



Part I – General information

Partner organisation:	Hellenic Agricultural Organization - “DEMETER”
Country:	Greece
NUTS2 region:	
Contact person:	Dimitrios KATSANTONIS
E-mail address:	dikatsa@cerealinstitute.gr
Phone number:	+306944907628



Part III – Details of the actions envisaged.

Please list and describe below the actions that will be implemented in your region as part of the second phase of the project.

ACTIONS

Name	WP2: Task 2.2 - Pilot specifications, design, and planning
Planned activities	Task 2.2 – Pilot assessment, evaluation and stakeholders/end-users' validation [Leader: DEMETER, Contributors: RDFCM, CERTH] [Months: 1-18] Involves the processing and analysis of the recoded data collected upon the execution of the pilot from DEMETER and CERTH. Moreover, DEMETER will be responsible for the quality stakeholder acceptance metrics based on the information and data collected upon the execution of the pilot, by certifying the clarity data before the implementation on the blockchain. Moreover, a number of 25 consumers will take part in the extended pilot study case, by completing satisfaction questionnaires. The consumers will be selected on a random basis by a circle of rice consumers located at Thessaloniki area, which is the biggest city of RCM. DEMETER and RDFCM will be responsible for the consumers implantation. DEMETER will design the questionnaire and carry out interviews. These consumers will be using the ICT system and mainly the App developed in Task 3.3 before completing the satisfaction questionnaires. All data analysis will be conducted by DEMETER and stored online.
Challenge addressed	
Interregional inspiration	
Players involved	<i>DEMETER</i>
Timeframe	<i>1M to 18M</i>
Costs	
Funding source(s)	
Urban-rural aspects	
Innovative character	<i>User's satisfaction and evaluation of the blockchain</i>
Date	<i>November 2021</i>



Deliverable 2.2

Pilot evaluation and optimization roadmap

Table of Contents

1.	Executive summary.....	4
2.	Introduction to Customer Satisfaction Theory.....	5
	Customer Satisfaction	5
3.	Rice Blockchain Users' satisfaction survey.....	6
	The consumers' satisfaction questionnaire in Greek.....	7
	The consumers' satisfaction questionnaire translated in English	10
4.	Analysis of the Consumers satisfaction survey.....	13
	Conclusions of survey analysis.....	22
5.	Annexes.....	23
	Rice accessions morpho physiological, quality, and nutrient analysis data	23
	Follow the link to download the completed questionnaires and data analysis	27



1. Executive summary

DEMETER is the responsible partner for the structure and the development database along with the setting up the front-end of the rice blockchain, including all laboratory data analysis (morpho-physiological, quality, nutrient data) along with the survey analysis, which include the users' evaluation of all datasets. Thus, after the completion of the backend development by CERTH (server, database, graphics ect) DEMETER carried out the Consumers Satisfaction survey, which was developed based on the "Assimilation - Contrast" and "Negativity" theories. The survey besides the evaluation of the blockchain platform, assisted the consortium to confront stage any possible corrections and improvements based on the testers' opinions expressed through the consumers' satisfaction. The user's evaluation roadmap led to the final optimization of the blockchain structure, interface, and strategy. It was conducted by interviewing 25 end-users all farmers and consumers. In brief, the analysis of the questionnaires led in many useful conclusions such as: initially, most of the end-users could not understand the blockchain technology very well, however, one third of them claimed that they were very well or well enough informed. Many of them understood the blockchain technologies after coming in close contract with RUMORE's pilot. A very important finding of the survey is that the majority of the interviewed would be willing to pay for blockchain services, motivated by their believes that this kind of service could increase their profits and lead to the production and consumption of healthier products. On the interface section, all the interviewed were at least satisfied with all blockchain input sections used on mobile, tablet or PC. However, we believe that the testers need more user time to provide a more realistic and safer opinion of the service after longer use. As far as the information output concerns, they were asked to select the data they don't really need to be visible in the output screen after the QR-CODE scanning. Thus, the most favourable options were: "Date of delivery to the retailer", "Date of processing", "Processing type" and "Carbohydrates". Finally, since RUMORE project concerns the instrumentation and implementation of regional policies and strategies, all consumers were asked to propose a name of their preference for future registration as Protected Geographical Indication rice, without the questionnaire to indicate any name. The most popular suggestion (>50%) was that a potential name for future registration of PGI rice in Central Macedonia region could be "Ρύζι Κεντρικής Μακεδονίας", translated as "Rice of Central Macedonia".



2. Introduction to Customer Satisfaction Theory

Customer Satisfaction

It is a commonly used key performance indicator that tracks how satisfied customers (in RUMOREs' case rice growers and consumers) are with your organisation's products and/or services. It's a psychological state that is measured by the customer's expectations. By knowing what those expectations are, you can dramatically increase customer's loyalty to the product or service. Common business knowledge tells us that it's 5-25 times harder to acquire new customers than to retain current ones. Thus, satisfaction and loyalty are crucial when it comes to helping businesses maximize profit. However, implementing changes to generate increased satisfaction and loyalty among customers is not always easy, and there are a few things to learn.

Satisfaction is an overall psychological state that reflects the evaluation of a relationship between the customer or consumer and a company, environment, product, or service. Satisfaction involves one of the following three psychological elements: cognitive (thinking/evaluation), affective (emotional/feeling), and behavioural. When it comes to customer satisfaction, companies shouldn't assume that they know what their consumers want, but instead should use tools like surveys, polls, focus groups, or other forms of research to measure retention and service quality, and gain valuable knowledge about how they can improve their offering.

There are 5 main theories of customer satisfaction:

Assimilation: according to this theory, customers try to adjust their expectations to bring it closer to the product's actual performance.

Contrast: this theory is the opposite and says that any experience-performance discrepancy will be exaggerated by the consumer.

Assimilation – Contrast: this theory looks at how big or small the discrepancy is and based on that, the consumer will act in one or the other way.

Negativity: this theory says that any discrepancy is negative for the customer.

Hypothesis Testing: this theory suggests that customers are biased to positively confirm their original expectations.

The basis of understanding the consumer's satisfaction or dissatisfaction respectively resides in people's ability of learning from their past experiences. The theory of learning states that: "a certain answer is consolidated both positively and negatively in accordance with the reward implied. The reward leads to an evaluation of the degree of satisfaction in conformity with purchasing, and it can have an influence on the beliefs and attitudes towards a certain brand." The possibility of embarking on similar purchasing activities will increase if we perceive the presence of positive consequences in the act of purchasing, or vice versa. Consumer's satisfaction is regarded by the first conceptualizations as a singular variable that implies a single reaction of consumer's evaluation, that can or cannot be



connected to the concepts of pre-evaluation. Discussing the conceptualization of consumer's satisfaction, observes that "satisfaction means a way of abandoning experience and its evaluation. One can have a pleasant experience that caused dissatisfaction, because no matter how pleasant it was, it did not prove to be as pleasant as expected. Therefore, satisfaction/dissatisfaction is not an emotion, but the evaluation of an emotion".

3. Rice Blockchain Users' satisfaction survey

DEMETER was the responsible partner for the front-end building of the blockchain. Due to the expertise and experience within the ice cultivation, DEMETER developed the whole structure of the database, in collaboration with the key actor (Association of Chalastra A) and other collaborators in rice agri-sector (primary and secondary production). Besides, DEMETER collected all the blockchain data and monitored the integrity, reliability, and the quality of the gathered information. In addition, it carried out all nutritional analysis of the collected seed samples, which were delivered by the rice growers participated in the blockchain. Furthermore, DEMETER was responsible for the evaluation, certification, and input into the blockchain database. The blockchain back-end, developed by CERTH was tested, corrected, by DEMETER in collaboration with RDFCM. All corrections and suggestions for improvements were submitted to CERTH for finalizing the structure and interface. Finally, DEMETER developed the satisfaction survey, which was approved by RDFCM, and carried out on-site interviews of consumers (end-users) mainly in Thessaloniki area (Task 2.2).

Identity of the Rice Blockchain Users' satisfaction survey:	
Theories based:	<i>"Assimilation – Contrast" and "Negativity"</i>
Conduction date:	<i>15th to 25th of October 2021</i>
Conduction method:	<i>In person interviews</i>
Region:	<i>Central Macedonia</i>
City/Town/Village:	<i>Thessaloniki, Chalastra, Kalochori</i>
Participants:	<i>25</i>
Capacity of the participants:	<i>consumers, rice growers, agri-sector employees</i>



The consumers' satisfaction questionnaire in Greek



Ερωτηματολόγιο χρηστών/καταναλωτών



Όνοματεπώνυμο:.....

