SIERRA LEONE AGRICULTURAL RESEARCH INSTITUTE

A Clarion Call for Improved Roadmap Strategy

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Perceived Knowledge of Selected Stakeholders on Research, Technology and Innovation Development at Sierra Leone Agricultural Research Institute: A Clarion Call for Improved Roadmap Strategy

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Brief Overview

The Sierra Leone Agricultural Research Institute (SLARI) is an agricultural research institute established by an act of parliament in 2007. The institute plays a crucial role in the development of agricultural research, technology, and innovation in Sierra Leone. However, there is a dearth of well-articulated knowledge of SWOT analysis of **Perceived Knowledge of Selected Stakeholders on Research, Technology and Innovation Development at Sierra Leone Agricultural Institute.** Understanding the perceived knowledge of various stakeholders—such as farmers, researchers, policymakers, and industry representatives—regarding particularly issues on **Research, Technology and Innovation Development** is essential for enhancing agricultural productivity and sustainability as well as revising our operational and strategic plans for the institute. The present study explored the perceptions of selected stakeholders on research, technology, and innovation development at SLARI.

Factors Influencing Perception

Several factors influence how these stakeholders perceive knowledge related to research, technology and innovation:

a) **Education Level**: Higher education levels among stakeholders generally correlate with greater awareness and understanding of technological advancements.

b) **Access to Information**: Stakeholders who have better access to information sources (e.g., workshops, publications) tend to have more accurate perceptions.

c) **Cultural Context**: Local beliefs about agriculture can shape how innovations are received; traditional practices may conflict with modern techniques.

Methodology

A total of 62 respondents were purposively selected from various institutions for participation in a survey on Perceived Knowledge of Selected Stakeholders on Research, Technology, and Innovation Development at Sierra Leone Agricultural Institute. The institutions that participated in the exercise included: Ministry of Agriculture and Food Sciences – MAFS (6), Njala University – NU (15), Food Systems Resilience Project – FSRP (2), National Federation of Farmers in Sierra Leone – NaFFSL (2), International Institute of Tropical Agriculture – IITA (3), Sierra Leone Seed Certification Agency – SLeSCA (2), National Fertilizer Regulatory Agency – NaFRA (1), Ernest Bai Koroma University of Science and Technology – EBKUST (1), and Sierra Leone Agricultural Research Institute – SLARI (30).

The survey instruments utilized were questionnaires and focus group discussions (FGD). The open-ended question types were utilized in both the questionnaire and FGD. The questions used in the survey are given below.

i. Barriers to research, technology, and innovation development
ii. Triggering factors to the barriers of research, technology, and innovation development in **SLARI**
iii. Mitigating strategies to overcome these barriers
iv. Strategies to increase **SLARI**'s research, technology, and innovation development performance
v. Strategies for more innovativeness in SLARI
vi. Strategies of best and successful researchers, technologists, and innovators
vii. Ways of measuring research, technology, and innovation progress and deploying improved practices
viii. Pathway to improve research, technology, and innovation development for SLARI
ix. Retention strategies of researchers, technologists, and innovators in SLARI

The questionnaires were shared with and collected from the respondents through email or WhatsApp social medium.

Findings revealed that, of the 62 respondents, a return rate of 85.5% (53 respondents) was received, collated, and organized in themes. The perceived knowledge of the selected stakeholders on constraints, triggering factors, and mitigating strategies to overcome barriers of research, technology, and innovation development is summarized in Table 1. Other aspects are organized in specific thematic headings, including:

- Strategies to increase **SLARI**'s research, technology, and innovation development performance;
- Strategies for more innovativeness in **SLARI**;
- Strategies of the best and successful researchers, technologists, and innovators;
- Ways of measuring research, technology, and innovation progress and deploying improved practices;
- Pathway to improve research, technology, and innovation development for **SLARI**;
- Retention strategies of researchers, technologists, and innovators in **SLARI**.

