



THENI MELAPETTAI HINDU NADARGAL URAVINMURAI

# NADAR SARASWATHI COLLEGE OF ENGINEERING & TECHNOLOGY



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Vadapudupatti, Annanji (po), Theni - 625 531,  
Tamilnadu, India.

### 3.1.1 Grants received from Government and non-governmental agencies for research projects/endowments in the institution during the last five years

Academic Year	: 2022-2023
Name of the Project Application	: ONION PEELER MACHINE
Name of the Principal Investigator	: <b>Mr.R.Santhaseelan</b> Assistant Professor, Department of Mechanical Engineering, Nadar Saraswathi College of Engineering and Technology, Vadapudupatti, Theni.
Name of the Co-Principal Investigator	: <b>Mr.A.Vennimalai Rajan</b> Assistant Professor, Department of Mechanical Engineering, Nadar Saraswathi College of Engineering and Technology, Vadapudupatti, Theni.
Name of the Funding Agency	: ROGITH ENTERPRISE, Theni
Amount Sanctioned	: <b>Rs. 2,00,000 /-</b>
Duration of the project	: Five Months



# NADAR SARASWATHI COLLEGE OF ENGINEERING & TECHNOLOGY



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Vadapudupatti, Annanji (po), Theni - 625 531,  
Tamilnadu, India.

Date: 08/06/2022

To

**ROGITH ENTERPRISE,**  
15/1B, Sales Society Street,  
Theni – 625 531.

Dear Sir,

Sub: *Research project work – Joint Venture* – reg.

The Nadar Saraswathi College of Engineering and Technology (NSCET), known for its updated infrastructure and facilities, was established in 2010. It is situated in Vadaputhupatti, Annanji, in Theni. Nadar Saraswathi College of Engineering and Technology (NSCET) focuses on providing high-quality learning and teaching atmosphere coated with layers of discipline and structured behavior. We offer courses in Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering, Mechanical Engineering, and PG Manufacturing and Structural Engineering. Our college is also involved in Fostering research and Consulting work in Engineering Competence. Our Mechanical Engineering faculty members also have expertise in their core area of Mechanical Engineering. Therefore, I am expressing our interest in establishing research work and joint venture collaboration with Rogith Enterprise Pvt. Ltd.

We look forward to working with a new research venture from **ROGITH Enterprise Pvt. Ltd.**

Thanking you,

Yours sincerely,

*Handwritten signature of Dr. C. Mathalai Sundaram*

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**

**Nadar Saraswathi College of  
Engineering and Technology**  
Vadapudupatti, Theni-625 531.



**C. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of  
Engineering and Technology**  
Vadapudupatti, Theni-625 531.





# ROGITH ENTERPRISE

PADDY, RICE, PULSES & GROCERY WHOLESALE MERCHANTS

15/1B, Sales Society Street, THENI-625 531.

To

Date 15/06/2022

The Principal,

Nadar Saraswathi College of Engineering and Technology,  
Annanji (P.O), Vadapudupatti, Theni-625531.

Dear Sir,

Subject: **Research Project Fund**– reg.

Ref : Letter dated on 08/06/2022.

I have your letter of request for the research project. We at **ROGITH ENTERPRISE** are experienced in producing paddy, Rice, and grocery wholesale Merchants for mechanical engineering applications. In this regard, we require your college's assistance with research on the Onion Peeler Machine. In light of this, we are delighted to comply with your request and extend an invitation to submit a research proposal. We anticipate that the research effort will successfully advance the production of mechanical components. Therefore, we ask that you submit a thorough project proposal with a budget.

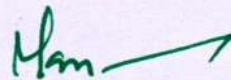
Thank you

Your Faithfully,

For **ROGITH ENTERPRISE**

Proprietor



  
Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,  
Principal  
Nadar Saraswathi College of  
Engineering and Technology  
Vadapudupatti, Theni-625 531.





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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Vadapudupatti, Annanji (po), Theni - 625 531,  
Tamilnadu, India.

