

267

Agrograde

Occipital Technologies Pvt. Ltd.
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

AO-Q1082022-S10

DATE: 08/06/2022

Proposal for Smart Onion Grading & Sorting Machine

Model: S3

For: Katwan Parisar Farmers Producer Company Limited

Sakri, Dhule, Maharashtra, India-424210


Director
Katwan parisar farmers
producer company limited
A/P-chhail Tal sakri Dist Dhule

Agrograde

Occipital Technologies Pvt. Ltd.
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

To,
Katwan Parisar Farmers Producer Company Limited
Sakri, Dhule, Maharashtra, India-424210
+91 9423912797

About Agrograde

Quality in fresh produce has always been subjective in nature, causing multiple problems in the supply chain. Agrograde is an agritech startup working on standardising quality in fresh produce to tackle food loss and opaque quality assaying mechanisms in the supply chain. Agrograde leverages AI through machines to assess the quality of fruits and vegetables to help businesses take informed action at every aggregation node in the supply chain. The solutions aim to increase the efficiency of post-harvest activities, improve the marketability of the produce, and reduce food loss.

Need for our solution

A uniform quality gets a premium price in the market while an ungraded mixed quality produce has lower marketability. Quality assessment and grading sorting activities play an important role in the supply chain as they remove the rotten produce from the lot and improve marketability of the produce. A single rotten fruit or vegetable can damage the entire produce, this makes grading and sorting very important to protect the shelf life of the perishable produce.

Our Solutions

Agrograde's smart grading and sorting machines harness the power of artificial intelligence to detect quality parameters in real time for fast, reliable and precise performance. An array of sensors and industrial grade high speed cameras capture images of fruits and vegetables which are then analysed by Agrograde's proprietary A.I. algorithms for size, colour, shape, sprouts, physical damages and other major defects. The produce is then segregated into multiple grades based on the quality assessed by the A.I. system.



(Image is for pictorial representation only. Actual product may vary)

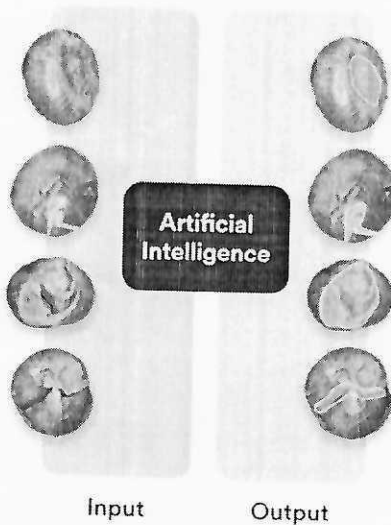
Director
Katwan parisar farmers
producer company limited

Agrograde

Occipital Technologies Pvt. Ltd.
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH



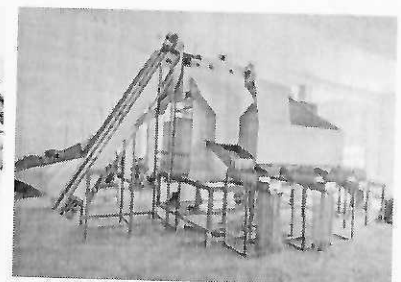
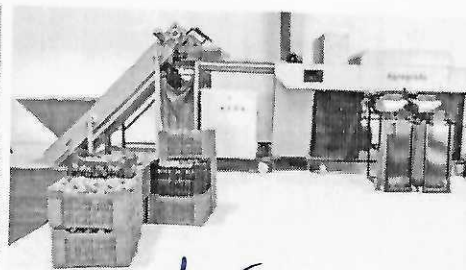
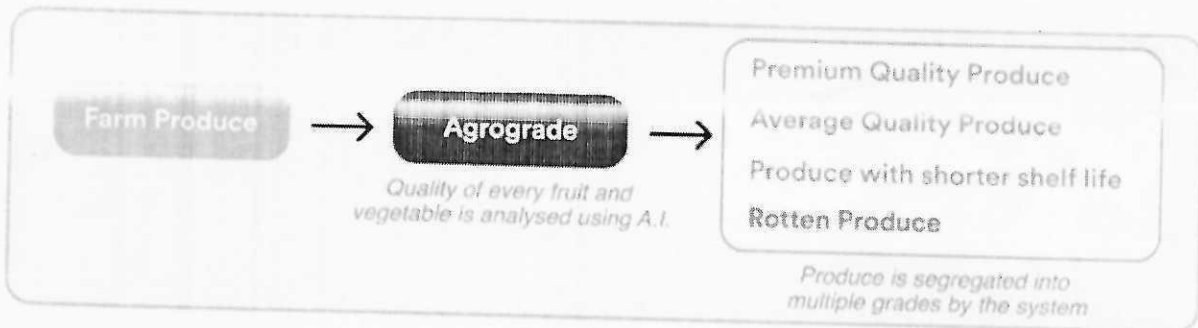
Agrograde's proprietary Artificial Intelligence software analyses multiples quality parameters such as size, shape, colour variations, defect patterns, sprouting and damages.