Table 1. Constraints, triggering factors, and mitigating strategies to overcome barriers to research, technology, and innovation development

Barriers to research, technology, and innovation development	**Triggering factors to barriers of research, technology, and innovation development**	**Mitigating strategies to overcome barriers**
Limited Funding	Insufficient financial resources allocated to SLARI	Advocate for increased government funding, seek partnerships with donor agencies and private sector sponsors, and explore grant opportunities to secure additional resources for research and innovation projects
	Slow response from the government on SLARI needs to promote research, technology, and development.	A timely response from the government on SLARI needs to promote technology and development.
	A few winning research proposals have been developed	Write more winning research proposals
Low motivation of scientists and other staff	Low government funding Poor attitude of researchers toward research Poor remuneration and limited career growth opportunities	High motivation of scientists and other staff members.
High levels of poverty and instability divert	Low government funding Poor conditions of service	Improve conditions of service Increase creativity and innovativeness

focus and resources away from research and development.	Poor attitude of researchers toward research	
Human Resource Constraints	Shortage of skilled researchers, scientists, and technicians	Invest in capacity building programmes, provide training opportunities for staff, establish partnerships with academic institutions to attract talent, and implement retention strategies to address brain drain
Infrastructure Deficiencies	Poor research infrastructure Disparities in digital infrastructure, access to technology	Develop a strategic plan for infrastructure development, prioritize upgrades to laboratory facilities and equipment, leverage public-private partnerships for infrastructure investments, and seek support from development partners for modernization efforts

Table 1. Continued

Barriers to research, technology, and innovation development	**Triggering factors to the barriers of research, technology, and innovation development**	**Mitigating strategies to overcome barriers**
Limited Access to Information and Data	Inadequate access to relevant data and research findings	Strengthen information sharing mechanisms, establish a knowledge management system within SLARI, foster collaboration with research institutions and libraries, and leverage digital platforms for data dissemination and knowledge exchange

Fragmented Collaboration	Limited collaboration with key stakeholders	Foster partnerships with industry, academia, government agencies, and community organizations, establish formal collaboration agreements, participate in research networks and consortia, and leverage multi-stakeholder platforms for knowledge sharing and joint projects.
Minimal involvement of farmers in research design and dissemination of findings	Limited collaboration with farmers Limited assessment of the immediate needs of farmers	Increase farmers' involvement in research design and dissemination of findings. Research outputs should address the immediate needs of farmers.
Political Interference	Political interference and policy instability	Advocate for institutional autonomy and research independence, engage with policymakers to communicate the importance of research and innovation for national development, establish governance structures to shield research activities from political influence, and build bipartisan support for long-term research funding commitments.
Weak policies, regulatory frameworks, and poor governance affect research and innovation.	Lack of clear, supportive policies for agricultural research and innovation.	Advocate for and develop supportive policies and frameworks that prioritise research, encourage innovation and streamline processes.
Misappropriation of funds	Poor justification of fund utilisation and untimely justification	Rebuilding the confidence of donor partners through the effective and efficient

		implementation of projects and delivery on targets

Table 1. Continued

Systemic errors in recruitment practices and priorities	Having the wrong personnel in the wrong designation	Structural review and capacity building
Bureaucratic bottlenecks in accessing research funds	Slow administrative processes and bureaucratic hurdles impede project implementation. Late disbursement of resources to implementing centres or scientists	Timely disbursement of resources to implementing centres
Poor leadership and project coordinating unit priorities	Lack of proper accountability and transparency within the project team or cycle	Improved accountability and transparency within the project team
	Little or no logistical support for research, technology and innovation development sustainability	Increase logistical support towards research, technology and innovation development.
Conflicts of interest	Tribal sentiments	Teamwork spirit
Inefficient sustainable financial risk management	Reliance on external funding sources, which can be unpredictable	Develop a sustainable pathway of financing routine research, technology and innovation development through commercialisation and other internal ways of generating funds.

		Facilitate the development of patent rights for innovative technologies developed by SLARI, wherein a scientist gets a loyalty bonus from end users of his/ her technology.

Strategies to increase SLARI's research, technology and innovation development performance

To enhance its research, technology, and innovation development performance, the Sierra Leone Agricultural Research Institute (SLARI) can implement the following strategies:

a) **Strategic Planning:** Develop a comprehensive strategic plan that outlines clear goals, priorities, and targets for research, technology, and innovation activities. SLARI should align its research efforts with national agricultural development objectives and stakeholder needs.

b) **Capacity Building:** Invest in training programmes to enhance the skills and expertise of researchers, scientists, and technicians within SLARI. Provide opportunities for continuous learning, professional development, and knowledge exchange.

c) **Technology Transfer and Commercialization:** Establish mechanisms for transferring research outcomes and technologies from the lab to the field. Explore licensing agreements, spin-off ventures, and incubation programs to commercialise innovative solutions and generate revenue.

