



UNIVERSITY OF VETERINARY AND
ANIMAL SCIENCES LAHORE

PROJECT REPORT 2021-23

CAPACITY BUILDING OF DAIRY FARMERS
AND INDUSTRY STAKEHOLDERS ON
MILK VALUE CHAIN

DEPARTMENT OF DAIRY TECHNOLOGY

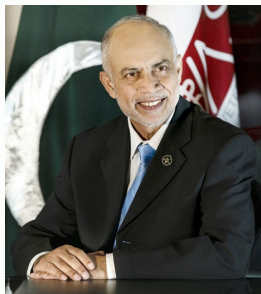


PROJECT REPORT

Duration: FY 2021-2023 (02 Years)

Total Cost: 70.00 Million

Department of Dairy Technology Capacity Building of Dairy Farmers and Industry Stakeholders on Milk Value Chain



Prof. Dr. Nasim Ahmed S.I
Vice Chancellor UVAS

Dairy sector is all about production, cost, and quality of milk and value-added milk products. University of Veterinary and Animal sciences is continuously striving to define methods to improve the return over investment of commercial and livelihood of small-scale dairy holders. High quality milk production with less impact on environment is the demand of country. I believe there is no better place than UVAS to learn these innovations and best practices.

Pakistan is an agricultural country where this sector contributes about one fifth in country's GDP and is the backbone of the rural economy as it provides employment to 42% workforce of the country. Livestock is the largest shareholder in the agriculture with enormous contribution of 60.1% in the agricultural GDP. It can be appraised from the fact that a rural population of nearly 30-35 million is directly dependent on livestock farming for their livelihoods (Economic Survey of Pakistan 2020-21). Pakistan is the fourth largest milk producing country in the world (FAO 2019) and majority of milk is produced by small dairy farmers (estimated to be over 8 million farmers).

Capacity building at farm-level for milk value addition can be a powerful instrument for raising the income of small-scale farming families. Milk processing is an art that calls for knowledge on how to combine milk into more lucrative goods. Value addition will increase milk value and reduce milk losses. A skilled and trained workforce in the field can contribute significantly to the development of the dairy farmers and milk value addition. We acknowledge Livestock & Dairy Development Department Govt. of Punjab for providing funds of worth RS 70.00 Million for this project.

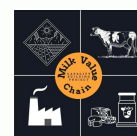


Dr. Muhammad Junaid
Project Director

Objectives of the Project

The intensive training modules have been aimed to train veterinary professional, dairy farmers and industry stakeholders on milk value chain.

1. To drive the opportunity among dairy stakeholders for milk value chain.
2. To advocate knowledge of advance technologies and machinery for milk value addition and get cutting edge advantage.
3. Capacity building on milk processing technologies for improving dairy products quality and shelf life.
4. To enhance capabilities of veterinary professional, dairy farmers and industry stakeholders regarding modalities and requirements of certifications for quality assurance of milk product through extensive trainings.



Mission Statement

It is critical to have a personal, professional, and safe learning environment in order to successfully learn new dairy skills. The Dept of dairy technology, which offers a combination of professional and enthusiastic trainers, exceptional facilities, and learning materials, is the greatest place to find these circumstances while also preparing you for new skills. We believe in transferring abilities that can be utilized freely in the workplace, based on the participant's own particular learning objectives.

Vision

Through the concept of Learning by Doing, each participant will gain new abilities and have unique training experience. The Department of Dairy Technology enhance and grow its position in hands-on learning in this way. The department also shares knowledge and skills with a variety of research and business partners.

Training Modules

1. Dairy Laboratory Analysis Skills
2. Entrepreneurship in Dairy Industry
3. Pasteurized & Flavored Milk Technologies
4. Hands-on Cheese Making
5. Frozen Dairy & Fat Rich Dairy Products
6. Intervention in consumer awareness
7. Efficient Milking Practices
8. Traceability of Milk & value-added dairy products
9. Halal & Food Safety Systems
10. Frozen & Fermented Dairy Products
11. Fat Rich Dairy products

Veterinary Professionals of L&DD

Preference was given to Field / Extension veterinarian

Small Scale Milk Processors

Literate, Progressive farmers & Entrepreneurs, Members of Dairy Farmers & Industry Associations