1) Ποια είναι η ιδιότητά σας;

- | | |
|--|--|
| <input type="checkbox"/> Ορυζοκαλλιεργητής | <input type="checkbox"/> Μεταποιητής/ Ορυζόμυλος |
| <input type="checkbox"/> Συνεταιρισμός | <input type="checkbox"/> Καταναλωτής |
| <input type="checkbox"/> Έμπορος | <input type="checkbox"/> Άλλο: |

2) Πόσα καλά γνωρίζεται το blockchain αγροτικών προϊόντων;

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Πολύ καλά | <input type="checkbox"/> Όχι πολλά |
| <input type="checkbox"/> Αρκετά καλά | <input type="checkbox"/> Καθόλου, μόλις το έχω ακούσει στο πλαίσιο του ερωτηματολογίου |

3) Ποιες από τις υπηρεσίες που προσφέρει το blockchain του ρυζιού σας φαίνονται ότι ταιριάζουν στις εργασίες σας ή στις ανάγκες σας ως χρήστης (μπορείτε να επιλέξετε πάνω από μία επιλογές);

- | | |
|---|---|
| <input type="checkbox"/> Ιχνηλασιμότητα | <input type="checkbox"/> Ασφάλεια τροφίμων |
| <input type="checkbox"/> Πιστοποίηση | <input type="checkbox"/> Βελτίωση της ποιότητας των προϊόντων |
| <input type="checkbox"/> Διαφάνεια | |

4) Θα ήσασταν διατεθειμένοι να πληρώσετε ή να επενδύσετε για μία ολοκληρωμένη υπηρεσία blockchain στην αλυσίδα αξίας του ρυζιού;

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Σίγουρα | <input type="checkbox"/> Σχεδόν Πιθανόν |
| <input type="checkbox"/> Πολύ πιθανόν | <input type="checkbox"/> Απίθανων |
| <input type="checkbox"/> Πιθανόν | |

5) Στα επόμενα 5 χρόνια πιστεύεται πως η συμμετοχή ή χρήση blockchain θα είχε μεγαλύτερη αξία για την αλυσίδα αξίας αγροτικών προϊόντων από ότι σήμερα;

- | | |
|---|--|
| <input type="checkbox"/> Σημαντικά περισσότερη | <input type="checkbox"/> Ίσως λίγο μικρότερη |
| <input type="checkbox"/> Ίσως λίγο περισσότερη | <input type="checkbox"/> Σημαντικά μικρότερη |
| <input type="checkbox"/> Θα παραμείνει περίπου η ίδια | |

6) Εάν χρησιμοποιούσατε τις υπηρεσίες του blockchain πιστεύετε ότι θα μπορούσατε να αυξήσετε το κέρδος της επιχείρησής σας;

- | | |
|------------------------------|------------------------------|
| <input type="checkbox"/> Ναι | <input type="checkbox"/> Όχι |
|------------------------------|------------------------------|

7) Πώς πιστεύετε ότι το ρύζι της Κεντρικής Μακεδονίας θα μπορούσε να αυξήσει τη πρόσοδο στην αλυσίδα αξία του;

- | |
|---|
| <input type="checkbox"/> Μείωση του κόστους παραγωγής και μεταποίησης |
| <input type="checkbox"/> Καλύτερο marketing/labeling |
| <input type="checkbox"/> Δημιουργία ρυζιού ΠΓΕ (Προστασίας Γεωγραφικής Ένδειξης) |
| <input type="checkbox"/> Δημιουργία ρυζιού ΠΟΠ (Προστατευόμενη Ονομασία Προέλευσης) |

8) Εάν κάποιος φορέας ή ιδιώτης προχωρήσει στη δημιουργία ρυζιού Προστασίας Γεωγραφικής Ένδειξης (ΠΓΕ), ποια ονομασία θα προτείνετε;

9) Σε ποιο βαθμό πιστεύετε ότι η χρήση blockchain στα αγροτικά προϊόντα θα βελτίωνε την κατανάλωση υγιεινότερου προϊόντος;

- | |
|---|
| <input type="checkbox"/> Σημαντική βελτίωση |
| <input type="checkbox"/> Ίσως μικρή βελτίωση |
| <input type="checkbox"/> Θα παραμείνει περίπου η ίδια |
| <input type="checkbox"/> Ίσως λίγο θα χειρότερευε |
| <input type="checkbox"/> Θα χειρότερευε σημαντικά |



10) Πόσο είστε ικανοποιημένος από την ενότητα «Αγρός καις σπορά»; Τι θα θέλατε να συμπληρώσετε ή να διορθώσετε;

- | | |
|---|--|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος | <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος | <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος | <input type="checkbox"/> Να συμπληρωθεί/διορθωθεί |

11) Πόσο είστε ικανοποιημένος από την ενότητα «Παραγωγή»; Τι θα θέλατε να συμπληρώσετε ή να διορθώσετε;

- | | |
|---|--|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος | <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος | <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος | <input type="checkbox"/> Να συμπληρωθεί/διορθωθεί |

12) Πόσο είστε ικανοποιημένος από την ενότητα «Συγκομιδή και Διάθεση της παραγωγής»; Τι θα θέλατε να συμπληρώσετε ή να διορθώσετε;

- | | |
|---|--|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος | <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος | <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος | <input type="checkbox"/> Να συμπληρωθεί/διορθωθεί |

13) Πόσο είστε ικανοποιημένος από την ενότητα «Διατροφική αξία»; Τι θα θέλατε να συμπληρώσετε ή να διορθώσετε;

- | | |
|---|--|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος | <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος | <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος | <input type="checkbox"/> Να συμπληρωθεί/διορθωθεί |

14) Μετά την χρήση της εφαρμογής του Blockchain του RUMORE σε κινητό, με ποιο βαθμό θα αξιολογούσατε την ικανοποίησή σας;

- | |
|---|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος |
| <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Αναφέρετε το/τα προβλήματα που συναντήσατε |

15) Μετά την χρήση της εφαρμογής του Blockchain του RUMORE σε tablet, με ποιο βαθμό θα αξιολογούσατε την ικανοποίησή σας;

- | |
|---|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος |
| <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Αναφέρετε το/τα προβλήματα που συναντήσατε |

16) Μετά την χρήση της εφαρμογής του Blockchain του RUMORE σε υπολογιστή, με ποιο βαθμό θα αξιολογούσατε την ικανοποίησή σας;

- | |
|---|
| <input type="checkbox"/> Πάρα πολύ ικανοποιημένη/ος |
| <input type="checkbox"/> Μερικώς ικανοποιημένη/ος |
| <input type="checkbox"/> Ικανοποιημένη/ος |
| <input type="checkbox"/> Χρειάζεται σχετικές βελτιώσεις |
| <input type="checkbox"/> Δεν έμεινα καθόλου ικανοποιημένη/ος |
| <input type="checkbox"/> Αναφέρετε το/τα προβλήματα που συναντήσατε |



Ποιες από τις παρακάτω πληροφορίες δεν θα θέλατε να συμπεριλαμβάνονται στις πληροφορίες που θα διατίθενται μετά τη σάρωση του QR-CODE.

- Περιοχή που βρίσκεται ο ορυζώνας
- Συντεταγμένες ορυζώνα
- Ημερομηνία σποράς
- Χρήση πιστοποιημένου σπόρου
- Όνομα ποικιλίας
- Ζιζανιοκτονία (πλήρης περιγραφή με ημερομηνίες)
- Έλεγχος ασθενείων (πλήρης περιγραφή με ημερομηνίες)
- Ημερομηνία Συγκομιδής
- Η τύχη των υπολειμμάτων μετά τη συγκομιδή
- Μέσα μεταφοράς
- Ημερομηνία και διάθεση παράδοσης
- Ημερομηνία και τόπος αποθήκευσης
- Ημερομηνία ξήρανσης
- Ημερομηνία εμπορίας (χοντρικό εμπόριο)
- Ημερομηνία εμπορίας (λιανεμπόριο)
- Ημερομηνία μεταποίησης
- Είδος μεταποίησης
- Συνολική απόδοση των σπόρων στο μύλο (%)
- Απόδοση σε ακέραιους (ολόκληρους) κόκκους (%)
- Κρυσταλλότητα (%)
- Ποσοστό αμυλόζης (%)
- Μήκος συγκομισμένου σπόρου (χιλιοστά)
- Λόγος Μήκους/Πλάτους (συγκομισμένοι σπόροι) (χιλιοστά)
- Μήκος κόκκου (καστανόι σπόροι) (χιλιοστά)
- Λόγος μήκους/πλάτους (καστανόι σπόροι)
- Ενέργεια (kcal)
- Πρωτεΐνες (gr)
- Λίπος (gr)
- Υδατάνθρακες (gr)
- Σάκχαρα (gr)
- Διαιτητικές Ίνες (gr)
- Σίδηρος (mg)
- Φώσφορος (mg)
- Κάλιο (mg)
- Ψευδάργυρος (mg)
- Θειαμίνη (Βιταμίνη B1) (mg)
- Ριβοφλαβίνη (Βιταμίνη B2) (mg)
- Νιασίνη (Βιταμίνη B3) (mg)
- Παντοθενικό οξύ (Βιταμίνη B5) (mg)
- Βιταμίνη B6 (mg)
- Πιστοποίηση ποιότητας
- Εντοπισμός προϊόντων εκτός προδιαγραφών
- Έλεγχος οχημάτων μεταφοράς
- Έλεγχος θερμοκρασίας μεταφοράς
- Έλεγχος προσμίξεων με αλλεργιογόνα
- Πληροφορίες απεντόμωσης
- Πληροφορίες καθαριότητας χώρων μεταποίησης-αποθήκευσης τελικού προϊόντος



The consumers' satisfaction questionnaire translated in English



Consumer's Satisfaction Questionnaire



Name:

1) What is your capacity?