d) **Innovation Culture:** Promote a culture of innovation within SLARI by encouraging creativity, risk-taking, and entrepreneurship among staff. Recognise and reward innovative ideas, pilot projects, and successful innovations to foster a culture of continuous improvement.

e) **Monitoring and Evaluation:** Implement robust monitoring and evaluation mechanisms to track the progress and impact of research, technology, and innovation initiatives. Use performance indicators to assess the effectiveness of interventions and make data-driven decisions for future planning.

f) **Community Engagement:** Involve local communities, farmers, and end-users in the research and innovation process. Conduct participatory research, field trials, and demonstrations to ensure that technologies are tailored to meet the needs of the target beneficiaries and are socially acceptable.

g) Implement cutting-edge technologies in agricultural research, such as precision farming and biotechnology.

h) Give responsibility on a merit/ capability basis and not on contacts

i) Retain promising and devoted scientists

j) Sanitize the payroll and improve the conditions of service for government support

k) Removal of unnecessary bureaucratic financial processes at SLARI HQ.

l) Focus on farmer-centric and market-oriented research priorities

m) Partner with regional and international research institutions to leverage expertise and resources

n) Put research into use by responding to farmers' needs

o) Writing more winning research proposals and searching for funding for them.

Strategies for more innovativeness in SLARI

To become more innovative, the Sierra Leone Agricultural Research Institute (SLARI) can adopt the following strategies:

a) **Promote a Culture of Innovation:** Foster a culture that values creativity, experimentation, and continuous improvement. Encourage staff to generate and share new ideas, take calculated risks, and embrace change.

b) **Encourage Collaboration:** Facilitate interdisciplinary collaboration among researchers, scientists, and external partners to leverage diverse expertise, perspectives, and resources. Create opportunities for cross-functional teams to work together on innovative projects.

c) **Invest in Research and Development:** Allocate resources for research and development activities that focus on generating new knowledge, technologies, and solutions to address agricultural challenges in Sierra Leone. Prioritise funding for innovative projects with high potential impact.

d) Create Innovation Hubs or Incubators: Establish dedicated spaces within SLARI to incubate and accelerate innovative ideas. Provide a supportive environment for experimentation, prototyping, and testing of new technologies.

e) **Promote Knowledge Sharing:** Encourage the sharing of research findings, best practices, and lessons learned within SLARI and with external partners. Foster a culture of open communication and collaboration to facilitate knowledge exchange and learning.

f) **Monitor Trends and Emerging Issues:** Stay informed about global trends, market demands, and technological advancements in agriculture. Anticipate future challenges and opportunities to proactively innovate and stay ahead of the curve.

g) **Celebrate and Reward Innovation:** Recognize and celebrate innovative achievements within SLARI. Establish rewards, incentives, and recognition programs to motivate staff to pursue innovative ideas and projects. The innovative technologies should have patent rights, wherein a scientist gets a loyalty bonus whenever their technology is used by the end users.

h) **Seek External Funding and Partnerships:** Explore opportunities for securing external funding from donors, research grants, and industry partnerships to support innovative research projects. Collaborate with international organizations and research institutions to access expertise and resources for innovation. Embrace cross-disciplinary approaches by combining expertise in agriculture, environmental science, and engineering.

i) Invest in digital infrastructure

j) Invest in adaptive research of elite technologies around the world.

k) Engage farmers in the innovation process to identify research gaps and develop new research technologies, and to ensure relevance and usability

l) Utilize data analytics, artificial intelligence, and remote sensing for precision agriculture

m) Encourage trial-based projects to test new technologies and practices

Strategies of the best and successful researchers, technologists, and innovators

The best researchers, technologists, and innovators often share common traits and practices that contribute to their success.

a) **Curiosity and Passion:** Successful researchers, technologists, and innovators are driven by a deep curiosity and passion for their work. They are constantly seeking to learn, explore new ideas, and solve complex problems.

b) **Critical Thinking and Analytical Skills:** They possess strong critical thinking and analytical skills, allowing them to evaluate information, identify patterns, and make informed decisions. They approach challenges with a logical and systematic mind-set.

c) **Creativity and Innovation:** They are creative thinkers who can generate novel ideas, think outside the box, and come up with innovative solutions to problems. They are not afraid to take risks and experiment with unconventional approaches.

d) **Persistence and Resilience:** They demonstrate perseverance and resilience in the face of setbacks and obstacles. They are willing to overcome failures, learn from mistakes, and keep pushing forward towards their goals.