Industry Stakeholders

Skilled & Semi Skilled, Literate Industry Workers

Laboratory Personnel

Veterinarians, Literate farmers, Industry personnel, Members of Dairy Farmers & Industry Associations

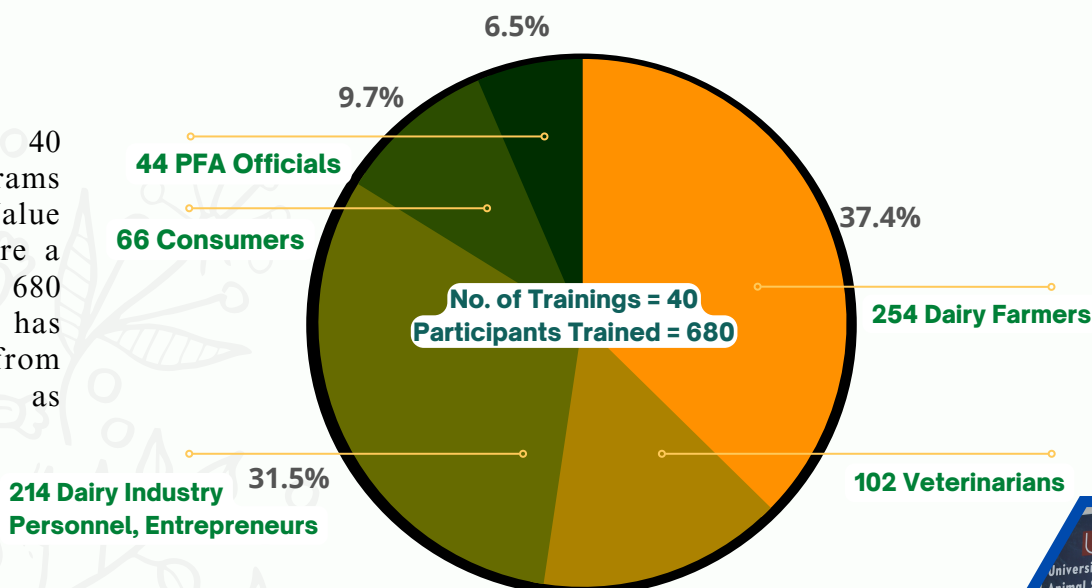
Consumers

Literate Consumer (included women & Children) for understanding of milk products categorization

Methodology

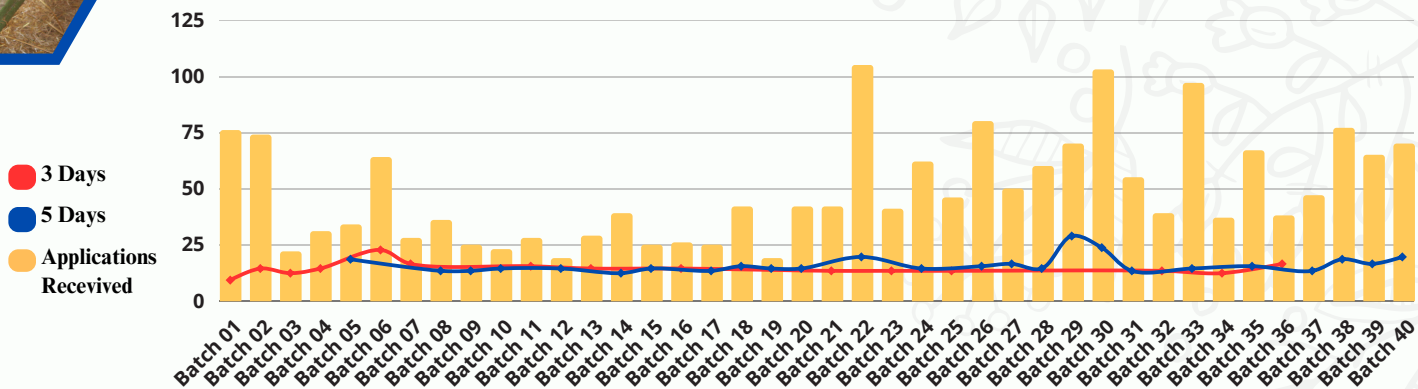
A. Trainings

Conducted 40 Training Programs on Milk Value Addition, where a total of 680 participants has been trained from various fields as shown





Applicants vs Shortlisted Participants



Participants Training Feedback

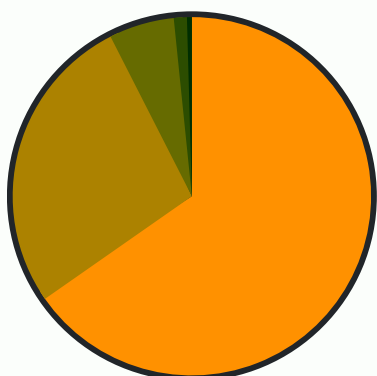


Fig.1: Did the course content meet your expectations?

