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| MFARM VENTURES PRIVATE LIMITED |
| **TradeWiser Smart Warehousing Partner Proposal** |
| Agri-Commodity Warehousing |

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# Some general steps to follow to create TradeWiser Smart Warehouse:

1. Conduct a feasibility study: Before setting up a smart agriculture warehouse, you need to conduct a feasibility study to determine the viability of the project. This study should consider factors such as location, market demand, competition, and available resources.
2. Identify suitable technology: Once you have determined the viability of the project, you need to identify suitable technology that can be used for pre-cleaning grains, pulses, and spices efficiently. This could include equipment such as sieves, destoners, and air classifiers.
3. Design the warehouse: The next step is to design the warehouse layout, taking into account factors such as the type and amount of equipment needed, the flow of materials, and the storage capacity.
4. Install the necessary equipment: After designing the warehouse, you need to install the necessary equipment, including the pre-cleaning machinery, weighing scales, and storage bins.
5. Train staff: You will need to train staff on how to operate the equipment and perform the pre-cleaning process efficiently. This will involve training on the use of the machinery, quality control, and safety procedures.
6. Establish quality control measures: To ensure that the pre-cleaning process is done efficiently, you will need to establish quality control measures to ensure that the grains, pulses, and spices meet the required standards. This could involve implementing a grading system, testing for moisture content and purity, and inspecting for any foreign matter.
7. Market the service: Once the warehouse is operational, you will need to market the service to local farmers. This could include outreach efforts to local agricultural organizations, social media marketing, and other promotional activities.
8. WDRA Registration and other compliances: TradeWiser facilitates all registrations and compliances as per state and central laws for smooth functioning of the warehouse on behalf of the warehousing service provider and will provide a compliance template for licensing/ permissions to be obtained by the WSP/ owner.

# Partner Proposal

## Franchising Partner Brochure and Business Proposition

### Introduction

We are excited to offer a unique opportunity for entrepreneurs interested in starting a warehousing services business. Our innovative model combines smart agriculture technology with efficient pre-cleaning of grains, pulses, and spices to provide farmers with a valuable service that helps bring their products to market more efficiently. We are now looking for franchising partners to help us expand this business model across the country.

### What we do

Our warehousing services business provides pre-cleaning services for grains, pulses, and spices brought in by local farmers. We use state-of-the-art equipment to ensure that these products meet the highest quality standards, which helps farmers to get the best price for their crops. Our services are available in small batches, which is perfect for small and medium-sized farmers who don't have the resources to handle large volumes of produce.

### Why franchise with us?

By partnering with us, you'll have access to a proven business model that has been successfully tested and implemented. We provide all the training, marketing, and ongoing support needed to help you build a profitable business. As a franchisee, you'll benefit from:

* A recognized brand name and a strong reputation for quality and reliability
* Comprehensive training on all aspects of the business, including the use of the pre-cleaning equipment, quality control measures, and customer service
* Ongoing support in areas such as marketing, operations, and financial management
* Access to our network of suppliers, which ensures that you'll always have the latest technology and equipment available
* A business model that has been optimized for efficiency and profitability, ensuring that you can grow your business quickly and sustainably

### Investment requirements

To become a franchising partner, you'll need to make an initial investment of Rs . 000,000, which covers the cost of training, equipment, and support. We estimate that the total start-up costs for a new franchise will be around Rs . which includes the initial investment, as well as rent, utilities, and other operational expenses for the first few months of operation. We also require a royalty fee of Z% of gross revenue, which covers ongoing support and access to our network of suppliers.  
  
We offer a financing mechanism to help franchisees get started with their business. We have partnered with several financing companies to provide funding options, such as small business loans, to cover the initial investment costs. The loan terms vary depending on the financing company, but typically have a repayment period of 5 to 7 years with an interest rate of 8% to 12% per annum.

## Next steps

If you're interested in becoming a franchising partner, please contact us to request more information. We'll be happy to answer any questions you have and provide you with detailed information on our business model, training program, and ongoing support. We look forward to hearing from you soon!