e) **Collaboration and Communication:** Successful researchers, technologists, and innovators excel at collaborating with others, sharing ideas, and working effectively in teams. They are skilled communicators who can articulate complex concepts and engage with diverse stakeholders. They collaborate with farmers, industry players, and policymakers.

f) **Adaptability and Flexibility:** They are adaptable to change and open to new perspectives. They embrace uncertainty and are willing to adjust their strategies based on evolving circumstances and feedback.

g) **Continuous Learning and Growth:** They have a growth mindset and are committed to lifelong learning. They seek out opportunities for professional development, skill enhancement, and staying up-to-date with the latest trends in their fields.

h) **Ethical and Responsible Conduct:** They uphold high ethical standards in their research, technology development, and innovation practices. They prioritise integrity, honesty, and social responsibility in their work.

i) **Focus on Impact and End-User Needs:** They are driven by a desire to create meaningful impact and address the needs of end-users or beneficiaries. They align their research and innovation efforts with real-world challenges and strive to make a positive difference in society.

j) Utilize data and evidence to inform their research and innovation strategies.

k) Intensify interface with MAFS Extension personnel to understand the dynamics at the field level in terms of technology adoption by farmers.

l) Enhance technology adoption and upscaling (putting research into use)

m) Develop practical solutions that address real-world challenges such as climate change

Ways of measuring research, technology, and innovation progress, and deploying improved practices

Measuring research, technology, and innovation progress is essential for evaluating performance, identifying areas for improvement, and deploying enhanced practices.

1. Establish Clear Objectives and Key Performance Indicators (KPIs)

- ✓ Define specific goals and objectives for research, technology, and innovation activities.
- ✓ Develop relevant KPIs to measure progress towards these goals, such as the number of patents filed, research publications, technology adoption rates, innovation impact metrics, etc.

2. Collect and Analyse Data

- ✓ Gather data on research outputs, technology development milestones, innovation outcomes, and other relevant metrics.
- ✓ Use data analytics tools to analyse trends, patterns, and performance indicators to assess progress and identify areas of strength and improvement.

3. Benchmarking and Comparison

- ✓ Compare performance metrics against industry benchmarks, best practices, and peer institutions to gauge competitiveness and identify areas where improvements are needed.
- ✓ Benchmarking can provide valuable insights into how the organisation stacks up against others in terms of research, technology, and innovation performance.
- ✓ Conduct pilot studies to demonstrate the efficacy of innovations before full deployment

4. Stakeholder Engagement and Feedback

- ✓ Engage with stakeholders, including researchers, staff, end-users, industry partners, and funding agencies, to gather feedback on research, technology, and innovation practices.
- ✓ Incorporate stakeholder input into the measurement process to ensure that key perspectives are considered and that practices are aligned with stakeholder needs.
- ✓ Establish mechanisms for continuous feedback from stakeholders and users. For instance, farmers need to provide feedback on the applicability of new technologies
- ✓ Feedback from end-users and stakeholders on the usability and effectiveness (adoption) of developed technologies.

5. Performance Reviews and Evaluation

- ✓ Conduct regular performance reviews and evaluations to assess the effectiveness of research, technology, and innovation initiatives.
- ✓ Identify strengths, weaknesses, opportunities, and threats (SWOT analysis) to inform decision-making and strategic planning.
- ✓ Measure the level of upscaling by the targeted group.
- ✓ Conduct impact assessment and sustainability
- ✓ Number of patents filed or granted because of innovation,
- ✓ Amount of research funding and grants received.
- ✓ Number of new products or technologies developed and brought to market.
- ✓ Number and quality of collaborations with other institutions, industries, and international partners.
- ✓ Number of research papers published in peer-reviewed journals.
- ✓ Number of times research work is cited by other researchers.

- ✓ The societal impact and relevance of the research and innovations.
- ✓ Compare performance metrics against leading institutions or global standards.