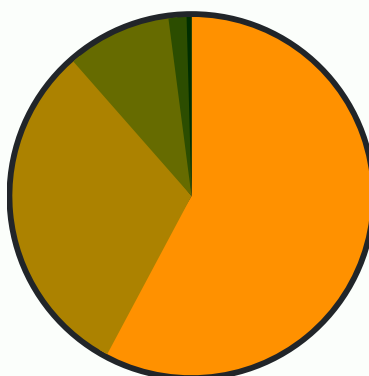


Fig.2: Training received was adequate for my position?

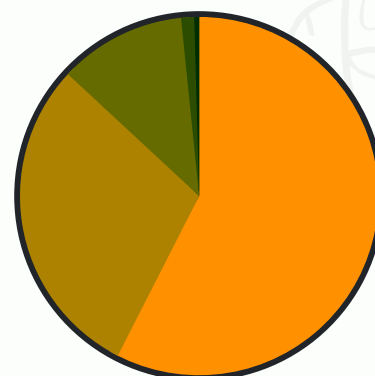


Fig.3: Can you practically apply the course material to your daily work situations?

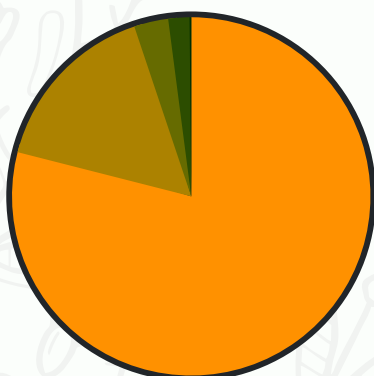


Fig.4: The food and dining staff was courteous?

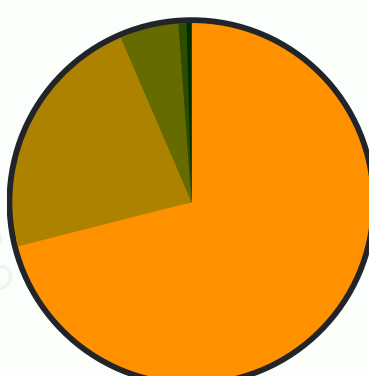


Fig.5: Mentoring was provided in a timely manner?

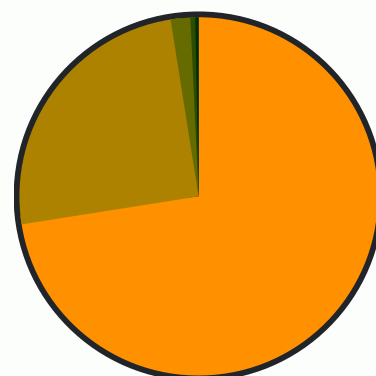
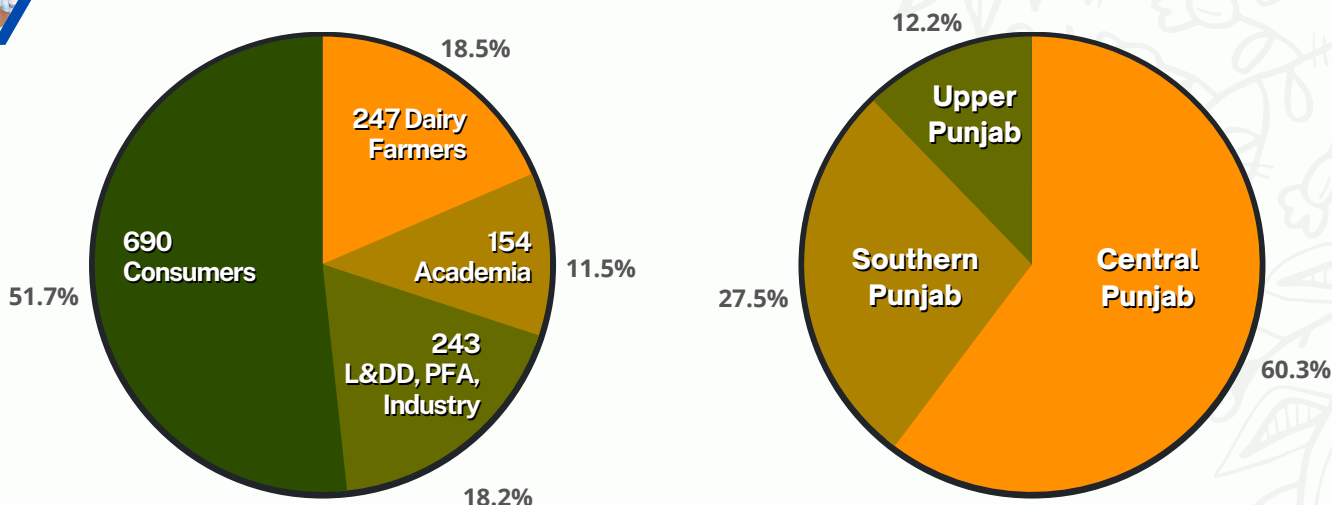


