

## **SKUAST Jammu: A Journey of Growth and Groundbreaking Achievements in Agriculture and Allied Sciences**

### **SKUAST-Jammu's Strong Performance in NIRF 2024 Rankings**

In the 2024 National Institutional Ranking Framework (NIRF) results, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu made a commendable entry into the rankings, securing the 20th position in the Agriculture and Allied Sectors category and 13<sup>th</sup> Rank amongst Agricultural Universities. This achievement highlights SKUAST-Jammu's commitment to academic excellence, research, and its role in advancing agricultural education in the region.

**S**her-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu) came into existence on 20th September, 1999 following the amendment in Sher-e-Kashmir University of Agricultural Sciences and Technology Act, 1982, through the State Legislature. The establishment of SKUAST of Jammu has in its background aspirations, commitment and missionary zeal to cater the needs of Jammu Division for the region-specific advances through education, research and extension in the field of agriculture.

The university is mandated to address the basic, strategic and applied research related to enhanced production in agriculture and allied sectors (livestock health improvement and quality-based products). SKUAST-Jammu is striving to achieve high standards of excellence in education, research and extension for the betterment of farming community of the region.

The university comprises distinct faculties, including the Faculty of Agriculture, Faculty of Veterinary Sciences & Animal Husbandry, Faculty of Horticulture and Forestry, Faculty of Dairy Technology, Faculty of Agricultural Engineering and the Institute of Biotechnology. SKUAST-J is a multi-campus university with its headquarter located at Chatha, Jammu.

Chatha campus possess 578.00 acres area and R. S. Pura campus has 84.13 acres land holding. The total land holding, including Research Stations/Sub-Stations and KVKs, of the University is 1223 acres. SKUAST-Jammu serves the diverse agro-climatic needs across sub-tropical, semi-temperate and temperate zones of Jammu Province with elevations ranging from 300 to 4200 meters above sea level. Dedicated in improving the livelihood of approximately 800,000 farm families, the university focuses on quality research, extension services, education, and entrepreneurship development.

There are 10 Research Stations/Sub-Stations and nine KVKs in the University which are located in different agro-climatic zones of Jammu region for catering the location-specific needs of the farming community. University pursues research of high standard through projects funded by various central and state agencies. Krishi Vigyan Kendra's (KVKs)

The admission to the undergraduate and postgraduate courses in the Faculties of Agriculture, Horticulture, Veterinary Science & Animal Husbandry, Dairy Technology, Basic Sciences and Agricultural Engineering, Institute of Biotechnology and Agri Business Management programmes through competitive exams is a regular feature. The university has been actively involved in the transfer of evolved technologies to the end users through the strong extension system.

### **Brief about Faculties, Research Stations and KVK network under SKUAST Jammu**

#### **Faculties (06)/ Institution (01)**

- Faculty of Agriculture - Chatha
- Faculty of Basic Sciences - Chatha
- Faculty of Horticulture & Forestry - Chatha
- Faculty of Agricultural Engineering - Chatha
- Faculty of Veterinary Sciences & Animal Husbandry - R.S. Pura, Jammu
- Faculty of Dairy Technology - Chatha
- Institute of Biotechnology – Chatha

#### **Research Stations and sub stations (08)**

- Advanced Center for Rainfed Areas (ACRA) - RakhDhiansar, Jammu
- Advanced Center for Horticultural Research (ACHR) - Udheywalla, Jammu
- Rainfed Research Station for Sub-tropical Fruit Crops (RRSS) - Raya, Samba
- Pulses Research Sub-Station (PRSS) - Samba
- Maize Research Sub-Stations (MRSS) - Udampur, Poonch
- Regional Horticultural Research Sub-Station (RHRSS) - Bhaderwah, Doda
- Regional Agriculture Research Station (RARS) - Rajouri
- Basmati Rice Research Center - Chakroi, R.S. Pura, Jammu

#### **Extension Network - Krishi Vigyan Kendras (KVKs 09)**

- KVK Jammu
- KVK Samba
- KVK Kathua
- KVK Reasi
- KVK Doda
- KVK Kistwar
- KVK Ramban
- KVK Rajouri
- KVK Poonch