## Financial model

Our financial model is designed to help you understand the potential profitability of your business. We have estimated the financial projections for a typical franchise location based on historical data from our existing franchise locations. These projections assume an average batch size of 500 kg, and a pre-cleaning fee of Rs . 1 per kg.

| **Revenue** | **Year 1** | **Year 2** | **Year 3** |
| --- | --- | --- | --- |
| Pre-cleaning fees | Rs A | Rs B | Rs C |

| **Expenses** | **Year 1** | **Year 2** | **Year 3** |
| --- | --- | --- | --- |
| Rent and utilities | Rs D | Rs E | Rs F |
| Equipment maintenance | Rs G | Rs H | Rs I |
| Staff salaries and benefits | Rs J | Rs K | Rs L |
| Marketing and advertising | Rs M | Rs N | Rs O |
| Royalty fee (Z%) | Rs P | Rs Q | Rs R |
| Other expenses | Rs S | Rs T | Rs U |

| **Profit** | **Year 1** | **Year 2** |

## Warehouse Design

### Storage Space

The warehouse will have a total storage capacity of 2000 MT. This will be divided into different storage spaces for different commodities. The storage spaces will be equipped with racks and shelves to optimize storage space and ensure easy access to stored products. There will be temperature and humidity controls in the storage spaces to maintain the quality of the stored products.

### Pre-cleaning Area

The pre-cleaning area will be equipped with state-of-the-art machinery for pre-cleaning grains, pulses, and spices. The area will have the following features:

* Multiple cleaning lines for processing different types of commodities simultaneously
* Pre-cleaning equipment such as destoners, magnetic separators, and vibratory screens
* A dust extraction system to ensure a clean and safe working environment
* A conveyor system for transporting the pre-cleaned commodities to the storage spaces
* Quality control measures to ensure that all commodities meet the required quality standards

### Processing Area

The processing area will be equipped with machinery for value-added processing of the stored commodities. This area will have the following features:

* Processing equipment such as color sorters, grading machines, and packaging machines
* A conveyor system for transporting the processed commodities to the storage spaces
* Quality control measures to ensure that all processed commodities meet the required quality standards

### Loading and Unloading Area

The loading and unloading area will be equipped with loading docks and forklifts for easy loading and unloading of commodities. This area will have the following features:

* Multiple loading docks to handle multiple trucks simultaneously
* Forklifts for moving the commodities from the storage spaces to the loading docks
* Weighing scales to ensure accurate measurement of the loaded and unloaded commodities
* Quality control measures to ensure that all commodities are loaded and unloaded correctly

### Office Space

The warehouse will have a dedicated office space for administrative tasks. The office space will have the following features:

* A reception area for greeting visitors and clients
* Offices for administrative staff and managers
* Meeting rooms for conducting business meetings and training sessions
* IT infrastructure for managing inventory and communication

### Conclusion

With this warehouse design, we can efficiently handle a capacity of 2000 MT for various commodities in batch sizes of 500 kg to 5 tonnes. The state-of-the-art equipment and quality control measures ensure that we can provide our clients with the best possible service, and the office space and IT infrastructure provide us with the necessary tools to manage our operations effectively.

# Quality Assessment at Warehouse

Quality assessment at the warehouse level involves a series of processes to ensure that the products meet the required quality standards. Here are some steps that can be taken to assess the quality of the products at the warehouse level:

1. Sampling: A representative sample of the products is taken from each batch for analysis. The sample size should be sufficient to ensure that the analysis is representative of the entire batch.
2. Inspection: The products are visually inspected for defects such as mould, insect damage, and foreign objects. The inspection should be conducted by trained personnel to ensure that all defects are identified.
3. Testing: The sample is subjected to various tests such as moisture content, aflatoxin, mycotoxin, and pesticide residue analysis. The testing should be conducted in a certified laboratory to ensure accuracy.
4. Documentation: All the data collected from the sampling, inspection, and testing is recorded and documented. The documentation should include details such as the date of sampling, the batch number, and the results of the analysis.
5. Decision-making: Based on the results of the analysis, a decision is made whether the product meets the required quality standards or not. If the product fails the quality test, it should be rejected and not be stored or processed any further.
6. Corrective action: If the product fails the quality test, corrective action should be taken to rectify the issue. The corrective action may include reprocessing, reconditioning, or disposal of the product.
7. Quality management system: The warehouse should have a quality management system in place that outlines the procedures for quality assessment and the corrective actions to be taken in case of any defects. The quality management system should be regularly reviewed and updated to ensure its effectiveness.