Fig.6: How do you rate the training overall?



B. Conferences / Outreach Activities

Seminars, conferences, workshops & farmers gathering methodized under Capacity Building Project %age wise (Punjab)



UVAS, RC & Buffalo Research Institute Pattoki

World Milk Day; A way forward for Uplift of Dairy Sector (01-06-2022)
Dynamism in Dairy Industry & Consumer Demand (19-10-2022)

KFUEIT, Rahim Yar Khan
Seminar on Milk Value Addition (20-06-2022)

BZU, Multan
Dairy Value Addition; On- Farm Processing Opportunities, Challenges & Insights (22-02-2023)

Dairy Forum & University of Education Lahore
Sustainability, Socio-economic Impact and Modern Trends to uplift Dairy Sector (15-06-2022)
Consumer Awareness; Quality Assessment and Buying Behavior of Dairy Products (04-10-2022)

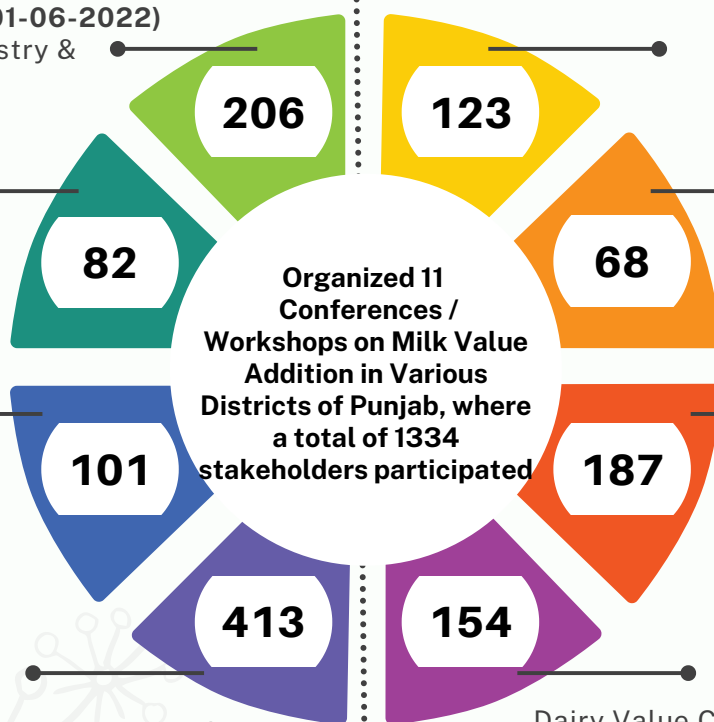
CVAS, Jhang

Current Standings, Latest Trends & Opportunities of Investments for Uplift of Dairy Sector (06-01-2022)