### **Directorate of Research: Advancing Agricultural Innovation and Development**

Directorate of research executes and manage research programmes of the University comprising of basic, strategic and applied research activities as per the aspirations of farming community. It also undertakes location specific research in all the Research Stations situated in different parts of Jammu division as well as monitor the location specific activities of these research stations. Research stations/sub-stations (10nos.) are catering the needs of agriculture and allied sector of Jammu Province. Eleven (11 nos.) AICRPs (All India Coordinated Research Projects along with 13 AICRP voluntary centers, 08 advance Center of Excellence including Advanced Centre for Horticulture Research

(Indo -Dutch project), Plant Tissue Culture and Bio-control Laboratory, Advanced Center for Rainfed Agriculture (ACRA), Rakh Dhiansar, Jammu, Gene Bank, Honey Testing Lab, Honey Bee Disease Diagnostic Lab, Quality Control Laboratory, and Advanced Genomics Facility(Next Generation sequencing Unit & Biolistic System) are working in the University for the welfare of farming community through R&D in different crops.

### **Key Highlights of Major Achievements (2021-24)**

Driven by research excellence, it advances studies in agriculture, animal husbandry, and allied fields, focusing on temperate and cold desert agriculture. This commitment has led to the development of total of 50 crop varieties have been released by the university, spanning various categories including cereals, oilseeds, pulses, vegetables and fruits. These varieties aim to enhance crop quality and productivity to cater different agricultural needs in the region. Our work at the forefront of agricultural innovation, benefiting rural communities across Jammu and Kashmir through impactful research and education.

Over recent years, SKUAST-Jammu has executed a growing number of research projects with substantial budgets, *viz* 82 projects in 2021-22 (INR 45.50 crores), 102 (INR 110.31 crores) in 2022-23 and 126 in 2023-24 (INR 199.30 crores), funded by various agencies such as DBT, DST, ICAR, MIDH, NABARD, RKVY-RAFTAAR and HADP (Govt. of J&K), etc.

Infrastructure development during the period includes Center of Excellence for horticulture, bio-control and tissue culture labs, as well as 15 custom machinery prototypes for hill agriculture.

Innovative products, like a Tannin Enriched Multi Nutrient Block and a diagnostic kit for warble fly, have been commercialized, alongside locust protein films for preserving livestock products. Technological advancements in hydroponic and vertical farming for vegetable and saffron cultivation have also been standardized.

University has made substantial strides in intellectual property, with 21 patents filed and 18 granted, alongside significant progress in geographical indications (GI) to protect regional specialties, with 4 GI registrations completed and 12 are under pipe-line. The university's research output has steadily increased, reaching 220 publications in 2021-22, 245 in 2022-23, and 270 in 2023-24, with good number in high-impact NAAS-rated journals. Additionally, University strengthened its collaborative impact through 53 strategic Memoranda of Understanding (MoUs) with national and international research institutions, fostering extensive partnerships to advance agricultural innovation and development.

The University is also providing technical support to the Department of Agriculture, J&K Government & line departments as well as the farmers and supply them improved quality seed and planting material for different agro-climatic conditions of Jammu Province of J&K.

The University has developed and implemented comprehensive IPR policy for governing Technology Management and Intellectual Property Rights (TM&IPR).

Through Holistic Agriculture Development Plan of J&K UT, the University is undertaking Research & Development in agriculture and allied sectors besides human resource development for technological backstop for sustainable and accelerated transformation of agriculture through scholarships to PG students and strengthening of student research and research infrastructure.

### **Directorate of Education: Fostering Knowledge and Skills for Future Generations**

The Director of Education oversees the coordination and management of inter-faculty and inter-campus instructional programmes, ensuring the quality of teaching across all undergraduate and postgraduate levels. This role involves shaping policies related to resident instruction within the university.

### **University Examination Cell**

University Examination Cell (UEC) established in November 2012 administers the SKUAST-J Common Entrance Test for admission to six undergraduate, 40 postgraduate, and 36 Ph.D. programmes. It is also responsible for conducting end-term examinations for all undergraduate programmes, namely B.Sc. (Hons.) Agriculture; B.Sc. (Hons.) Horticulture; B. Tech. Biotechnology; B.Tech. Agricultural Engineering, and B.Tech. Dairy Technology. Additionally, UEC manages annual board exams (theory and practical) for B.V.Sc & AH, written comprehensive examination for Ph.D. students, recruitment tests for non-teaching positions, and final examination for Diploma in Agricultural and Horticultural Training

### **Counseling & Placement Cell**

The Counseling & Placement Cell focuses on the holistic development of students by creating opportunities for them to engage with field experts and participate in personality development training. Specialized sessions cover resume building, communication skills, and interview preparation. A key mandate of the cell is to establish industry partnerships to facilitate campus placements and provide career guidance to students.