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Rice Farmer | <input type="checkbox"/> Ricemill |
| <input type="checkbox"/> Cooperation | <input type="checkbox"/> Consumer |
| <input type="checkbox"/> Merchant | <input type="checkbox"/> Other..... |

2) What is your level of understanding of a blockchain for agricultural products?

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Very Well | <input type="checkbox"/> Not Much |
| <input type="checkbox"/> Well Enough | <input type="checkbox"/> Not at all, this is the first time |

3) Which of these rice blockchain services seems more likely to be useful to you as a user (you can choose more than one option)?

- | | |
|--|---|
| <input type="checkbox"/> Traceability | <input type="checkbox"/> Food Safety/Security |
| <input type="checkbox"/> Certification | <input type="checkbox"/> Improvement of Product Quality |
| <input type="checkbox"/> Transparency | |

4) Would you be willing to pay or to invest in a holistic blockchain service in the rice value chain?

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Definitely | <input type="checkbox"/> Not very likely |
| <input type="checkbox"/> Very Likely | <input type="checkbox"/> Unlikely |
| <input type="checkbox"/> Likely | |

5) Do you believe that in the next 5 years the use of blockchain will be increased in the agricultural value chain, compared with today?

- | | |
|--|---|
| <input type="checkbox"/> Significantly more | <input type="checkbox"/> Slightly less |
| <input type="checkbox"/> Maybe a little more | <input type="checkbox"/> Significantly Less |
| <input type="checkbox"/> It will stay the same | |

6) Do you believe that if you used the blockchain services, you would be able to increase your business profitability?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

7) What are the necessary steps, according to your opinion, that need to be taken in order to increase the value of the Central Macedonian rice?

- Lowering the cost of production and processing
- Better marketing/labeling
- Creation of PGI rice (Protection of Geographical Indication)
- Creation of PDO rice (Protected designation of origin)

8) If somebody from the public or private sector decides to create a PGI rice, what name would you suggest?

.....

9) Do you think that use of blockchain in agricultural products can lead to the consumption of healthier products?

- Yes, Significantly
- Little improvement
- It will remain about the same
- Maybe it would get a little worse
- It would get significantly worse



10) How satisfied are you with the section: "Field and sowing"?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> It needs improvement |
| <input type="checkbox"/> Partly Satisfied | <input type="checkbox"/> I am not satisfied |
| <input type="checkbox"/> Satisfied | <input type="checkbox"/> It has to be corrected..... |

11) How satisfied are you with the section: "Production"?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> It needs improvement |
| <input type="checkbox"/> Partly Satisfied | <input type="checkbox"/> I am not satisfied |
| <input type="checkbox"/> Satisfied | <input type="checkbox"/> It has to be corrected..... |

12) How satisfied are you with the section: "Harvesting and product distribution"?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> It needs improvement |
| <input type="checkbox"/> Partly Satisfied | <input type="checkbox"/> I am not satisfied |
| <input type="checkbox"/> Satisfied | <input type="checkbox"/> It has to be corrected..... |

13) How satisfied are you with the section: "Nutritional Value"?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> It needs improvement |
| <input type="checkbox"/> Partly Satisfied | <input type="checkbox"/> I am not satisfied |
| <input type="checkbox"/> Satisfied | <input type="checkbox"/> It has to be corrected..... |

14) After using the RUMORE Blockchain app on your mobile, how would you rate your experience?

- Very Satisfied
- Partly Satisfied
- Satisfied
- It needs improvement
- I am not satisfied
- It has to be corrected.....

15) After using the RUMORE Blockchain application on your tablet, how would you rate your experience?

- Very Satisfied
- Partly Satisfied
- Satisfied
- It needs improvement
- I am not satisfied
- It has to be corrected.....

16) After using the RUMORE Blockchain application on your computer, how would you rate your experience?

- Very Satisfied
- Partly Satisfied
- Satisfied
- It needs improvement
- I am not satisfied
- It has to be corrected.....



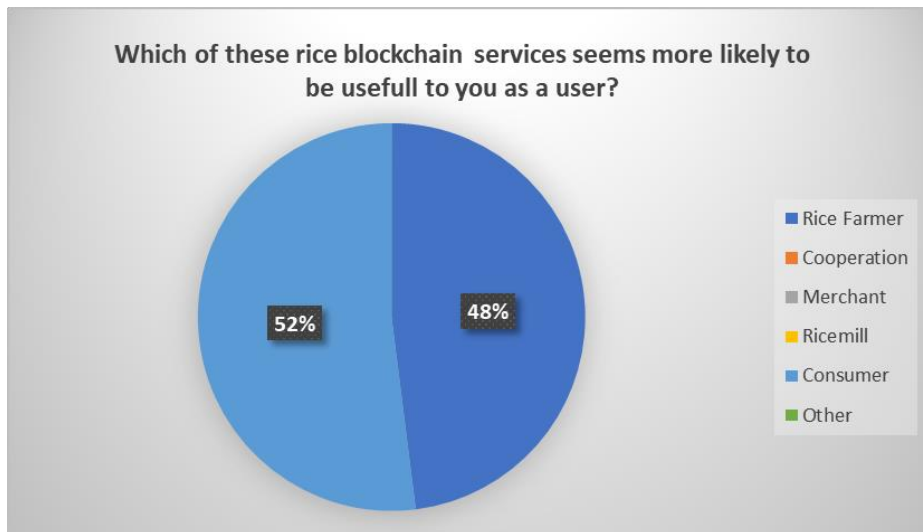
What type of information you DON'T need to be included in the blockchain output after scanning with QR-CODE.

- Amylose (%)
- Brown rice length (mm)
- Brown rice length/width ratio
- Carbohydrates
- Coordinates
- Date of delivery
- Date of delivery to the retailer
- Date of delivery to the whole sale
- Date of drying
- Date of processing
- Date of sowing
- Disinfestation information
- Fibers
- Grain length (mm)
- Grain length/width ratio
- Information concerning the processing and storage areas
- Iron
- Monitoring of transportation temperature
- Monitoring of transportation vehicles
- Phosphorus
- Potasium
- Processing type
- Residual of rice
- Total milling yield (%)
- Transportation
- Use of certified seed
- Vitamin B1 (Thiamin)
- Vitamin B2 (Riboflavin)
- Vitamin B3 (Niacin)
- Vitamin B5 (Pantothenic acid)
- Pearl %
- Whole milling yield (%)
- Zinc



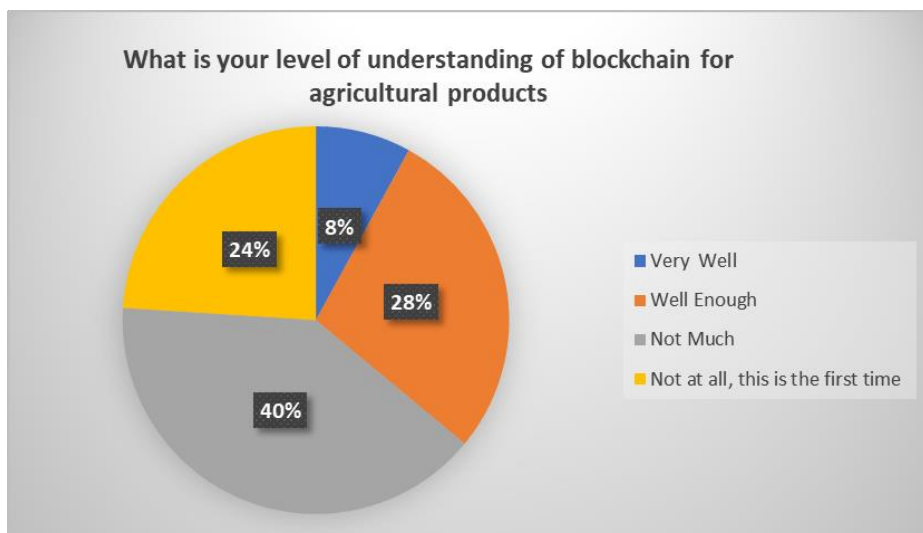
4. Analysis of the Consumers satisfaction survey

1. What is your capacity?



- 1.
- 2.
3. Almost half (52%) of the participants were rice farmers, while the other half (48%) was made up from consumers

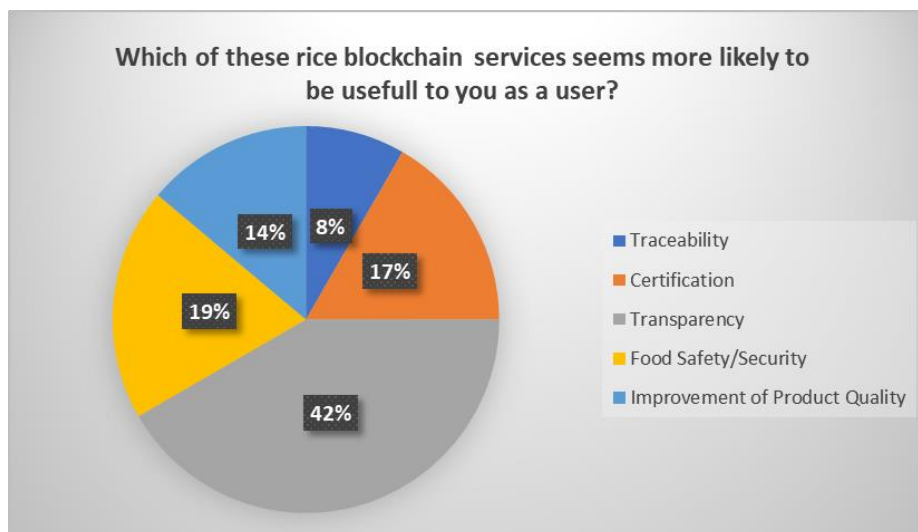
2. What is your level of understanding of blockchain for agricultural products?