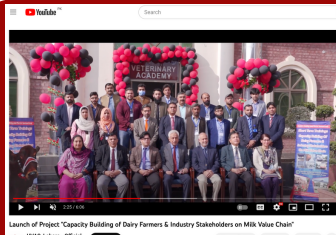
KBCMA, CVAS Narowal
Seminar on Milk Value Addition (13-01-2022)

PVI, Karor Layyah
Farmers Gathering on Modern Dairy Practices to strengthen milk value chain (03-02-2022)

PMAS-AAUR Rawalpindi
Dairy Value Chain; Modern Trends and Needs in Dairy Industry (15-03-2022)
Dairy Value Addition; On- Farm Processing Opportunities, Challenges & Insights (22-12-2022)

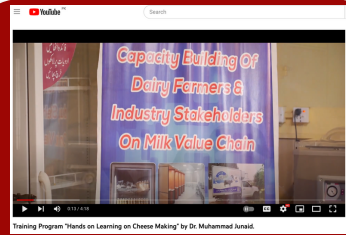


C. Digital Repository Achievements



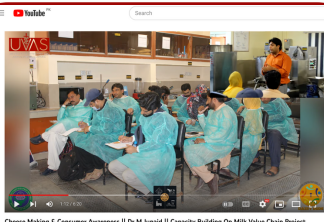
Launch of Project

<https://youtu.be/oEVpeKbjim8>



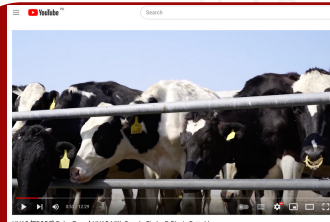
Training on Cheese Making

<https://youtu.be/qr6gcZgHLgg>



Cheese & Consumer Awareness

<https://youtu.be/9gkMhzhpLrI>



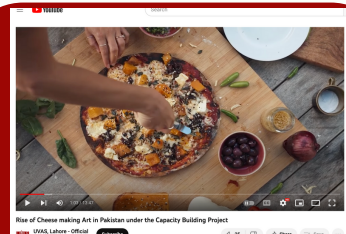
UVAS (TR&DF) Dairy Farm

https://youtu.be/5lt_EoAsz34



Dairy Forum Lahore

<https://youtu.be/gFFIMTPrXBo>



Rise of Cheese Making Art

<https://youtu.be/tbbVAHuWtM8>



World Milk Day

<https://youtu.be/LT0rUIZRFB0>



Training Activities & Feedback

<https://youtu.be/-hYe2t3U3x8>



Milk Pasteurization & Value Added Products

<https://youtu.be/oEVpeKbjim8>



Milk Consumption of LSD Animal

<https://youtu.be/oEVpeKbjim8>

Outcome / Impact of Trainings

- 08 Entrepreneurs started new dairy setups
- 07 Companies benefited for target market and bridged the gap among manufacturers, producer, processor & regulatory
- 17 Allies from academia, dairy farmer associations, certification & regulatory bodies and social media/ news coverage
- 08 Processing setups extended their businesses in milk value addition



Participants Module Assessment (Batch 15-40)

Table. Participants score (out of 10) before and after training

Module Title	N	Before	After	p-value
Module 1 (Dairy Laboratory Analysis Skills)	49	5.48 ^b ± 0.25	8.29 ^a ± 0.15	< 0.0001
Module 2 (Entrepreneurship in Dairy Industry)	61	4.69 ^b ± 0.19	7.67 ^a ± 0.18	< 0.0001
Module 3 (Pasteurized and Flavored Milk)	77	5.09 ^b ± 0.17	8.00 ^a ± 0.14	< 0.0001
Module 4 (Cheese Making)	83	5.59 ^b ± 0.19	7.92 ^a ± 0.13	< 0.0001
Module 5 (Frozen and Fat Rich Dairy Products)	35	4.91 ^b ± 0.26	7.69 ^a ± 0.22	< 0.0001
Module 6 (Food Safety)	37	5.30 ^b ± 0.28	8.05 ^a ± 0.18	< 0.0001
Module 7 (Consumer Awareness)	29	4.86 ^b ± 0.25	7.38 ^a ± 0.21	< 0.0001
Module 8 (Efficient Milking Practices)	30	6.00 ^b ± 0.35	8.17 ^a ± 0.30	< 0.0001
Module 9 (Fat Rich Dairy Products)	17	5.18 ^b ± 0.35	8.71 ^a ± 0.17	< 0.0001
Module 10 (Frozen & Fermented Dairy Products)	30	4.20 ^b ± 0.22	6.73 ^a ± 0.11	< 0.0001
Module 11 (Milk Handling & Traceability during Storage and Transportation)	18	6.61 ^b ± 0.66	8.61 ^a ± 0.38	< 0.0001