### **Key Highlights of Major Achievements (2021-24)**

- Gross enrollment has risen by 10%, bringing the total student strength to 1,910 including 1,141 undergraduates, 404 master's students, and 298 Ph.D. candidates.
- New faculties have been established, including the Faculty of Horticulture & Forestry, Faculty of Dairy Technology, and Faculty of Agricultural Engineering.
- A dual degree programme with Western Sydney University, Australia, has been introduced for B.Sc. (Hons.) Agriculture and B.Tech (Biotechnology) students.
- Three new postgraduate programmes—M.Sc. Fisheries Sciences, M.Sc. Organic Farming, and M.Sc. Seed Technology—were launched within the last three years.
- The National Education Policy (NEP) 2020 has been implemented at the undergraduate level, following the ICAR 6th Deans' Committee Report.
- In line with NEP 2020, the University formulated the guidelines for Master's and Ph.D. sandwich/bilateral degree programmes.

- The peer review process for a PhD student's research synopsis has been adopted for thorough assessment by independent experts in the field.
- Guidelines for 'Professors of Practice' and 'Adjunct Faculty' have been formulated to enrich academic offerings.
- Under the 'Study in India' initiative, foreign students have been admitted to postgraduate programmes.
- Recommendations from the BSMA Committee have been adopted for PG and Ph.D. programmes.
- A scholarship of ₹5,000 per month has been implemented for all PG and Ph.D. students under HADP.
- Plagiarism detection software, Drill Bit, is now used to uphold academic integrity in theses and research publications.
- Industry-Academia collaborations have been strengthened through R&D partnerships and the appointment of Professors of Practice. Four Memorandums of Understanding (MoUs) have been signed with industry partners.
- A Career Development Centre has been established to foster students' personality and career development.
- Recruitment tests for non-teaching positions have been held since December 2022, filling 125 positions across 15 posts.

### **Directorate of Extension: Empowering Farmers Through Research-Driven Extension Initiatives**

The Directorate of Extension at SKUAST-Jammu serves farmers across 10 districts encompassing three distinct agro-climatic zones in the Jammu region; Sub-tropical, Intermediate, and Temperate. Technologies developed at research stations and faculties of the university tailored for these zones, are then disseminated directly to field through KVKs. Additionally, various externally funded extension projects are executed to showcase research interventions directly at farmers' fields. The operational framework of the Directorate is strategically aligned to address both traditional and emerging challenges, ensuring the advancement of the agricultural sector along modern lines.

Directorate of extension is working with the mandate of planning, executing and coordinating the extension activities of the university, transferring of latest technologies related to agriculture, animal husbandry, horticulture and other allied areas to the farmers and field functionaries using different extension methodologies and strengthening the linkages between university, line departments and various National International organisations.

Coordination and monitoring of technology application and frontline extension education programmes through a network of 09 Krishi Vigyan Kendra's with the objective of boosting the socio-economic development of rural families through improved agricultural practices could enhance agricultural productivity and income.

## Key Highlights of Major Achievements

- Substituted 40% of coarse rice cultivation with Pusa Basmati varieties in the plains of Jammu region led to a significant increase in profitability, yielding an extra Rs. 16,000 per hectare.
- Transformed maize production over an area of 80% Intermediate hills and Temperate zones by replacing composites with hybrid varieties resulted in enhanced productivity by 28 quintals per hectare.
- Supported the Purple Revolution in 28 villages of Doda district, replacing maize cultivation with Lavender, boosted profitability by Rs. 21,000 per hectare.
- Strengthened over 200 farmers in the Kandi (rainfed) villages of Jammu through Harad cultivation, with each tree yielding an average of 100-120 kgs and generating an average income of Rs. 1800 per tree.
- Contributing to the preservation of traditional Basmati rice in Jammu by producing over 400 quintals of high-quality seed annually.
- Over 500 rural youths in 21 batches secured employment opportunities in the past three years after completing certificate courses (15-days each) on Integrated Nutrient Management since 2021.
- Supported the growth of more than 1000 entrepreneurs in mushroom growing and bee-keeping enterprises.
- Empowering Pashu Sakhis: An alternative community-led livestock extension service mechanism of NDDDB has been promoted, led to generation of employment for 312 Pashu Sakhis, from remote villages in 12 batches of the Jammu region in 2023-24.
- Benefitted over 1 lakh farmers and enabled them to have access to information related to Agriculture and allied sectors besides various schemes through Regional Agriculture Fairs and Kisan Melas organized by the Directorate during 2019-2024.
- In the 2023-24 period, the Directorate introduced a recent intervention by demonstrating the utilization of agricultural drones to farmers, covering an extensive area of 300 hectares. This initiative aimed to facilitate the adoption of time and energy-saving technologies in agriculture.
- Developed and uploaded over 200 videos under YouTube channels and Daksh Kisan program to empower farmers and agri-preneurs by providing access to high-quality training and educational resources under Holistic Agriculture Development Plan (HADP).
- Facilitating market linkages for over 1500 farmers through 15 Farmer Producer Organizations (FPOs) promoted by the Directorate since 2021.
- Created employment opportunities for more than 500 farm women in the Reasi district through Self-Help Groups (SHGs), involving value addition and processing, with an average annual income of Rs. 2.49 lakh per group.