- 4.
- 5.
6. Most of the participants (40%), were not very familiar with blockchain technology for agricultural products, while 28% were well acquainted with this technology. On the other hand, 24% answered that this was the first time they came in to contact with blockchain technology for agricultural products, while only 8% were well informed about this technology.



**3. Which of these rice blockchain services seems more likely to be useful to you as a user?
(Multiple answers)**



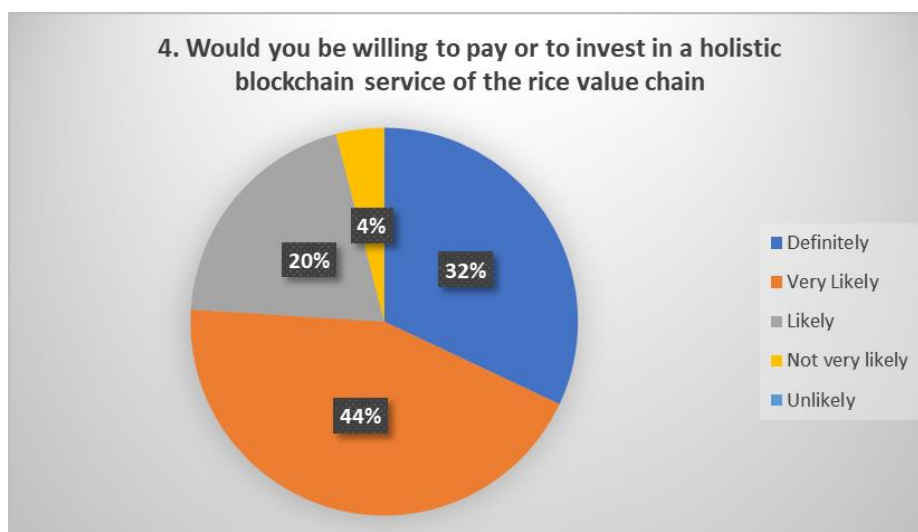
7.

8.

9. The majority of the participants interviewed (42%), answered that the most important service of blockchain is transparency, while 19% answered that food safety/security is more important to them. Furthermore, 14% and 17% answered that blockchain will improve product quality and certification, respectively. Finally, the remaining 8% answered that this technology will improve product traceability.

10.

4. Would you be willing to pay or to invest in a holistic blockchain service of the rice value chain?



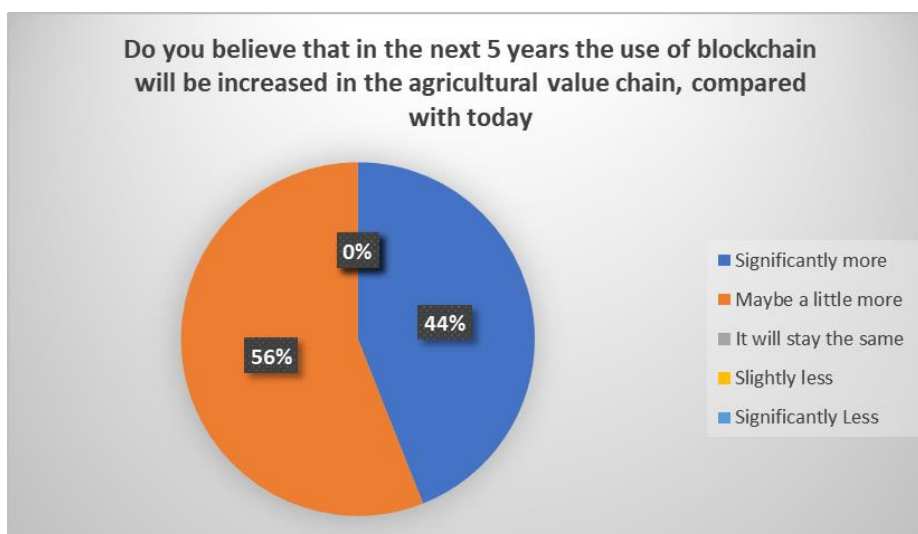
11.

12.

13. Almost half of the rice growers and consumers (44%), answered that they were very likely to pay or invest in a holistic blockchain service, while 32% answered that they would definitely do it. On the other hand, 20% answered that they would likely invest or pay for this service. Finally, 4% answered that they probably wouldn't pay or invest, while the percentage of participants unlikely to pay or invest was zero (0%).

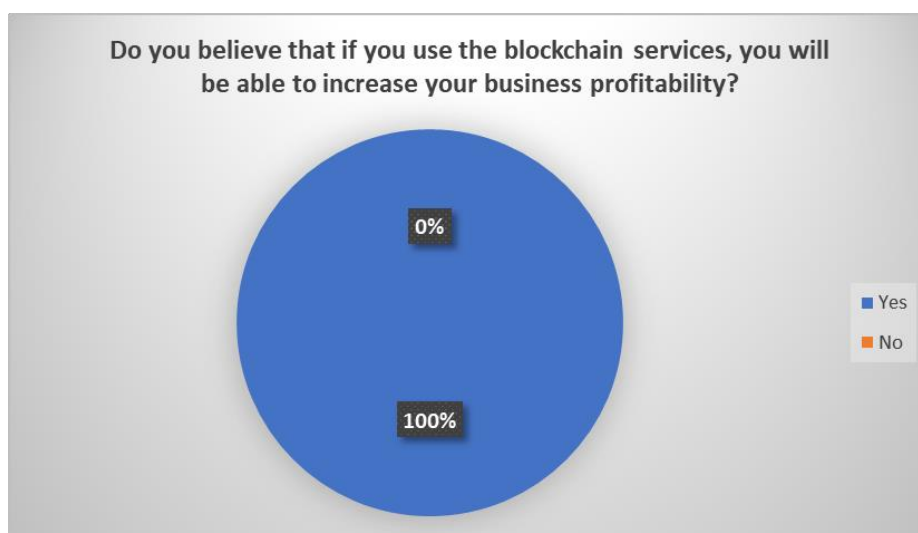


5. Do you believe that in the next 5 years the use of blockchain will be increased in the agricultural value chain, compared with today?



While, more than half of the interviewed participants (56%), answered that in the next five years the use of blockchain will probably increase a little bit more, 44% answered that the use of this technology will increase significantly more. The remaining options (it will stay the same, slightly less, significantly less) didn't receive any answers (0%).

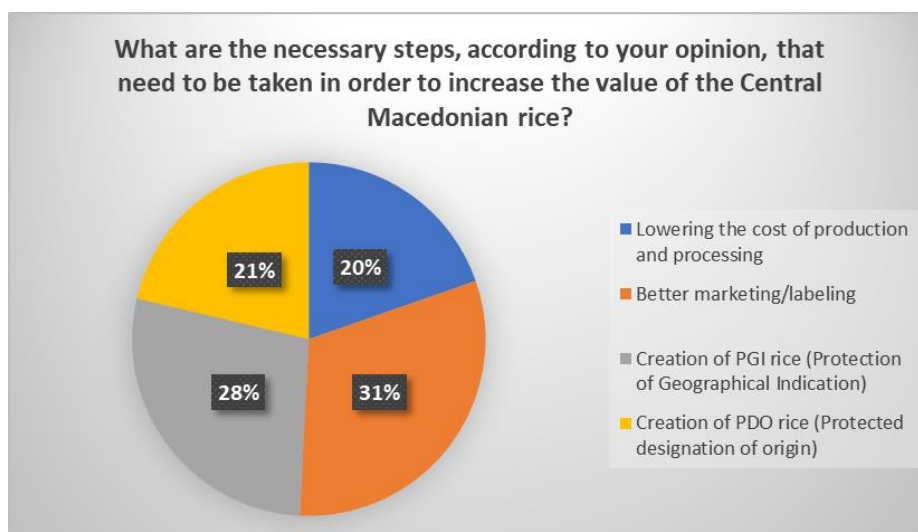
6. Do you believe that if you use the blockchain services, you will be able to increase your business profitability?



All of the rice farmers (100%) answered that the use of blockchain services will be able to increase their business profitability.