6. Knowledge Sharing and Learning

- ✓ Promote knowledge sharing and learning across the organisation to disseminate best practices, lessons learned, and successful innovation strategies.
- ✓ Encourage collaboration and cross-functional learning to foster a culture of innovation and improvement.
- ✓ Use community-based extension systems to reach more farmers with research outputs
- ✓ Provide hands-on training for farmers on adopting new technologies and practices

Pathway to improve research, technology, and innovation development for SLARI

Improving research, technology, and innovation development in the Sierra Leone Agricultural Research Institute (SLARI) requires a strategic and holistic approach. The pathways include a pathway to improve research, technology, and innovation development, including:

a) Assessment and Planning

- ✓ Conduct a comprehensive assessment of SLARI's current research, technology, and innovation landscape, including strengths, weaknesses, opportunities, and threats.
- ✓ Develop a strategic plan that outlines clear goals, objectives, and priorities for improving research, technology, and innovation within SLARI.

b) Infrastructure and Resources

- ✓ Provide necessary infrastructure, equipment, and resources to support research, technology development, and innovation activities.
- ✓ Invest in modern laboratory facilities, research tools, and technology platforms to enable cutting-edge research and innovation.

c) Collaboration and Partnerships

- ✓ Foster collaboration with local and international research institutions, industry partners, government agencies, and other stakeholders to leverage expertise, resources, and networks.
- ✓ Establish strategic partnerships that facilitate knowledge exchange, joint research projects, and technology transfer initiatives.

d) Research Excellence

- ✓ Promote a culture of research excellence within SLARI by encouraging high-quality research outputs, publications, and innovations.
- ✓ Support researchers in conducting rigorous, impactful research that addresses key agricultural challenges in Sierra Leone.
- ✓ Ensure that women and youth actively participate in research and innovation initiatives

e) Technology Development

- ✓ Prioritise technology development initiatives that focus on creating innovative solutions to enhance agricultural productivity, sustainability, and resilience.
- ✓ Invest in research and development activities that lead to the creation of new technologies, tools, and practices that benefit farmers and communities.

f) Innovation Ecosystem

- ✓ Build an innovation ecosystem within SLARI that supports the identification, incubation, and commercialisation of innovative ideas and technologies.
- ✓ Establish mechanisms for promoting entrepreneurship, technology transfer, and industry collaboration to drive innovation and economic growth.
- ✓ Create a roadmap aligned with national and global agricultural goals.

g) Monitoring and Evaluation

- ✓ Implement a monitoring and evaluation framework to track progress, measure impact, and assess the effectiveness of research, technology, and innovation initiatives.
- ✓ Use performance metrics and feedback mechanisms to inform decision-making, identify areas for improvement, and deploy enhanced practices.

h) Sustainability and Impact

- ✓ Ensure that research, technology, and innovation efforts are sustainable, scalable, and have a positive impact on agricultural development, food security, and livelihoods in Sierra Leone.
- ✓ Align SLARI's activities with national development priorities and the needs of farmers and communities to maximise impact and relevance.

i) Streamline administrative processes to reduce bureaucratic delays.
j) More adaptive research and breeding programmes.
k) More multi-locational trials for environmental adaptability.
l) Viable planting materials/seeds and breeds of livestock
m) Logistical support to research, technology and innovation development.
n) Capacity building and in-service training
o) More financial support
p) Staff motivation mechanism

Retention strategies of researchers, technologists and innovators in SLARI

Retaining researchers, technologists, and innovators in the Sierra Leone Agricultural Research Institute (SLARI) requires a combination of strategies that focus on professional development, career advancement, work environment, and organizational culture. The key approaches to retaining talent in SLARI are:

a) Career Development Opportunities

- ✓ Provide researchers, technologists, and innovators with opportunities for career growth and advancement within SLARI.
- ✓ Offer training programmes, workshops, and mentorship opportunities to support professional development and skill enhancement.

b) Recognition and Rewards

- ✓ Recognise and reward the contributions of researchers, technologists, and innovators through incentives, awards, and performance-based bonuses.
- ✓ Conduct bi-annual evaluation and promotion.
- ✓ Acknowledge achievements, milestones, and innovative projects to motivate and retain top talent.

c) Work-Life Balance

- ✓ Promote a healthy work-life balance by offering flexible work arrangements, telecommuting options, and wellness programmes.
- ✓ Support employees in managing their workload, stress levels, and personal commitments to enhance job satisfaction and retention.

d) Competitive Compensation

- ✓ Ensure that researchers, technologists, and innovators receive competitive salaries, benefits, and incentives that reflect their skills, expertise, and contributions.
- ✓ Conduct regular salary reviews and benchmarking to remain competitive in the market and retain top talent.

e) Professional Development Support

- ✓ Invest in professional development opportunities, such as workshops, conferences, and training programs, to enhance the skills and knowledge of researchers, technologists, and innovators.
- ✓ Support employees in pursuing advanced degrees, certifications, and specialised training to further their expertise.