- Encouraged marigold cultivation in 36 villages of Doda district, involving over 680 households and generating a collective annual turnover of Rs. 1 crore.
- Providing on-the-spot solutions to farmers' queries under the new initiative 'Vice Chancellor to Village' Programme.
- Delivered capacity building support in Extension Management to 6683 extension functionaries through 222 programs, encompassing participants from both public and private sectors under SAMETI.
- Fifty extension functionaries from various line departments successfully completed the Post Graduate Diploma in Agricultural Extension Management (PGDAEM), while 80 rural youth accomplished the Diploma in Agricultural Extension Services for Input Dealers (DAESI) provided by MANAGE Hyderabad.
- Successfully advocated for the adoption of high egg laying backyard poultry breeds among rural youth and women farmers, resulting in a net annual income of Rs 16000 per 20 birds.
- Enhanced the overall health and productivity of dairy animals by introducing urea mineral molasses blocks in fodder-deficient regions, leading to an increase of 1-1.25 kg in daily milk production per animal.

### **KVKs under Directorate of Extension**

The KVKs operating under the SKUAST, Jammu, serve as vital agricultural technology hubs in their respective districts. It plays a pivotal role in agricultural advancement through assessing and refining technologies to adapt to the unique needs of local farming systems. Currently, India has established 732 KVKs across rural districts, with 19 in J&K and 09 operating under the jurisdiction of the SKUAST Jammu with the vision to become leading resource and knowledge centres for agricultural technology, promoting the progress and well-being of the farming community. Their main activities include on-farm testing of technologies and products to determine location-specific suitability, as well as conducting frontline demonstrations to showcase the potential of innovative agricultural practices directly on farmers' fields. KVKs also focus on human resource development by providing training to farmers, rural youth, and extension personnel, thereby enhancing skills and knowledge in agricultural practices. Acting as resource and knowledge centers for agricultural technology, KVKs support initiatives from public, private, and voluntary sectors aimed at agricultural improvement

KVK framework aims to leverage agricultural innovations and strengthen the farming community, working closely with stakeholders across sectors are enhancing the agricultural economy of the region.

### **State Agricultural Management and Extension Training Institute, Jammu**

SAMETI-J under the Directorate of Extension is an autonomous institution with greater flexibility in structural and operational aspects. The SAMETI is a state level institute established on the patterns of MANAGE, and mandated to provide support to Extension Reforms. The institute was set up in 2009. The institute has been assigned responsibilities of

imparting training to in-service officers of various departments including Agriculture, Horticulture, Animal Husbandry, Sheep Husbandry, Floriculture, Sericulture, Social Forestry, and Fisheries; along with imparting training to extension personnel of ATMA, NGOs, Input Dealers, Deputy Project Directors and Farmer friends with major objective to develop systematic linkage between State, Regional and International Institution of outstanding accomplishment in the field of Agricultural Extension Management It also provides induction training to ATMA functionaries and refresher training to all ATMA functionaries minus BTMs and SMSs. SAMETI–J is conducting contact classes and examination of One Year Post Graduate Diploma in Agricultural Extension Management (PGDAEM) and Diploma in Agricultural Extension Services for Input Dealers (DAESI) in collaboration with MANAGE, Hyderabad, Government of India.