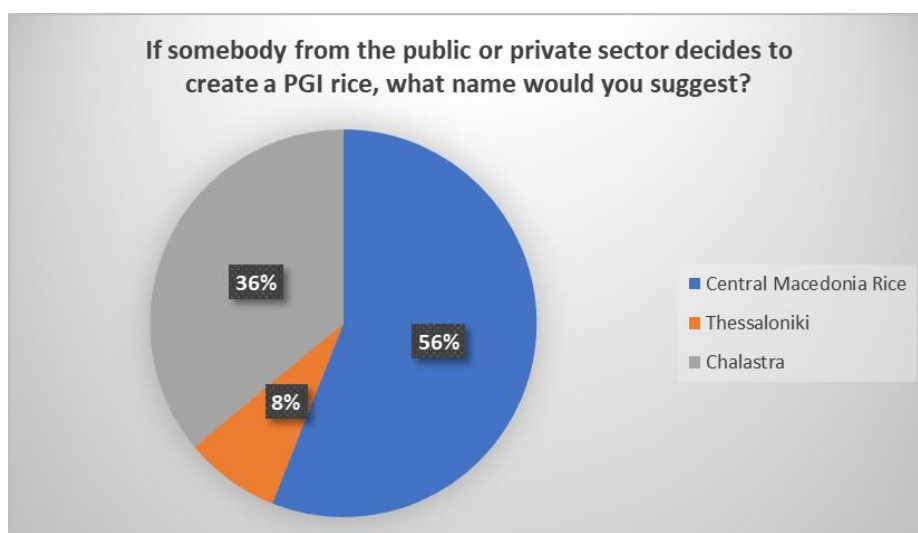


7. What are the necessary steps, according to your opinion, that need to be taken in order to increase the value of the Central Macedonian rice?



The answers were almost equally spread among the four different options. Specifically, 31% of the participants answered that the necessary steps to increase the value of the Central Macedonian rice is to better market/label the product, while 20% answered by lowering the cost of production. On the other hand, 28% and 21% answered that to increase the value of the Central Macedonian rice a PGI and a PDO rice, respectively, must be created.

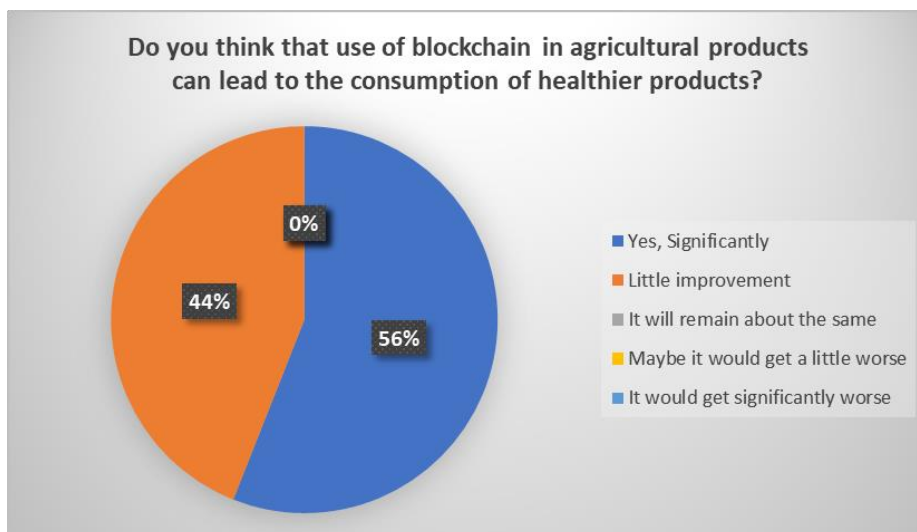
8. If somebody from the public or private sector decides to create a PGI rice, what name would you suggest?



The majority (56%) of the rice and farmers and consumers answered that the best name for a PGI rice would be “**Central Macedonia Rice**”, while 36% answered that their preferred name would be “**Chalastra**”, the remaining 8% answered “**Thessaloniki**”.

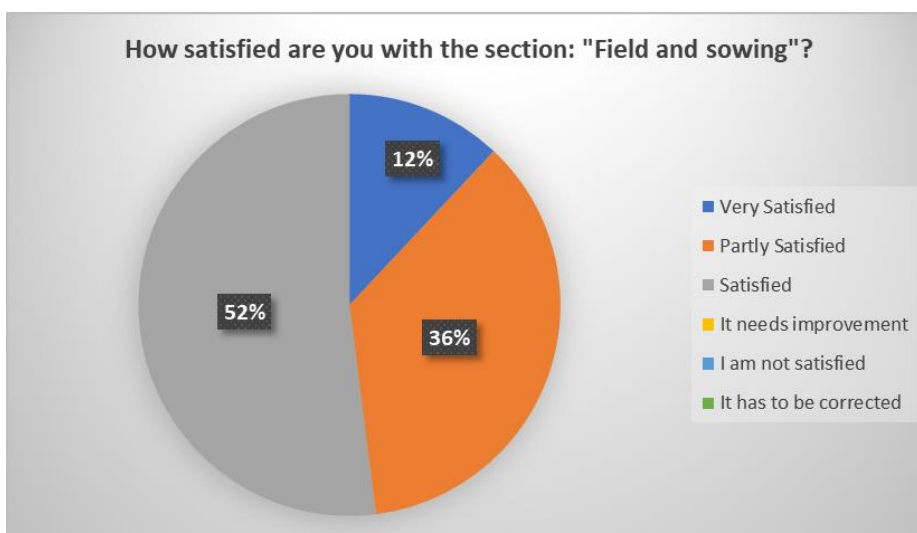


9. Do you think that use of blockchain in agricultural products can lead to the consumption of healthier products?



When asked, whether the use of blockchain in agricultural products can lead to the consumption of healthier goods, more than half of the interviewed participants (56%) answered that yes it will help significantly. On the other hand, 44% answered that blockchain technology will have little impact in people's diet.

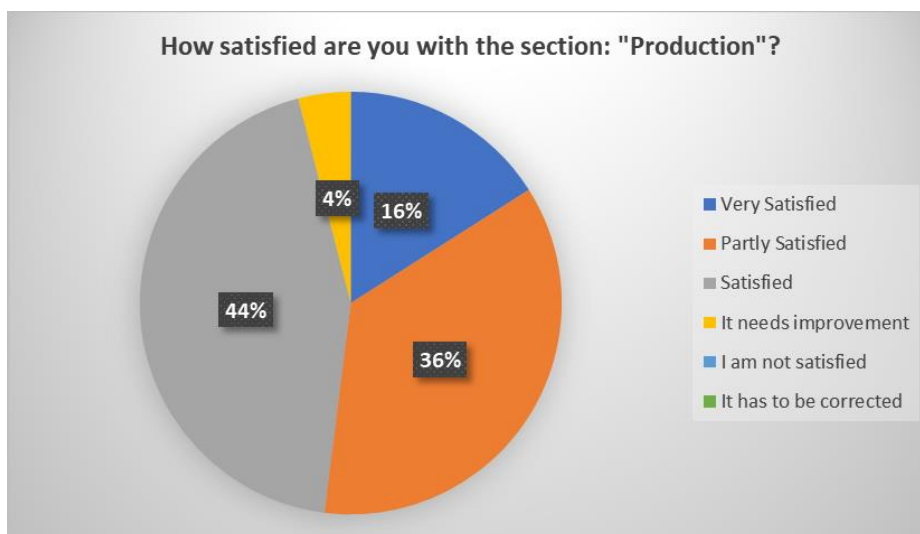
10. How satisfied are you with the section: "Field and sowing"? What would you add or change?



Most of the participants (52%), answered that they were satisfied with the "Field and Sowing" section, while 36% answered that they were partly satisfied with it. On the other hand, only 12% answered that they were very satisfied, while no participants answered that the section needs more improvement, or that they were not satisfied, or that this section has to be corrected.

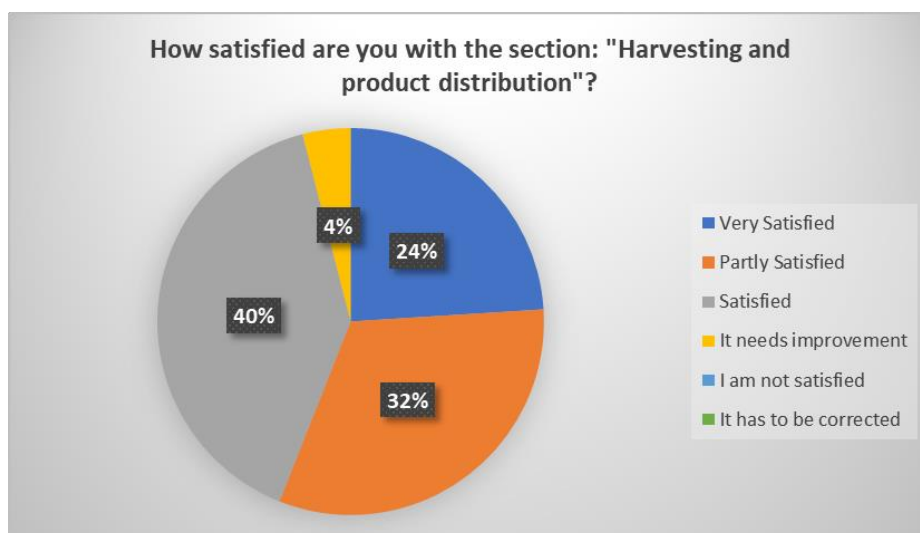


11. How satisfied are you with the section: "Production"?



In this question, 44% of the rice farmers and consumers answered that they were satisfied with the “Production” section and 36% answered that they were partly satisfied. On the other hand, 16% answered that they were very satisfied, while only 4% answered that this section needs improvement. Finally, no participants answered that they were not satisfied by this section or that it has to be corrected.