Every product that goes through the machine is photographed by industrial grade cameras. These images are processed by Agrograde's proprietary image processing and machine learning algorithms to detect multiple quality related parameters within a fraction of a second. The process is so fast that even a human eye can't process at the same speeds.

The quality detected and the user settings are then passed on to the sorting unit where the produce is segregated into multiple grades.

Every product that goes through the machine is analysed to provide detailed produce insights in real-time. Distribution of size and percentages of damaged and rejected produce can be used to take recovery related decisions prior to dispatch.



ky
Director
Ketan...

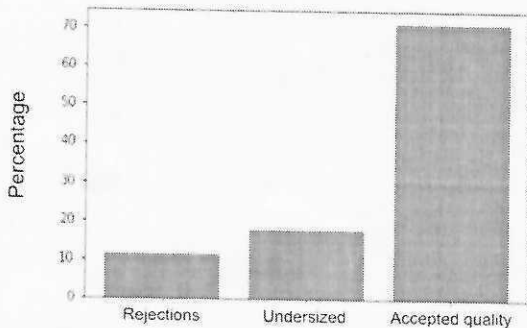
Agrograde

Occipital Technologies Pvt. Ltd.

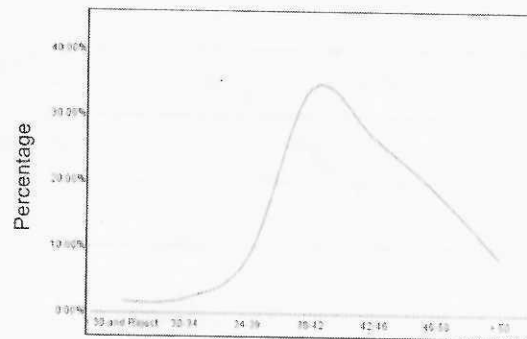
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

Features:

- Grading and Sorting of Onions based on Size and Quality
- Rejection criteria: Small size, Major defects and other defects as per requirement (e.g. rotten, black smut, sprouts, doubles etc).
- Customisable size and quality settings as per user requirements
- Minimal maintenance costs
- Low electricity consumption
- Dashboard for lot / Batch details
- Online technical support
- Market linkage software



Quality analysis

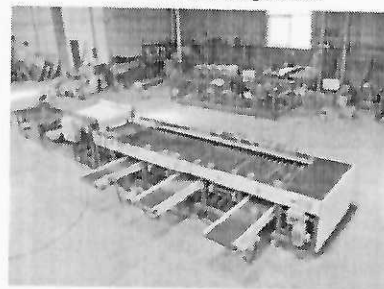


Size analysis

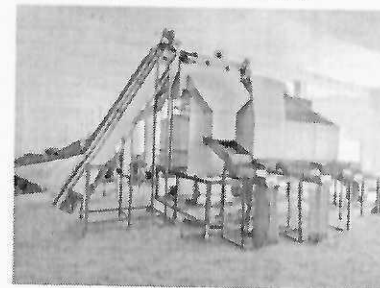
Online reports provided on cloud

Comparison between grading technologies

Radial/shake/belt graders



Agrograde smart grader



Parameters	Radial/shake/belt graders	Agrograde smart grader
Defect detection	No ❌	Yes (Above 90% accuracy) ✅
Size accuracy	Medium (Less than 80%)	High (Above 95% accuracy)
Skin protection	No ❌	Yes ✅
Customisable settings	No ❌	Yes ✅
Energy efficiency	Low ❌	High ✅
Labour savings	Low ❌	High ✅
Quality report	No ❌	Yes ✅
Market linkage	No ❌	Yes ✅

Director

Katwan parisar farmers

Agrograde

Occipital Technologies Pvt. Ltd.