Between 2014 and 2024, the SAMETI organized 222 training programs across various sectors, engaging a total of 6,821 participants. The primary area of focus was Agriculture, which saw the highest number of participants (4,168) over the decade, reflecting consistent engagement. Other significant areas included Sericulture (448 participants), Animal Husbandry (A.H) with 402 participants, and Social Welfare (394 participants), which saw a notable increase due to ICDS-related training in recent years. Horticulture, Floriculture, and Fisheries also saw steady participation, contributing to a diversified training portfolio. Smaller programs, like Command Area Development (17 participants), focused on specific skills, while intermittent training in sectors like ATMA and KVKs/SKUAST targeted specialized needs.

Overall, the SAMETI training initiatives addressed various sectors, promoting skill development across agricultural and social welfare domains.

Establishment of **Agri-Business Incubation Centre (ABIC)** in 2019 at Sher-e-Kashmir University of Agricultural Sciences & Technology, Jammu (SKUAST-Jammu), is another milestone, serves as the sole R-ABI (Rashtriya Agri-Business Incubator) with the aims to empower agri-entrepreneurs and startups by enhancing their business knowledge and skills through specialized training, focusing on the fundamentals of establishing and managing a successful agri-business. Additionally, it assists in securing grant-in-aid support through the Ministry of Agriculture & Farmers' Welfare, Government of India. ABIC, SKUAST-Jammu currently offers two key training programs: First one is UDGAM (Agripreneurship Orientation Programme/Idea Stage) that targets individuals with innovative ideas in agriculture or allied sectors, helping them move from concept to incubation. Selected participants may receive a grant-in-aid of up to Rs. 5 lakhs. Second one is PRAGATI (Seed Stage Funding Programme) that geared towards agri-entrepreneurs who have developed a prototype, minimum viable product, or working model, PRAGATI supports these participants in further development, with selected projects eligible for a grant-in-aid of up to Rs. 25 lakhs.

Since its inception, ABIC, SKUAST-Jammu has incubated 78 entrepreneurs across seven training batches through the UDGAM and PRAGATI programs. It has successfully secured grant-in-aid funding totaling Rs. 2.88 crores for 26 of these startups from the Ministry of Agriculture & Farmers' Welfare, Government of India.



## WHAT DISTINGUISHES US

- Our university is home to a dedicated team of highly skilled educators and professionals who are committed to academic excellence and the success of our students.
- Our university upholds rigorous academic standards, ensuring that our programs are of the highest quality and effectively prepare our students for successful careers in their respective fields.
- Our university fosters a dynamic and inspiring academic atmosphere that promotes critical thinking, creativity, and innovation, encouraging students to reach their full potential.
- Our university offers a comprehensive learning experience that connects theoretical knowledge with practical, real-world applications.
- Our university is dedicated to cultivating an entrepreneurial mindset among our students, equipping them with the skills and confidence to excel in the business world.
- Our focus is on advancing research in agriculture, animal husbandry, and allied fields—particularly in temperate and cold desert agriculture—positions us as leaders in agricultural innovation.
- Our research efforts are designed to have a direct, positive impact on rural communities in the union territory of Jammu and Kashmir, contributing to local development.
- We strive to shape the next generation of problem-solvers, equipping our students with the knowledge and skills needed to address global challenges and drive innovative solutions.

## Recap

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu has made significant strides since its inception in 1999 in advancing agricultural research, education, and extension. The university's strategic approach, which integrates cutting-edge research with practical extension services, has played a crucial role in transforming the agricultural landscape of Jammu and Kashmir. Through its diverse faculties, extensive research stations, and robust extension network, SKUAST-Jammu is empowering farmers, fostering entrepreneurship, and contributing to the overall socio-economic development of rural communities.

Key achievements such as the release of 50 crop varieties, the execution of over 300 research projects, the commercialization of innovative products, and the successful implementation of technology transfer initiatives highlight the university's commitment to addressing region-specific challenges. Its strong focus on infrastructure development, intellectual property, and collaborations with national and international institutions further strengthens its position as a leader in agricultural innovation.

With a growing emphasis on education and the establishment of new programs, SKUAST-Jammu is actively preparing its students to meet the challenges of the modern agricultural industry. The university's extension services, delivered through Krishi Vigyan Kendras, have improved agricultural practices, enhanced productivity, and created sustainable livelihoods for farmers.

As SKUAST-Jammu continues to focus on research excellence, infrastructure development, and the holistic empowerment of farmers, it remains at the forefront of agricultural innovation and a beacon of hope for the agricultural community in Jammu and Kashmir. The university's initiatives are paving the way for a prosperous future, ensuring that agricultural transformation in the region is both sustainable and impactful.