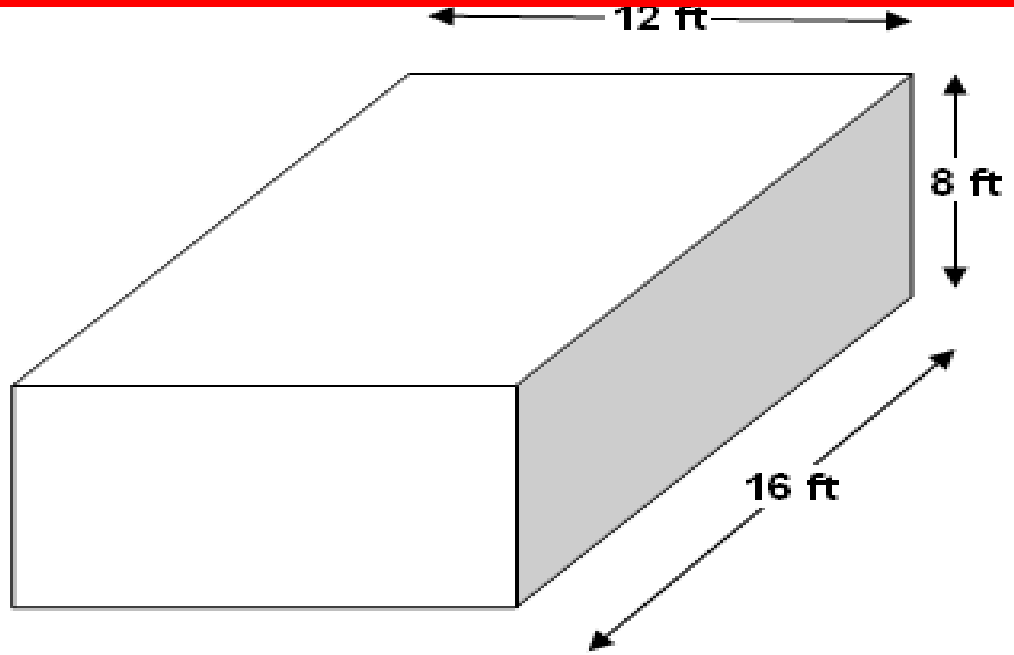
500 Kg System:



Approximate Production Capacity: 500 Kg / Day

- **Number of Tray-full of Fodder Produced: 42 per Day**
- **Total 6 days cycle inside machine hence Total 252 trays in use at a time**
- **161.7 Sq Ft / Day, Area production**

Govind - Hydroponic Fodder Growing System
Technical Specifications

- All dimensions are subject to change as per design modifications
- We make as per customers requirements
- All fabricated structure SS-304 material
- Side walls insulated U-PVC , 25 mm thick
- Aluminum sliding doors

Fodder Grown on Land

- **Fodder Grass Grown on Land takes 60 days Cycle**
- **10,000 Sq. Ft Land produces about 72,000 Kg Grass in a Year**
- **About 36,50,000 Litres Water is Consumed Annually**
- **Requires Tillage, Land Overturn, Plough and other labour oriented activities**
- **Harvesting and Transportation from Farm to Cow Shed is expensive**

Fodder Grown in Govind

- Fodder Grass Grown in Govind has a 7 Day Cycle
- 200 Sq. Ft Area produces about 1,82,500 Kg Grass in a Year due to short cycle and Multi-Tier Growing
- About 36,500 Litres Water is Consumed Annually
- No Tillage, Land Overturn, Plough and other labour oriented activities
- No Harvesting and Transportation as Govind can be set up in Cow Shed itself

Fodder Grass Grown in Govind
Comparative Advantage

	Grass on Land	Grass in Govind
Land Area in (Sq Ft)	10,000	200
Water Consumption (Litre per Day)	10,000	1,500
Water Consumption (Litre per Year)	36,50,000	5,47,500
Green Grass Produced (Kg per Year)	72,000	1,82,500

Key Features: Fodder Grown in Govind

- **All year Cultivation**
- **Multiple Times Greater Yield than Land Crop**
- **Just 5 – 10% of Water Consumption as compared to Land Crop**
- **Minimum Wastage of Water and Fertilizers**
- **Minimum Power and Space Requirement**
- **Large Savings on Capital Costs, Transportation, Manual Work**
- **Land saved can be used for other Crop or Fruit Trees or Forestation**
- **Easily Scalable from a Small Plant to much Higher Capacities**

Advantages of Green Fodder Grown in Govind

- All year all Season all Weather Ensured Supply of Clean and Fresh Green Fodder
- High Nutritional Values
- No Wastage as Cattle / Goats can eat the whole plant with roots
- Provides High Quality Proteins, Vitamins, Fiber and Enzymes

Advantages of Green Fodder Grown in Govind

- Contains anti-Oxidants, anti-ulcer and anti-inflammatory properties

- Contains Folic Acid, Omega-3 Fatty Acids, and Chlorophyls hence reduced Cattle Feed and Supplements

Advantages of Green Fodder Grown in Govind

- **No Soil Born Disease**
- **No Fungus or Weeds hence healthy cattle**
- **Forage increases the fertility rate and reduces the fetal mortality/abortion**
- **Increases lactation/milk yield by up to 10-15 %**

Govind - Hydroponic Fodder Growing System Economics

500 Kg Per Day System	Kg	500	250	100
Greenhouse Area	Sq. Ft.	250	100	100
Capital Cost				
Greenhouse with polyfilm as a cover and shade net.	Rupees	100,000	75,000	50,000
Growing system-cabinet with trays, water nutrient tank, pump and controller etc .	Rupees	1,500,000	750,000	300,000
Excise Duty 12.36% (Presently Exempted on Agricultural Equipment)	Rupees	0	0	0
Maharashtra VAT @ 12.5%	Rupees	187,500	93,750	37,500
Total Capital Cost	**Rupees**	**1,787,500**	**918,750**	**387,500**
Operating Annual Cost (with 5% cost increase every year)				
Description	**Units**	**Year 1**	**Year 1**	**Year 1**
120 Kg / Day Seed at Cost of Rs. 12.00 / Kg	Rupees	525,600	262,800	96,360
Water and nutrients Charges	Rupees	50,000	25,000	10,000
Manpower	Rupees	50,000	40,000	25,000
Power Consumption 40 Units per day at Rs. 12 per Unit for 365 Days	Rupees	175,200	65,700	30,660
Other Maintenance	Rupees	20,000	20,000	15,000
Total Operating Cost	**Rupees**	**820,800**	**413,500**	**177,020**

Technical Advantage:

- 100% Designed and Manufactured in India
- Very Strong Engineering Team
- In-house System Engineering
- In-house Design and Development of Systems and Controls
- In-house Design and Development of Industrial Electronic and Instrumentation Equipments
- In-house Manufacturing of Industrial Electronic and Instrumentation Equipments
- In-house Software Development
- In-house Injection Plastic Molding

Concluding Remarks

New Ideas and Technologies are essential to sustain Agriculture and Cattle Growth

- **Increased Efficiency**
- **Energy savings in electricity, fuel and other natural resources**
- **Bring in the cost reductions without compromising the quality**
- **Increase Productivity**

THANK YOU!

For your time and Presence

SAVE FUEL

REDUCE CARBON FOOTPRINT

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AND YET, MAKE MONEY

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