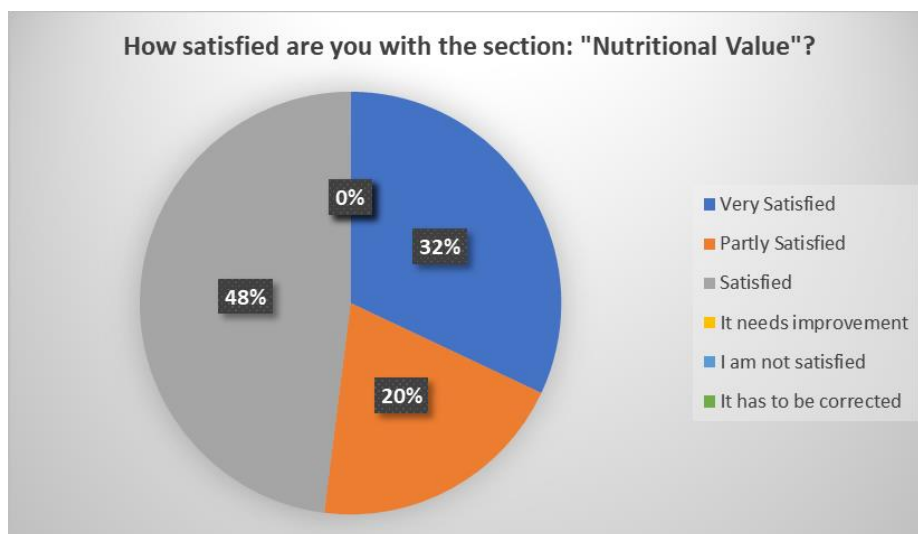
12. How satisfied are you with the section: "Harvesting and product distribution"?



When asked, if they were satisfied by the “Harvesting and product distribution” section, most of the participants 40% answered that they were satisfied, while 32% answered that they were partly satisfied. On the other hand, 24% answered that they were very satisfied, while 4% answered that it needs improvement. Finally, no participants answered that that they were not satisfied by this section or that it has to be corrected.

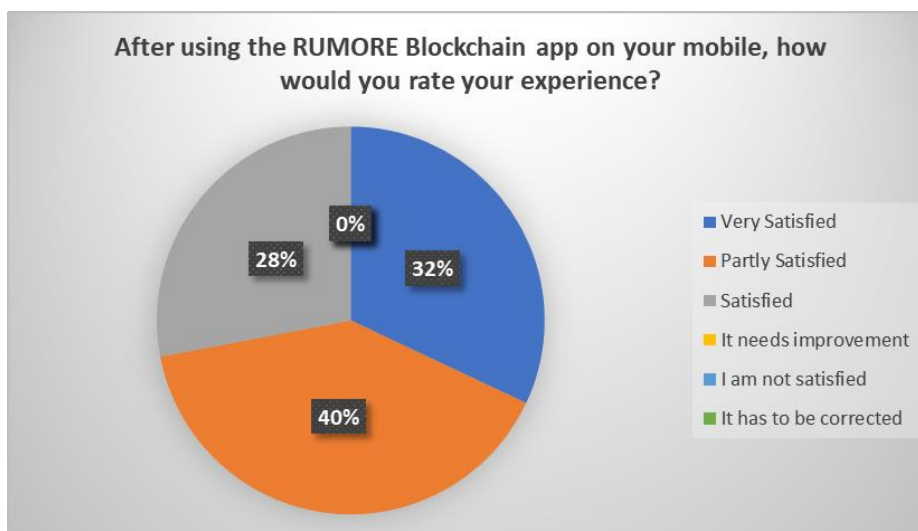


13. How satisfied are you with the section: "Nutritional Value"?



Almost half of the rice farmers and consumers (48%), answered that they were satisfied by the “Nutritional Value” section while an impressive 32% answered that they were very satisfied. The participants who were partly satisfied were 20%, while the rest of the options received no percentage (0%).

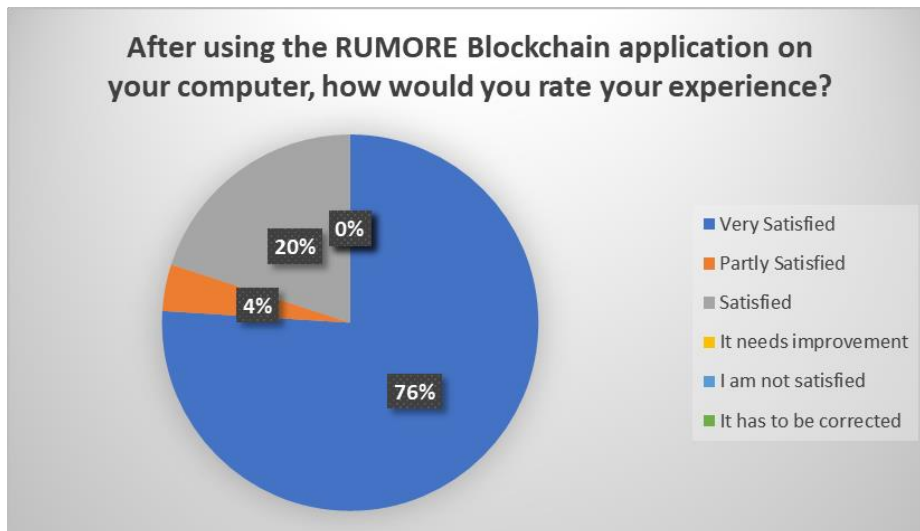
14. After using the RUMORE Blockchain application on your mobile, how would you rate your experience?



All of the participants enjoyed their experience using the RUMORE Blockchain application. Specifically, most of the participants (40%), answered that they were partly satisfied with their experience when using it, while an equally impressive 32% answered that they were very satisfied. Finally, 28% answered that they were satisfied using the app, while the number of participants dissatisfied with the app, or claiming that the app needs improvement or that it has to be corrected was zero.

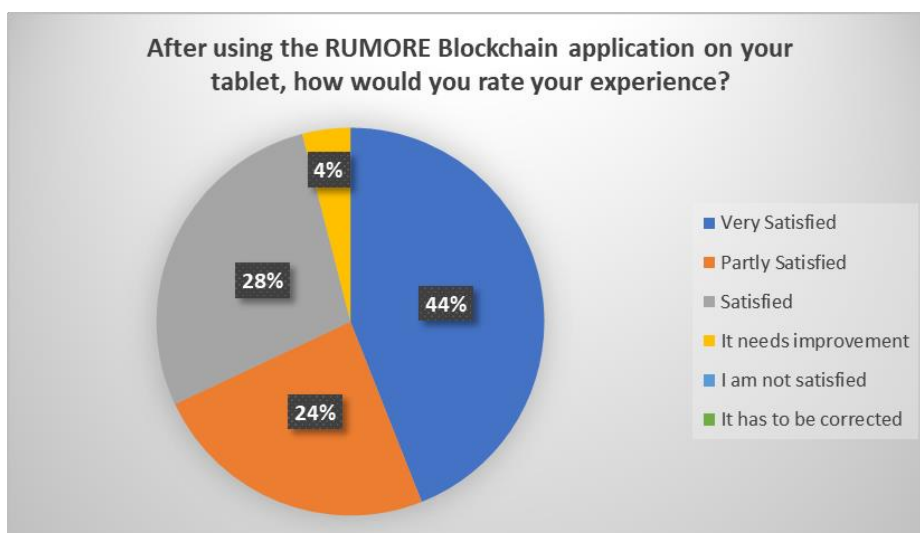


15. After using the RUMORE Blockchain application on your computer, how would you rate your experience?



All of the participants gave a positive review when asked what their experience was using the RUMORE Blockchain application on their computers. Specifically, more than three quarters of the interviewed participants (76%), answered that they were very satisfied when using the RUMORE Blockchain computer app., 20% answered that they were satisfied, while only 4% answered that they were partly satisfied.

16. After using the RUMORE Blockchain application on your tablet, how would you rate your experience?



Most of the participants (44%), answered that they were very satisfied when using the application on their tablet, while 28% answered that they were satisfied. On the other hand, 24% answered that they were partly satisfied, while only 4% answered that the app needs improvement.



During laboratory analysis a number of 38 morphophysiological, quality and nutrient characteristics were analysed : 1) Milling Yield (%), 2) Whole milling yield (%) 3) Total Milling yield (%), 4) 1000 paddy grains weight (g), 5) Paddy length (mm), 6) Paddy width (mm), 7) Paddy ratio, 8) Brown length (mm), 9) Brown width, 10) Brown ratio, 11) 1000 white grains weight (g), 12) White length (mm), 13) White width (mm), 14) White ratio, 15) Grain Pearl (%), 16) Brown grains L* 17) Brown grains a*, 18) Brown grains b*, 19) White grains L*, 20) White grains a*, 21) White grains b*, 21) EU classification, 22) Alkali digestion, 23) Protein content (%), 24) Amyloze content (%), 25) Pearl (%), 26) Carbohydrates (g), 27) Fats (g), 28) Dietary fibers (g), 29) Thiamin (mg), 30) Niacin (mg), 31) Iron (ppm), 32) Potassium (%), 33) Zinc (ppm), 34) Manganese (ppm), 35) Cooper (ppm), 36) Calcium (%), 37) Potassium (%), 38) Magnesium (%). All data are presented in Annex (page 23-26). The data can be available as output though QR Code scanning according to the customer's needs. Furthermore, these data collections were carried out to develop a full map of each blockchain accession and to be used a certification of the integrity of the data entries, along with DNA genotyping.