Data on participants score (out of 10) are presented as least square mean ± standard errors

Superscripts on different means within row differ significantly at $p \leq 0.05$



Success Stories

Sr. No.	Name	Brand Name	Impact	Logo
1.	Mr. Umair Tauqeer (CEO)	Pakistan National Dairies- Kasur	Installation of a pasteurization plant, followed by the production of Value-added Dairy products	
2.	Mr. Rehan Sheikh (CEO)	Nabipur Dairy Farm- Nankana	Commercial Dairy Farm Established, followed by the production of Value-added Dairy products	
3.	Mr. Kamran Khan (CEO)	Royal Dairies- Peshawar	Kulfi Production Started	
4.	Mr. Asim Shehzad- Shop Owner	Saffron Dairy Products- Layyah	Kulfi and Flavored Milk production started	
5.	Mr. Zia Ali Shaukat (CEO)	Puro Fresh- Lahore	Flavored Milk Production Started	
6.	Mr. Muhammad Shahid- Owner	Shahid Milk Shop- Lahore	Rabri, Kulfi, Flavored Milk & Desi Ghee production started	
7.	<ul style="list-style-type: none"> Mr. Imran Saleh- CEO Miss Tahira Saeed- CEO Ms. Safia Zaib- CEO 	<ul style="list-style-type: none"> Farmers Cheese Making- Lahore The Artisan Cheese Factory- Lahore Pakistan Northern Cheese Making- Peshawar 	Provided target market for consumer in Punjab and Northern areas of Pakistan	  
8.	<ul style="list-style-type: none"> Mr. Sajid Hanif- CEO Mr. Ibrar Gujjar- CEO 	<ul style="list-style-type: none"> Fill n Pack- Lahore Dairy Machinery PK- Okara 	Bridged the gap between farmers and local manufacturers	 
9.	Mr. Amjad Islam- Shop Owner	Al- Rehman Milk Shop- Lahore	Started the production of value-added dairy products	
10.	Mr. Umar Farooq- Dairy Entrepreneur	Cremito- Lahore	Started making Dairy Ice- cream	



Success Stories

Sr. No.	Name	Brand Name	Impact	Logo
11.	Mr. Mazhar Iqbal	Ittehad Dairies & Zamzam Mart- Jhang	Provided target market for the consumers of Jhang	
12.	Mr. Rifaqat Anjum- Dairy Farmer / Entrepreneur	The Dairy Shop- Lahore	Launched Kulfi sales at 40 different sites in Lahore and production of value-added dairy products	
13.	Dr. Zeeshan Shahid	Fazal Dairies- Muzaffargarh	Started the production of value-added dairy products	
14.	<ul style="list-style-type: none"> Shakir Umer Gujjar- President Dr. Muhammad Zubair- Manager Operations Muhammad Muzammil- Vice President 	<ul style="list-style-type: none"> Dairy and Cattle Farmers Association Pakistan Dairy Association Dairy, Agriculture, Livestock, Fisheries and Advanced Technology 	Capacity Enhancement of small-scale & Progressive Dairy Farmers in Punjab, Khyber Pakhtunkhwa and Sindh	  
15.	Mr. Shakeel- CEO	MooBell- Okara	Capacity Strengthening of existing Mozzarella and Cheddar cheese processing setup	
16.	Mr. Mustajab Ahmad- GM Quality & Production	Cakes & Bakes- Lahore	Collaboration in refresher courses and exchange of ideas among dairy community	
17.	<ul style="list-style-type: none"> Dr. Muhammad Fiaz- Assistant Professor / Focal Person (Department of Livestock Production & Management) Dr. Aneela Hameed- Chairperson (Department of Dairy Technology) Dr. Adnan Khaliq- Assistant Professor (Department of Food Science & Technology) 	<ul style="list-style-type: none"> Pir Mehar Ali Shah ARID Agriculture University Rawalpindi Bahauddin Zakariya University Multan Khawaja Fareed University of Engineering & Information Technology 	Academic collaboration of Capacity Building Project in terms of spreading awareness to local dairy farmers and potential entrepreneurs of central, upper and south Punjab	  