## The Digital Experience

To assess commercial quality parameters quickly and update the results via an app to the user, the following steps can be taken:

1. Use of rapid testing methods: Rapid testing methods such as near-infrared spectroscopy (NIRS) or electronic noses can be used to quickly assess commercial quality parameters such as moisture content, protein content, and oil content. These methods provide instant results and can be used in conjunction with traditional testing methods.
2. Automated data collection: The results of the rapid testing methods can be automatically collected and recorded using software connected to the testing equipment. This reduces the time and effort required for manual data entry.
3. Integration with app: The testing equipment can be integrated with an app that allows usersto access the results of the quality assessment in real-time. The app can also provide notifications to userswhen the results are ready.
4. User-friendly interface: The app should have a user-friendly interface that allows usersto easily navigate and access the results of the quality assessment. The app should also be able to display the results in a format that is easily understandable for the user.
5. Cloud-based storage: The results of the quality assessment can be stored in the cloud, making it easy to access and share with other stakeholders. The cloud-based storage also allows for real-time updates to be made to the results.

By using rapid testing methods, automating data collection, integrating with an app, providing a user-friendly interface, and using cloud-based storage, the quality assessment process can be done quickly, and the results can be updated via an app to the user.

# Key components and features of the WMS system:

1. User interface: The system will have a user interface that allows users to manage and monitor various aspects of the warehouse operations. This interface will be accessible via a web browser and will be responsive to different screen sizes.
2. Inventory management: The system will manage the inventory of different commodities stored in the warehouse. It will keep track of the quantity, location, and quality of each commodity batch. It will also generate alerts when the inventory falls below a certain threshold.
3. Quality assessment: The system will provide a quality assessment module that uses image processing and machine learning techniques to assess the quality of different commodities. This module will be integrated with the inventory management system and will update the quality assessment results in real-time.
4. Order management: The system will manage the orders placed[[1]](#footnote-1) by the farmersand traders for storing their commodities in the warehouse. It will keep track of the order details, delivery dates, and payment status.
5. Billing and invoicing: The system will generate bills and invoices for the farmers and traders based on the storage charges and other fees. It will also track the payment status and generate alerts for overdue payments.
6. Reporting and analytics: The system will provide various reports and analytics on the warehouse operations, such as inventory levels, quality assessment results, order fulfilment status, and billing and payment status.
7. Integration with mobile app: The system will be integrated with a mobile app that allows farmers and traders to view their inventory and quality assessment results in real-time. The mobile app will also allow them to place new orders and make payments.

# SOP Outline for inwarding, cleaning, assessment, packing, storage, dispatch, and the use of RFID and QR code technologies in the smart agriculture warehouse:

## Inwarding:

a. The commodity delivery vehicles will be weighed on the weighbridge and the weight will be recorded in the system.

b. The commodities will be inspected for quality and quantity and the details will be recorded in the system.

c. The commodities will be assigned a unique RFID tag or QR code for tracking and identification purposes.

d. The commodities will be stored in the designated area for cleaning and assessment.

## Cleaning:

a. The commodities will be cleaned using appropriate cleaning equipment and methods.

b. The cleaning process will be monitored and recorded in the system.

c. The cleaned commodities will be moved to the assessment area.

## Assessment:

a. The quality of the commodities will be assessed using image processing and machine learning tools.

b. The assessment results will be recorded in the system and communicated to the farmers and traders via the mobile app.

c. Commodities that do not meet the quality standards will be rejected and the farmers and traders will be notified. The accepted commodities will be moved to the packing area.

## Packing:

a. The commodities will be packed according to the batch size specified by the farmers and traders.

b. The packed commodities will be assigned a unique RFID tag or QR code for tracking and identification purposes

c. The packed commodities will be moved to the designated storage area.

## Storage:

a. The packed commodities will be stored in the designated area based on their commodity type, batch size, and quality.

b. The commodities will be continuously monitored for temperature, humidity, and other environmental factors.

c. The commodity storage data will be recorded in the system and will be accessible to the farmers and traders via the mobile app.

## Dispatch:

a. The farmers and traders will place orders for the dispatch of their commodities via the mobile app.

b. The order details will be recorded in the system and the commodities will be picked up from the designated storage area.

c. The RFID or QR code on the commodity packaging will be scanned during the dispatch process for tracking purposes.

d. The commodity delivery vehicles will be weighed on the weighbridge and the weight will be recorded in the system.

## RFID and QR code technologies:

a. RFID tags and QR codes will be used to track and identify the commodities throughout the warehouse management process.

b. RFID readers and scanners will be used to read the RFID tags and QR codes at various stages of the process.

c. The RFID and QR code data will be recorded in the system and will be accessible to the farmers and traders via the mobile app.

## Web 3.0 technologies:

a. The warehouse management system will be built using modern web 3.0 technologies such as blockchain and decentralized storage.

b. The use of blockchain will ensure the security and transparency of the data stored in the system.

c. Decentralized storage will ensure the availability and accessibility of the data stored in the system.

1. Confidential [↑](#footnote-ref-1)