f) Research Funding and Resources

- ✓ Provide researchers with access to research funding, grants, and resources to support their projects and initiatives.
- ✓ Provide the necessary equipment, facilities, and support services to conduct high-quality research and innovation activities.

g) Leadership and Mentorship

- ✓ Provide strong leadership and mentorship to researchers, technologists, and innovators to guide their career development and growth.
- ✓ Foster a culture of mentorship and knowledge transfer to support the professional growth of employees at all levels.
- ✓ Clearly communicate the organisation's mission and vision, ensuring alignment with personal and professional goals.
- ✓ Highlight the societal impact and importance of their work in addressing national and regional challenges.

h) Feedback and Communication

- ✓ Establish regular feedback mechanisms and communication channels to solicit input from employees and address their concerns.
- ✓ Encourage open dialogue, transparency, and two-way communication to engage employees and foster a sense of ownership and belonging.
- ✓ Fair resolution of inequalities and biases

i) Enabling Environment and Commitment

- ✓ Provide the requisite research infrastructure, housing, electricity, water and other relevant logistics.
- ✓ Invest in digital infrastructure.
- ✓ Enforce a strong and fair bonding agreement with staff pursuing capacity enhancement with pay
- ✓ Improve accountability and transparency mechanisms
- ✓ Respect all staff irrespective of their levels.

These findings corroborate those obtained in the focus group discussions, as some organisations, such as NaFFSL, collected, collated and submitted their views as an institutional contribution. Moreover, NaFFSL provided additional responses to key questions developed by them that could be useful in addressing the felt needs of farmers in Sierra Leone, as presented below.

Accordingly, the challenges in rice and other crops, such as pests, diseases, and low yields, can be addressed through RTID by providing farmers with access to improved seed varieties that are pest-resistant, high-yielding, and climate-smart. The bottlenecks in accessing research findings or improved technologies from RTID should be resolved, as many farmers lack direct access to research results due to limited communication channels and inadequate extension services.

Regular training on good agricultural practices, seed selection, and post-harvest handling to improve the quality and marketability of their rice, and workshops on modern farming techniques, etc. The farmers also opined that RTID should introduce climate-resilient rice varieties and help them adopt water management techniques like irrigation systems and proper catchment management.

The needs of farmers can be adequately addressed through the involvement of farmers in participatory research by hosting regular consultations, on-field trials, and feedback sessions to tailor our research outputs to their challenges.

Enhancing access to affordable and high-quality seeds for smallholder farmers requires RTID's key role in scaling up the production and distribution of foundation seeds to seed companies that produce certified seeds for farmers.

The farmers' body furthered that RTID should utilize farmer field schools, radio programmes, and partnerships with extension officers and the NaFFSL to ensure that research findings reach farmers effectively.

The RTID should establish farmer committees to work alongside researchers in assessing the uptake of new technologies and documenting success stories or challenges.

Establishing a farmer-researcher advisory group that meets quarterly to discuss ongoing challenges, share research updates, and co-develop solutions.

The RTID and NaFFSL should jointly advocate for policy support to enhance rice production and the adoption of research outputs by preparing joint policy briefs, engaging stakeholders, and presenting unified recommendations to the Ministry of Agriculture and Food Security (MAFS).

To ensure effective collaboration between farmers and RTID, NaFFSL can act as a mediator, facilitating communication, organizing workshops, and advocating for resources to strengthen farmer-RTID collaboration.

The key milestones that could be achieved within the next five years are increasing rice productivity by 30%, expanding the adoption of improved seed varieties, and enhancing farmer income through better market linkages and value chain integration.

Conclusion

The study on perceived knowledge among selected stakeholders on research, technology, and innovation development at Sierra Leone Agricultural Institute established invaluable findings that could be useful for improving the roadmap strategy of SLARI. Findings contribute better understanding of constraints, triggering factors, mitigating strategies, increasing performance strategies, principles of best and successful researchers, technologists, and innovators, ways of measuring progress and deploying improved practices, pathways to improve RTID, and staff retention strategies that are useful for developing targeted strategies that enhance collaboration among researchers, policymakers, farmers, and industry representatives. By addressing gaps in knowledge through effective communication and education initiatives, better conditions of service, passion, collaboration, increased support, and good leadership, SLARI can foster an environment conducive to innovation-driven agricultural development.