Success Stories

Sr. No.	Name	Brand Name	Impact	Logo
18.	Mr. Nazakat ul Husnain-Entrepreneur	College of Veterinary & Animal Sciences Jhang	CVAS Jhang students under Entrepreneurship model launched Flavored Milk (Nutri Max) as an impact of Capacity Building Project trainings.	
19.	<ul style="list-style-type: none"> Dr. Muhammad Qasim-CEO Mr. Muhammad Zubair-CEO Mr. Muhammad Ali-Auditor Mr. Junaid Kahloon- CEO Hafiz Rehan Nadeem 	<ul style="list-style-type: none"> ACTS Halal Research Council Bureau Veritas A2Z Consultancy National Alliance for Safe Food 	Implementation and awareness of certification, halal and food safety programs	
20.	<ul style="list-style-type: none"> Dr. Khalid Mehmood Dr. Muhammad Jassar Aftab 	<ul style="list-style-type: none"> The Veterinary News & Views Jassar Aftab News 	Media Alliance for dissemination of news & updates over massive audience	
21.	Mr. Kamran Ameen-CEO	Ameen Dairy Farm-Faisalabad	Started the production of value-added dairy products	
22.	Mr. Sarmad Basit	Shah Nosh- Lahore	Acquired technical knowledge, troubleshooting and increased sales by convincing potential cheese culture customers through Capacity Building Project training	
23.	Mr. Muhammad Waqar	Khalis Milk	Capacity strengthening of existing setup for better traditional Yoghurt making	
24.	Mr. Muhammad Azam	SDGs Academy Jhang	Provided a platform to local dairy farmers for on-site quality testing of raw milk by organizing Kissan Bethak in collaboration with Capacity Building Project and CVAS Jhang at Shakarganj Milk collection center	



Success Stories

Sr. No.	Name	Brand Name	Impact	Logo
25.	Mr. Naveed Ullah Khan	Rajbro Farms	Implemented milk quality testing at farm level and improved milk reception and dispatch practices	
26.	Mr. Wasif Umer	Gujjar Dairy	Capacity strengthening of current setup for better traditional yoghurt, makhan, desi ghees making and fresh pouch milk sale at five outlets in Karachi	
27.	Punjab Food Authority		Capacity Building Project collaboration with Punjab Food Authority in disseminating knowledge regarding legal framework to the training participants as well as officials are being trained on Food Safety Management Systems and Laboratory Analysis Skills through trainings and seminars	
28.	Livestock & Dairy Development Department		Extension and field officials of L&DD Punjab & KPK are acting as master trainers in fields to instruct and train dairy farmers after Capacity Building Project trainings and seminars	

News Bulletin, Alumni Books



Edition: 1
December 2021 to
January 2022



Edition: 2
February to March 2022



Edition: 3
April to July 2022



Edition: 4
August to October
2022





Appreciations



**KHWAJA FAREED
UNIVERSITY OF ENGINEERING
AND INFORMATION TECHNOLOGY**
RAHIM YAR KHAN

**Faculty of
Engineering & Technology**

**Institute of
Food Science & Technology**

Ref. No. KFUEIT/FST/856

Dated: June 23rd, 2022

Dr. Muhammad Junaid,
Project Director,
Department of Dairy Technology,
UVAS, Ravi Campus.

Subject: **ACKNOWLEDGEMENT FOR COLLABORATION IN ORGANIZING A CONFERENCE ON MILK VALUE CHAIN IN SOUTHERN PUNJAB**

We acknowledge and appreciate the outstanding efforts of UVAS and Capacity Building Project team for the collaboration in organizing a one-day conference in Southern Punjab on Milk Value Chain.

Capacity Building Project is especially linked with the sectoral strategy of Livestock Govt. of Punjab. Currently small scale dairy farmers need sophisticated technologies that are used on a global scale to improve their productivity and quality. This initiative will step in to teach personnel in accordance with worldwide standards that have higher quality attributes.