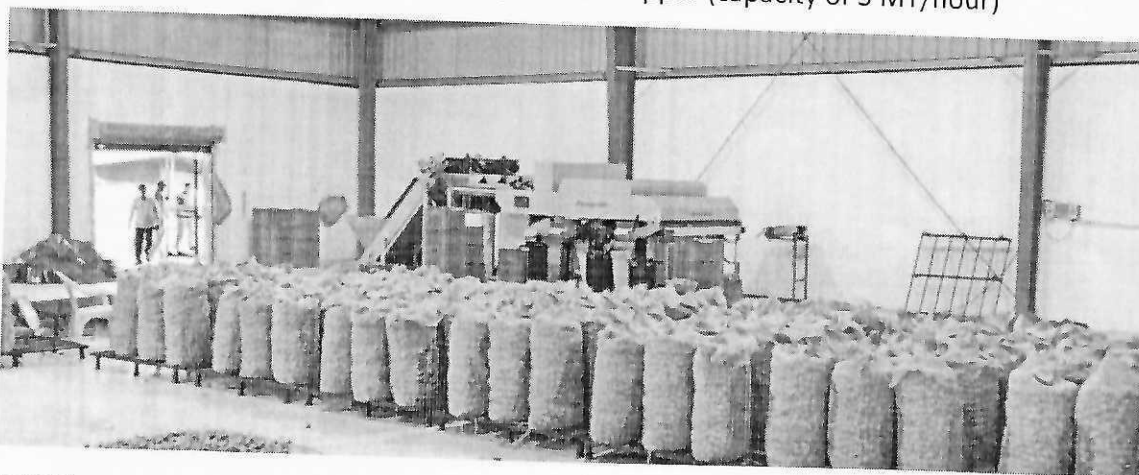
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

Specifications:

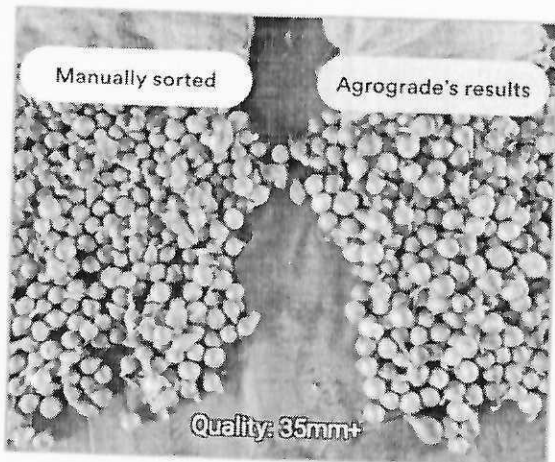
1. Number of grades: 2 good quality grades + 1 rejection grade
2. Capacity per hour: Approximately 3 MT/hour (Considering 45-60mm size range)
3. Dimensions
Machine: Length 8m x Width 3m x Height 4m
4. Operating space: 2m along length and width
5. Power requirements: Three phase
Average Power Consumption: 9.5hp / 7 kVA
6. Warranty: 1 year
7. Total labour required: 6-8

Pre-requisites:

1. Flat concrete platform for machine
2. Stable three phase power supply
3. Internet connection via LAN/Wi-Fi
4. Feeding: Bags, Crates, Box tippers, or Bulk hopper (capacity of 3 MT/hour)



Examples:



Rotten and damaged produce rejected by the machine to avoid further spoilage



Comparison - Manual vs Agrograde

Agrograde

Occipital Technologies Pvt. Ltd.

B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007

www.agrograde.com

+91 8369599377, sales@agrograde.com

GSTIN: 27AACCO4346G1ZH

Commercial Terms & Conditions:

Sr. no.	Items	Amount**
1.	<p>Agrograde optical grading sorting machine Capacity: 3 MT/hour*</p> <p>Grades and sorts onions based on size and quality by optically scanning each and every onion that passes through the system.</p> <p>Includes: Grading Sorting Machine Bag filling system for 26-50kg bags</p>	Rs. 19,85,500

*Calculated based on average number of onions in the size range 45-60 mm

**12% GST applicable on quoted price



Director
Katwan parisar farmers
producer company limited
A/Rchhail Tal sakri Dist Dhule

Agrograde

Occipital Technologies Pvt. Ltd.