Date: 23/06/2022

To

**ROGITH ENTERPRISE,**  
15/1B, Sales Society Street,  
Theni - 625 531.

Dear Sir,

**Subject: Research project work - Acknowledging your letter dated 15/06/2022** - Submission  
of the Project Proposal titled "Onion Peeler Machine" - Reg.

**Ref: Your Reference letter Dated 15/06/22.**

I am writing to extend my heartfelt gratitude on behalf of the faculty and students of Nadar Saraswathi College of Engineering and Technology for granting us the opportunity to submit our project proposal to Rogith Enterprise. We are truly honoured and grateful for the chance to be considered for collaboration on this project. We understand the importance of your company to the industry and recognize the value of working with a reputed organization like Rogith Enterprise. Your support in allowing us to present our ideas and solutions is encouraging and motivating for our academic community. Hence, I am submitting a research proposal titled "Onion Peeler Machine" for your kind perusal and further action. And for all the necessary budget and the allocation of team members for the proposed project, kindly receive the same and do what is needed.

Yours Sincerely,

*Mam* 23/06/22

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of**  
**Engineering and Technology**  
Vadapudupatti, Theni-625 531.

*Mam*

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
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Tamilnadu, India.

Date: 23/06/2022

To

**ROGITH ENTERPRISE,**  
15/1B, Sales Society Street,  
Theni – 625 531.

Dear Sir,

*Sub: Project proposal submission with budget and team-reg.*

With reference to the above, I am submitting a project proposal attached with the budget and assigning the team for the forthcoming research project. Kindly receive it and do the needful.

Yours Sincerely,

*Ham* 23/06/22

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of**  
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*Ham*

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## Project Overview

### Background

Onion, a popular tropical vegetable, requires manual labor for peel Onions, leading to increased production costs. This project aims to develop a cost-effective Onion Peeler Machine within a budget of Rs. 2,00,000/-The Machine will enhance efficiency, reduce labor, and lower production costs.

### Objectives

1. **Efficiency Enhancement:** The Onion Peeler Machine will streamline the peeling process, increasing the speed and efficiency of our production line.
2. **Labor Optimization:** By automating the peeling process, we anticipate a reduction in manual labor requirements, allowing our skilled workforce to focus on more intricate tasks.
3. **Quality Improvement:** The advanced technology of the Onion Peeler Machine ensures uniform and precise peeling, contributing to a higher-quality end product with minimized waste.
4. **Cost Efficiency:** Over time, the project is expected to yield cost savings through reduced labour costs, enhanced efficiency, and increased product yield.

### Project Scope

#### Inclusions

1. Research and development of the Onion Peeler Machine within the budget constraints.
2. Prototyping and testing of the machine for efficiency and safety.
3. Designing a simple user interface for machine operation.
4. Documentation and training materials for machine users.



  
Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,  
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Tamilnadu, India.

## Exclusions

1. Onion harvesting or procurement.
2. Installation of the machine at user locations (if applicable).
3. Post-production marketing and sales activities.

## Methodology

1. Feasibility Study: (1 month) [December 1, 2022 – December 31, 2022]
2. Machine Acquisition: (2 months) [January 1, 2023 - February 28, 2023]
3. Installation and Integration (1 month) [March 1, 2023- March 31, 2023]
4. Testing and Optimization: (1 month) [April 1 2023, April 30, 2023]

## Deliverables

1. Onion Peeler Machine Prototype.
2. Simple user interface for machine operation.
3. Documentation for machine users.
4. Test results and performance analysis reports.

## Timeline

1. Feasibility Study: [December 1, 2022 – December 31, 2022]
2. Machine Acquisition: [January 1, 2023 - February 28, 2023]
3. Installation and Integration [March 1, 2023- March 31, 2023]
4. Testing and Optimization: [April 1 2023, April 30, 2023]

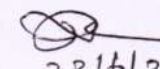
## Budget Allocation

1. Research and Analysis: Rs. 50,000/-
2. Design and Prototyping: Rs. 80,000/-
3. User Interface Development: Rs. 30,000/-
4. Documentation: Rs. 40,000/-

**Total Budget:** Rs. 2,00,000/-



  
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23/6/22  
(R. SANTHASEELAN)





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Vadapudupatti, Annanji (po), Theni - 625 531,  
Tamilnadu, India.