At the end of the satisfaction survey the interviewed consumers rated the information which were included in the rice blockchain. This question was very critical, because it helps to understand what kind of information people acquire to be visible after scanning the QR code. Therefore, the most important ones for consumers needs there were chosen as the most favourable: 1) Date of delivery to the retailer, 2) Date of processing, 3) Processing type, 4) Carbohydrates, 5) Date of delivery to the whole sale, 6) Amylose (%), 7) Date of delivery, 8) Disinfestation information, 9) Pearle (Vitreosity) % and 10) Monitoring of transportation vehicles. Furthermore, this result was forwarded to CERTH, to finalize the output visible ranged of the needed data.

What type of information you <u>don't</u> need to be included in the blockchain output after scanning the QR-CODE	
1. Date of delivery to the retailer	1
2. Date of processing	1
3. Processing type	1
4. Carbohydrates	1
5. Date of delivery to the whole sale	2
6. Amylose (%)	2
7. Date of delivery	3
8. Disinfestation information	3
9. Pearl (Vitreosity) %	4
10. Monitoring of transportation vehicles	4
11. Use of certified seed	12
12. Vitamin B3 (Niacin)	16
13. Date of drying	17
14. Transportation	18
15. Potassium	18
16. Vitamin B5 (Pantothenic acid,)	19
17. Information concerning the processing and storage areas	19



18. Iron	20
19. Vitamin B3 (Niacin)	20
20. Coordinates	21
21. Residual of rice	21
22. Fibers	21
23. Vitamin B1 (Thiamin)	21
24. Vitamin B2 (Riboflavin)	21
25. Zinc	22
26. Brown rice length/width ratio	23
27. Date of sowing	24
28. Whole milling yield (%)	24
29. Phosphorus	24
30. Monitoring of transportation temperature	24
31. Total milling yield (%)	25
32. Grain length (mm)	25
33. Grain length/width ratio	25
34. Brown rice length (mm)	25

Conclusions of survey analysis

The questionnaires were distributed equally between two groups, rice farmers and consumers. Most of the participants didn't have a very good understanding of blockchain technology for agricultural products, however, more than one third of them claimed that they were very well or well enough informed. Most of the participants answered that blockchain technology will help with the product transparency, while the majority was willing to pay or to invest in it. All participants believe that in the next five years the use of blockchain will increase and it will lead to the consumption of healthier agricultural products, while all rice farmers believe that its use will increase the profitability of their businesses. Most of the participants believe that the creation of a PGI or PDO rice product, labeled "Central Macedonia rice", will increase the value of the Central Macedonian rice. Also, all rice farmers and consumers reported that they were satisfied with the sections of the RUMORE Blockchain application and enjoyed their experience using the web or the app, on multiple platforms (mobile phone, computer, tablet).



5. Annexes

Rice accessions morpho physiological, quality, and nutrient analysis data

	Variety	Type	Year	Milling Yield (%)	Whole milling yield (%)	Total Milling yield (%)	1000 paddy grains weight (g)
1	GLORIA	RUMORE Pilot 1	2020	80.5	70.5	74.3	19.8
2	GLORIA	RUMORE Pilot 2	2020	80.5	69.9	69.8	22.9
3	GLORIA	RUMORE Pilot 3	2020	80.0	70.0	69.1	18.3
4	GLORIA	RUMORE Pilot 4	2020	82.4	72.4	66.9	28.0
5	GLORIA	RUMORE Pilot 5	2020	80.7	70.7	71.7	21.4
6	GLORIA	RUMORE Pilot 6	2020	80.3	70.3	76.8	20.0
7	GLORIA	RUMORE Pilot 7	2020	81.1	71.1	77.2	26.6
8	GLORIA	RUMORE Pilot 8	2020	81.9	71.9	65.1	23.8
9	GLORIA	RUMORE Pilot 9	2020	81.6	71.6	60.1	22.1
10	GLORIA	RUMORE Pilot 10	2020	81.1	71.1	77.2	26.6
11	OLYMPIADA	Certified seed 1	2020	71.5	66.2	64.5	20.45
12	GLORIA	Certified seed 1	2020	81.1	71.1	77.2	26.6
13	LUNA	Certified seed 1	2020	73.2	62.2	69.0	29.1
14	OLYMPIADA	Certified seed 2	2020	72.1	67.3	64.1	21.25
15	RONALDO	Certified seed 1	2020	74.1	70.4	63.2	28.91
16	LUNA	Certified seed 2	2020	75.2	62.9	68.3	29.51
17	GLORIA	Certified seed 2	2019	81.1	71.1	77.2	26.6
18	GLORIA	Certified seed 3	2019	81.9	71.9	65.1	23.8
19	GLORIA	Certified seed 4	2019	81.6	71.6	60.1	22.1
20	LUNA	Certified seed 3	2019	74.9	61.1	69.7	28.8
21	LUNA	Certified seed 4	2019	72.7	63.6	67.8	27.9
22	RONALDO	Certified seed 2	2019	75.2	69.8	62.4	29.05
23	OLYMPIADA	Certified seed 3	2019	72.5	62.1	65.2	20.53
24	GLORIA	Certified seed 5	2019	80.0	70.0	69.1	18.3



Variety	Type	Paddy length (mm)	Paddy width (mm)	Paddy ratio	Brown length (mm)	Brown width	Brown ratio	1000 white grains weight (g)
GLORIA	RUMORE Pilot 1	9.45	3.87	2.44	6.9	3.39	2.04	17.7
GLORIA	RUMORE Pilot 2	10.04	3.88	2.59	6.98	3.37	2.07	20.4
GLORIA	RUMORE Pilot 3	9.89	3.93	2.52	6.52	3.39	1.92	16.3
GLORIA	RUMORE Pilot 4	10.27	3.99	2.57	6.22	3.31	1.88	24.9
GLORIA	RUMORE Pilot 5	10.17	3.97	2.56	6.71	3.41	1.97	19.0
GLORIA	RUMORE Pilot 6	10.14	3.97	2.54	6.46	3.31	1.95	17.8
GLORIA	RUMORE Pilot 7	9.69	4.05	2.39	6.78	3.34	2.03	23.7
GLORIA	RUMORE Pilot 8	9.61	3.92	2.45	6.68	3.38	1.98	21.1
GLORIA	RUMORE Pilot 9	9.85	3.97	2.46	6.54	3.36	1.95	19.7
GLORIA	RUMORE Pilot 10	9.69	4.05	2.39	6.78	3.34	2.03	23.7
OLYMPIADA	Certified seed 1	9.74	2.79	3.49	6.61	2.17	3.05	18.2
GLORIA	Certified seed 1	9.69	4.05	2.39	6.78	3.34	2.03	23.7
LUNA	Certified seed 1	7.18	3.53	2.03	5.41	3.18	1.70	25.9
OLYMPIADA	Certified seed 2	9.64	2.82	3.42	6.67	2.15	3.10	18.9
RONALDO	Certified seed 1	8.49	2.85	2.98	6.43	2.48	2.59	25.7
LUNA	Certified seed 2	7.18	3.53	2.03	5.41	3.18	1.70	26.3
GLORIA	Certified seed 2	9.69	4.05	2.39	6.78	3.34	2.03	23.7
GLORIA	Certified seed 3	9.61	3.92	2.45	6.68	3.38	1.98	21.1
GLORIA	Certified seed 4	9.85	3.97	2.46	6.54	3.36	1.95	19.7
LUNA	Certified seed 3	7.18	3.53	2.03	5.41	3.18	1.70	25.6
LUNA	Certified seed 4	7.18	3.53	2.03	5.41	3.18	1.70	24.8
RONALDO	Certified seed 2	8.53	2.84	3.00	6.44	2.49	2.59	25.9
OLYMPIADA	Certified seed 3	9.69	2.87	3.38	6.69	2.16	3.10	18.3
GLORIA	Certified seed 5	9.89	3.93	2.52	6.52	3.39	1.92	16.3

Variety	Type	White length (mm)	White width (mm)	White ratio	Grain Pearl (%)	Brow grains L*	Brown grains a*	Brown grains b*
GLORIA	RUMORE Pilot 1	6.52	3.29	1.98	82.5	78.65	5.07	25.2
GLORIA	RUMORE Pilot 2	6.44	3.24	1.99	80.4	79.47	5.38	26.05
GLORIA	RUMORE Pilot 3	6.33	3.25	1.95	68.3	76.65	5.01	24.85
GLORIA	RUMORE Pilot 4	6.5	3.29	1.98	88.5	78	5.2	25.32
GLORIA	RUMORE Pilot 5	6.33	3.31	1.92	76.1	80.52	5.3	25.69
GLORIA	RUMORE Pilot 6	6.33	3.27	1.94	76.6	79.69	4.87	25.01
GLORIA	RUMORE Pilot 7	6.15	3.31	1.86	68.8	79.03	4.73	25.73
GLORIA	RUMORE Pilot 8	6.54	3.27	2.00	69.4	77.52	4.35	24.58
GLORIA	RUMORE Pilot 9	6.53	3.28	1.99	70	77.68	5.64	24.89
GLORIA	RUMORE Pilot 10	6.15	3.31	1.86	68.8	79.03	4.73	25.73
OLYMPIADA	Certified seed 1	6.34	2.12	2.99	30	74.61	5.52	26.04
GLORIA	Certified seed 1	6.15	3.31	1.86	68.8	79.03	4.73	25.73
LUNA	Certified seed 1	5.1	2.81	1.82	88.5	78	5.2	25.32
OLYMPIADA	Certified seed 2	6.15	3.31	1.86	28	77.68	5.64	24.89
RONALDO	Certified seed 1	6.17	2.38	2.59	31	79.03	4.73	25.73
LUNA	Certified seed 2	5.2	2.92	1.79	68.3	76.65	5.01	24.85
GLORIA	Certified seed 2	6.15	3.31	1.86	68.8	79.03	4.73	25.73
GLORIA	Certified seed 3	6.54	3.27	2.00	69.4	77.52	4.35	24.58
GLORIA	Certified seed 4	6.53	3.28	1.99	70	77.68	5.64	24.89
LUNA	Certified seed 3	5.3	2.91	1.83	70	77.68	5.64	24.89
LUNA	Certified seed 4	5.2	2.81	1.86	76.1	80.52	5.3	25.69
RONALDO	Certified seed 2	6.17	2.36	2.62	20.1	79.47	5.38	26.05
OLYMPIADA	Certified seed 3	6.41	3.32		28	72.31	5.45	27.1
GLORIA	Certified seed 5	6.33	3.25	1.95	68.3	76.65	5.01	24.85