B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

Terms & Conditions:

- A) Delivery time: 9 weeks from the receipt of Purchase Order and advance
- B) Commissioning and handover: 2 weeks
- C) Staff training: Free of cost
- D) 12% GST applicable on the quoted price
- E) Terms of payment:
65% along with purchase order
27% before dispatch
8% after delivery
- F) Validity of quotation: 30 days
- G) Freight and Transportation Charges - Extra at actual, on "To Pay" basis
- H) Orders once placed cannot be cancelled under any circumstances and in case of cancellation the advance shall be forfeited
- I) Prerequisites would be under client's scope
- J) Volume calculated assuming average size range of onions as 45-60 mm*
- K) AMC (Annual Maintenance cost)
Applicable after the warranty period and consists of 4 annual visits which covers inspection and primary maintenance of the machine. If any repair or replacement required, will be charged at actual. AMC is supposed to be renewed every year else every visit or maintenance activity will be charged at actuals. AMC is quoted post commissioning of the machine.
- L) Delivery:
The delivery period of the machine will be as per the schedule shared above. It is understood that no dispatch clearance is required from the customer. We understand that the exact modality and process to be followed for the dispatch & receipt of material will be communicated at the time of order finalization.


Director
Katwan parisar farmers
producer company limited
A/R-chhail Tal sakri Dist Dhule

M) Warranty:

- a. The machine offered is covered by warranty under proper use, for faulty material or workmanship for 12 months from the date of dispatch. Damages
- b. The purchaser shall inform us in writing of any defect in equipment noticed during warranty period. On receipt of the purchaser's written notice, we shall at our option, replace or repair, equipment supplied by him. Purchaser shall not return the equipment to the supplier before receiving supplier's confirmation to this effect. The equipment in such cases shall be returned to our works on a freight to pay basis.
- c. The warranty under this clause is subject to conditions that purchaser shall not have subjected the machine to alteration, addition or repair by anyone except supplier or his authorized representative.

N) Arbitration:

Any dispute or difference or claim arising out of or in relation to this transaction including construction, validity, performance or breach thereof shall, failing amicable settlement be referred to arbitration under Indian Arbitration and Conciliation Act of 1996 or any statutory modification thereof or time being in force. Such arbitration shall take place in Mumbai. The award of the arbitrator/s shall be final and binding on parties. Cost of arbitration to be covered by the individual parties.

O) No liability for damages:

We, Agrograde (Occipital Technologies Pvt Ltd), shall to the maximum extent permitted by applicable law, in no event be liable for any damages whatsoever (including without limitation, special, incidental, consequential, direct or indirect damages, for personal injury, loss of business profits, business interruptions, loss of business information or any other pecuniary loss) arising out of the use of or inability to use the products / equipment / machines.

P) Retention Clause:

Agrograde's obligation to fulfil this agreement is subject to the provision that the fulfilment is not prevented by any impediments arising out of national and international foreign trade and customs requirements or any embargos [or other sanctions].


Director
Katwan parisar farmers
producer company limited
A/P-chhail Tal sakri Dist Dhule

Agrograde

Occipital Technologies Pvt. Ltd.
B-67, NICE, Satpur MIDC,
Nashik, Maharashtra, India - 422007
www.agrograde.com
+91 8369599377, sales@agrograde.com
GSTIN: 27AACCO4346G1ZH

About us

We are an AI start-up developing Artificial Intelligence based grading and sorting solutions. Our solutions detect size, colour, foreign objects, surface quality, defects, diseases, shape and variety of a commodity for grading and sorting. Our solutions are centred around improving marketability of the commodities, reducing post-harvest losses and enabling an efficient and transparent trading process.

Our aim is to use technology to improve the efficiency in post-harvest processes and we have been supported by organisations such as Solid works and Autodesk to develop these technologies.

- Awarded Top 10 Impact ventures by BSE
- Winner of Social Alpha Quest for AgriTech Innovations
- Winner of BigLeap 2020
- Incubated by Social Alpha
- A NASSCOM 10K Startup
- Awarded Top 100 Startups by MSINS
- Finalists in Agriculture Grand Challenge
- 1st Gastrotope Accelerator Cohort

We are supported by:



Director
Katwan parisar farmers
producer company limited
A/P Chhail Tal sakri Dist Dhule