Date: 23/06/2022

The Following faculty members are assigned to conduct research for the proposed "Onion Peeler Machine" project.

## List of Faculty Members

S. No	Name of the PI & Co-PI	Designation and Specialization	Contact Information
1.	Mr.R.Santhaseelan	Assistant Professor/ Mechanical Engineering	9003398111 santhaseelanme@gmail.com
2.	Mr.A.Vennimalai Rajan	Assistant Professor/ Mechanical Engineering	8778284005 avmrajan5@gmail.com

*Ham* 23/06/22  
PRINCIPAL

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of**  
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**Vadapudupatti, Theni-625 531.**



*Ham*  
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# ROGITH ENTERPRISE

PADDY, RICE, PULSES & GROCERY WHOLESALE MERCHANTS

15/1B, Sales Society Street, **THENI-625 531.**

Date 01/07/2022

To

The Principal,

Nadar Saraswathi College of Engineering and Technology,  
Annanji(P.O), Vadapudupatti, Theni-625531.

Dear Sir,

Subject: **Project Approval and Cash Issued (Cheque number – 876259)**

I am pleased to inform you that your project proposal titled "**Onion Peeler Machine**" has been thoroughly reviewed and approved by our team. We recognize your project's potential impact and significance and are enthusiastic about supporting its successful execution. The **amount of Rs 2,00,000/-** was sanctioned for your proposal, and we request you to complete this project by 02/01/2023.

We believe that the successful execution of this project will contribute to advancing technology and provide valuable insights for the benefit of the industry and society.

Thank you

Yours Faithfully,

For **ROGITH ENTERPRISE**

Proprietor



**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
Principal  
Nadar Saraswathi College of  
Engineering and Technology  
Vadapudupatti, Theni-625 531.

TMB

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THENI Branch  
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₹ 2,00,000/-

A/c. No. 007150310875418

Cheque No. 01876259

For ROGITH ENTERPRISE

*M. Arif*  
Authorised Signatory

Payable at all our branches

Please sign above

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*Mam*  
Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,  
**Principal**  
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Tamilnadu, India.

## PROJECT COMPLETION REPORT

1. Project Title : Onion Peeler Machine.
2. Name of the Investigator : Mr.R.Santhaseelan
  - a. E-mail : santhaseelanme@gmail.com
  - b. Contact Address : Nadar Saraswathi College of Engineering and Technology, Annanji(P.O), Vadapudupatti, Theni-625531.
  - c. Mobile No. : 9600316378
3. Name of the Institution of which the Investigator is attached: Nadar Saraswathi College of Engineering and Technology
4. Name of the Director / Principal of the Institution: **Mr.R.Santhaseelan**
5. Date of Release of R & D Grant: **01/07/2022**
6. Date of Commencement of the Project: **01/07/2022**
7. Amount of R & D Grant: **Rs. 2,00,000**
8. Date of Receipt of R & D Grant: **01/07/2022**
9. How much work is yet to be completed the reason of the delay: **NIL**
  - a. Percentage of work completed: 100%
  - b. Amount utilized till date: Rs.2,00,000
10. How much work is yet to be completed with the reason of delay: **NIL**
  - a. Work yet to be completed with details: **NIL**
  - b. Reason for delay : **NIL**
11. Probable date of completion of the project: **NIL**



  
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Tamilnadu, India.