Variety	Type	White grains L*	White grains a*	White grains b*	EU classification	Alkali digestion	Protein (%)	Amyloze (%)
GLORIA	RUMORE Pilot 1	84.55	0.95	17.51	Long A	6	8.4	18.5
GLORIA	RUMORE Pilot 2	83.15	0.93	17.61	Long A	6	9.1	19.1
GLORIA	RUMORE Pilot 3	84.97	1.29	18.2	Long A	6	8.4	18.3
GLORIA	RUMORE Pilot 4	87.89	0.74	17.21	Long A	6	8.8	18.2
GLORIA	RUMORE Pilot 5	82.15	1.15	17.91	Long A	6	8.1	19.3
GLORIA	RUMORE Pilot 6	86.06	1.18	17.3	Long A	6	8.5	18.9
GLORIA	RUMORE Pilot 7	85.73	0.7	17.52	Long A	6	8.7	19.2
GLORIA	RUMORE Pilot 8	86.32	1.16	18.12	Long A	6	8.2	18.5
GLORIA	RUMORE Pilot 9	84.64	1.01	17.4	Long A	6	8.9	19.1
GLORIA	RUMORE Pilot 10	85.73	0.7	17.63	Long A	6	8.5	18.3
OLYMPIADA	Certified seed 1	84.64	1.01	17.4	Long B	7	8.2	23.8
GLORIA	Certified seed 1	85.73	0.7	17.52	Long A	1	8.4	18.5
LUNA	Certified seed 1	87.89	0.74	17.21	Long A	5	7.6	18.4
OLYMPIADA	Certified seed 2	84.64	1.01	17.2	Long B	1	8.4	24.8
RONALDO	Certified seed 1	85.73	0.7	17.52	Medium	1	7.4	16.1
LUNA	Certified seed 2	84.97	1.29	18.2	Long A	5	7.9	19.1
GLORIA	Certified seed 2	85.73	0.7	17.43	Long A	6	8.9	18.2
GLORIA	Certified seed 3	86.32	1.16	18.12	Long A	6	9.2	18.7
GLORIA	Certified seed 4	84.64	1.01	17.4	Long A	6	8.3	18.8
LUNA	Certified seed 3	84.64	1.01	17.4	Long A	5	8.1	18.7
LUNA	Certified seed 4	82.15	1.15	17.91	Long A	5	7.7	18.3
RONALDO	Certified seed 2	83.15	0.93	17.61	Medium	1	7.2	15.5
OLYMPIADA	Certified seed 3	85.73	0.7	17.5	Long B	1	7.9	23.2
GLORIA	Certified seed 5	84.97	1.29	18.2	Long A	6	7.9	18.4

Variety	Type	Pearl (%)	Carbohydrates (g)	Fats (g)	Dietary fibers (g)	Thiamin (mg)	Niacin (mg)	Iron (ppm)
GLORIA	RUMORE Pilot 1	85	76	0.9	1.7	0.1	2.1	108.5
GLORIA	RUMORE Pilot 2	85	74	0.9	1.5	0.1	1.9	110.2
GLORIA	RUMORE Pilot 3	85	77	1.0	1.7	0.1	2.0	109.3
GLORIA	RUMORE Pilot 4	85	81	0.9	1.8	0.1	2.1	111.2
GLORIA	RUMORE Pilot 5	85	80	0.9	1.7	0.1	2.1	108.6
GLORIA	RUMORE Pilot 6	85	74	0.9	1.8	0.1	2.2	109.8
GLORIA	RUMORE Pilot 7	85	80	0.9	1.7	0.1	2.1	112.2
GLORIA	RUMORE Pilot 8	85	77	1.0	1.9	0.1	2.0	110.3
GLORIA	RUMORE Pilot 9	85	76	0.9	1.7	0.1	2.1	111.1
GLORIA	RUMORE Pilot 10	85	73	0.8	1.5	0.1	2.2	108.4
OLYMPIADA	Certified seed 1	10	78	0.9	1.5	0.1	2.1	73.3
GLORIA	Certified seed 1	85	78	0.9	1.7	0.1	2.1	108.9
LUNA	Certified seed 1	69	74	0.9	1.8	0.1	2.2	95.4
OLYMPIADA	Certified seed 2	13	81	0.9	1.7	0.1	2.1	82.1
RONALDO	Certified seed 1	8	78	0.7	1.8	0.1	2	181.3
LUNA	Certified seed 2	66	79	0.8	1.4	0.1	2.1	97.2
GLORIA	Certified seed 2	85	72	0.8	1.3	0.1	2.2	110.7
GLORIA	Certified seed 3	85	77	0.9	1.7	0.1	2.1	111.2
GLORIA	Certified seed 4	85	80	0.9	1.7	0.1	2.1	109.4
LUNA	Certified seed 3	68	72	0.8	1.5	0.1	2.0	98.1
LUNA	Certified seed 4	59	76	0.8	1.3	0.1	1.9	94.5
RONALDO	Certified seed 2	9	77	0.9	1.4	0.1	1.8	178.9
OLYMPIADA	Certified seed 3	11	81	0.9	1.6	0.1	1.9	75.7
GLORIA	Certified seed 5	85	76	0.9	1.8	0.1	2.2	112.8



Variety	Type	Potassium (%)	Zinc (ppm)	Manganese ppm	Cooper (ppm)	Calcium (%)	Potassium (%)	Magnesium (%)
GLORIA	RUMORE Pilot 1	1.58	90.7	125.68	8.84	0.09	2.42	0.9
GLORIA	RUMORE Pilot 2	1.73	91.5	120.56	9.41	0.09	2.13	0.9
GLORIA	RUMORE Pilot 3	1.64	89.5	131.12	7.98	0.09	2.53	0.9
GLORIA	RUMORE Pilot 4	1.56	92.0	121.99	9.24	0.09	2.47	0.9
GLORIA	RUMORE Pilot 5	1.71	91.4	123.17	7.99	0.09	2.61	0.9
GLORIA	RUMORE Pilot 6	1.47	88.6	125.16	9.45	0.09	2.32	0.9
GLORIA	RUMORE Pilot 7	1.49	91.1	127.34	10.16	0.09	2.16	0.9
GLORIA	RUMORE Pilot 8	1.63	89.9	127.44	9.12	0.09	2.19	0.9
GLORIA	RUMORE Pilot 9	1.59	93.1	122.49	10.21	0.09	2.23	0.9
GLORIA	RUMORE Pilot 10	1.56	91.6	125.92	8.93	0.09	2.34	0.9
OLYMPIADA	Certified seed 1	2.35	70.17	110.44	11.38	0.09	2.26	0.7
GLORIA	Certified seed 1	1.53	91.4	121.68	8.82	0.09	2.41	0.9
LUNA	Certified seed 1	2.18	97.2	121.54	9.81	0.09	1.83	0.9
OLYMPIADA	Certified seed 2	2.24	72.5	111.21	12.13	0.09	2.22	0.7
RONALDO	Certified seed 1	1.87	78.38	109.49	8.11	0.09	2.17	0.8
LUNA	Certified seed 2	2,26	98.3	120.49	9.32	0.09	1.91	0.9
GLORIA	Certified seed 2	1.58	90.1	125.23	8.78	0.09	2.26	0.9
GLORIA	Certified seed 3	1.47	88.9	123.67	8.44	0.09	2.45	0.9
GLORIA	Certified seed 4	1.61	90.1	128.41	9.13	0.09	2.34	0.9
LUNA	Certified seed 3	2.21	95.3	119,39	10.23	0.09	1.78	0.9
LUNA	Certified seed 4	2.3	96.6	122.71	9.56	0.09	1.84	0.9
RONALDO	Certified seed 2	1.92	77.8	109.13	8.48	0.09	2.19	0.8
OLYMPIADA	Certified seed 3	2.33	71.1	109.69	10.88	0.09	2.27	0.7
GLORIA	Certified seed 5	1.65	90.3	125.82	8.89	0.09	2.41	0.9



Follow the link to download the completed questionnaires and data analysis