12. Amount of matching grant: 2,00,000 INR

- Name and address of the organization: Nadar Saraswathi College of Engineering and Technology, Annanji(P.O), Vadapudupatti, Theni-625 531.
- Amount received: Rs.2,00,000
- Amount utilized till date: Rs. 2,00,000

13. Name of the organizations providing support to the project: **NIL**

- Name of the organization: **NIL**
- Nature of support e.g. financial, technical and infrastructural: **NIL**
- Support yet to be received: **NIL**

14. Project Achievements in Brief:

Developing an Onion Peeler Machine addresses the need for increased efficiency, cost reduction, improved product quality, and compliance with safety and hygiene standards in the food processing industry. This project aims to develop a cost-effective Onion Peeler Machine within a budget of Rs. 2,00,000/-.

## Objectives

- Efficiency Enhancement:** The Onion Peeler Machine will streamline the peeling process, increasing the speed and efficiency of our production line.
- Labor Optimization:** By automating the peeling process, we anticipate reducing manual labor requirements, allowing our skilled workforce to focus on more intricate tasks.
- Quality Improvement:** The advanced technology of the Onion Peeler Machine ensures uniform and precise peeling, contributing to a higher-quality end product with minimized waste.
- Cost Efficiency:** Over time, the project is expected to yield cost savings through reduced labour costs, enhanced efficiency, and increased product yield.



  
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Tamilnadu, India.

15. Expected beneficiaries of the project:

Data collected by smart sensors used in this project stored in the cloud can be verified and utilized at any Project Scope

## Inclusions

1. Research and develop the Onion Peeler Machine within budget constraints.
2. Prototyping and testing of the machine for efficiency and safety.
3. Designing a simple user interface for machine operation.
4. Documentation and training materials for machine users.

## Exclusions

1. Onion harvesting or procurement.
2. Installation of the machine at user locations (if applicable).
3. Post-production marketing and sales activities.

16. Any other information to be furnished regarding the progress of the project: **NIL**

**Principal Investigater**



  
**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of**  
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Vadapudupatti, Theni-625 531



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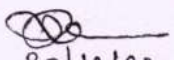


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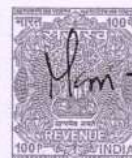
## UTILIZATION CERTIFICATE

1. Title of the Project : Onion Peeler Machine
2. Name of the Institution : Nadar Saraswathi College of Engineering and Technology, Theni.
3. Name of the Principal Investigator : Mr.R.Santhaseelan, AP/ Mechanical.  
Mr.A.VennimalaiRajan, AP/ Mechanical.

Certified that out of ₹2,00,000 of grants-in-aid sanctioned during the year 2022-2023 in favor of Nadar Saraswathi College of Engineering and Technology under consultancy projects dated 01/07/2022 and ₹2,00,000. A sum of ₹2,00,000 has been utilized for the purpose of developing a Plastic Extruder Machine, Result validation for which it was sanctioned. I further certify that the entire grant amount has been utilized judiciously and exclusively for the purpose stated in the research proposal.

  
30/12/22

PRINCIPAL INVESTIGATOR



30/12/22

PRINCIPAL

**Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,**  
**Principal**  
**Nadar Saraswathi College of**  
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15/1B, Sales Society Street, **THENI-625 531.**

Date...01/01/2023.....

To

The Principal,

Nadar Saraswathi College of Engineering and Technology,  
Annanji (P.O), Vadapudupatti, Theni-625531.

Dear Sir,

Subject: *Project Completion –Acknowledgement–* reg.

Ref: Report from NSCET dated on 30/12/2022.

We confirm that we have received the completed *Project Report and Utilization Certificate* for **onion peeler machine**, which was generated by the research team directed by Assistant Professor Mr.R.Santhaseelan, from the Department of Mechanical Engineering. The report was evaluated by our panel of specialists, and we are delighted to notify you that the results contained in the project report match our production criteria. We commend the cooperative endeavour and comprehension exhibited throughout this endeavour. We eagerly anticipate the opportunity to collaborate on future scientific endeavours. We would like to once again extend our appreciation to Nadar Saraswathi College of Engineering and Technology for their invaluable contribution to the successful completion of this research endeavour.

Thank you

For ROGITH ENTERPRISE

Proprietor



Dr. C. MATHALAI SUNDARAM, M.E., M.B.A., Ph.D.,  
Principal

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