In this regard, the faculty of KFUEIT, RYK is grateful to Project Director- Dr. Muhammad Junaid and his project team for making the session possible through financial and moral support for the capacity building of progressive dairy farmers, industry stakeholders, and dairy technology students who will be the dairy sector's bright future in the coming years.

The KFUEIT faculty would like to express the sincere gratitude to Prof. Dr. Nasim Ahmad (S.I.), Worthy Vice Chancellor, UVAS, Lahore, for giving us this opportunity at KFUEIT, RYK and sparing his valuable time for the online session.

This activity will prove to be the South Punjab's future Horizon. We extend our services for any such future collaborations and joint ventures.

Looking forward to host you at KFUEIT in the near future.

Dr. Muhammad Farhan Jahangir Chughtai
Additional Director
Institute of Food Science and Technology
KFUEIT-RYK.

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National Alliance For Safe Food®
(Safe Food, Healthy Nation)

Ref No: NAFS/22/39
Date: June 29, 2022

Dr. Muhammad Junaid,
Project Director,
Department of Dairy Technology,
UVAS, Ravi Campus.

Subject: **Acknowledgement for Collaboration in Organizing National Seminar on World Milk Day titled "Safe Milk-Safe Nation: Dairy Industry Perspective"**

We acknowledge and appreciate the outstanding efforts of UVAS and Capacity Building Project team for the collaboration in organizing a one-day National seminar on the theme "Safe Milk-Safe Nation: Dairy Industry Perspective" in accordance to the event of World Milk day at Pearl Continental Hotel, Lahore.

Capacity Building Project is especially linked with the sectoral strategy of Livestock Govt. of Punjab. Currently small scale dairy farmers need sophisticated technologies that are used on a global scale to improve their productivity and quality. This initiative will step in to teach personnel in accordance with worldwide standards that have higher quality attributes.

In this regard, National Alliance for Safe Food is grateful to Project Director- Dr. Muhammad Junaid and his project team for making the seminar possible through financial and moral support for the capacity building of progressive dairy farmers and industry stakeholders.

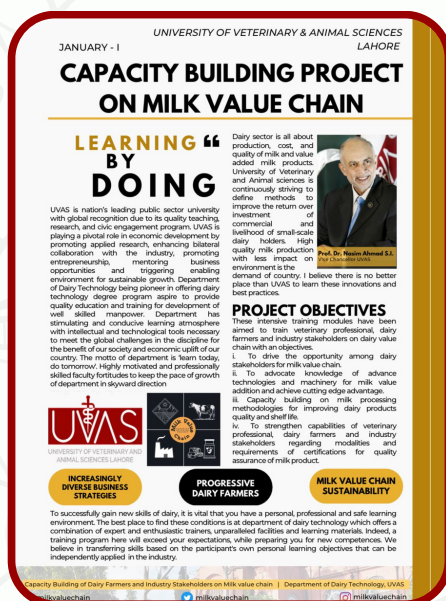
The team of National Alliance for Safe Food would like to express the sincere gratitude to Prof. Dr. Nasim Ahmad (S.I.), Worthy Vice Chancellor, UVAS, Lahore, for giving us this opportunity and sparing his valuable time for the session.

We extend our services for any such future collaborations and joint ventures for the capacity building of dairy sector.

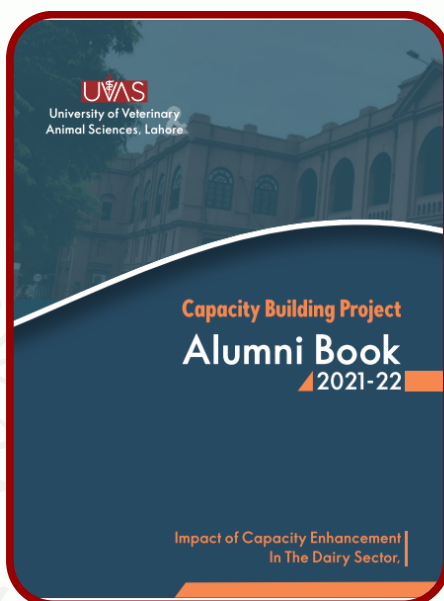
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Islamabad: Ground Floor, NSTP Building, NUST Islamabad. Karachi: 246-D, KDA Scheme 01. Lahore: J-16, Johar Town.
www.nafsfood.org, info@nafsfood.org

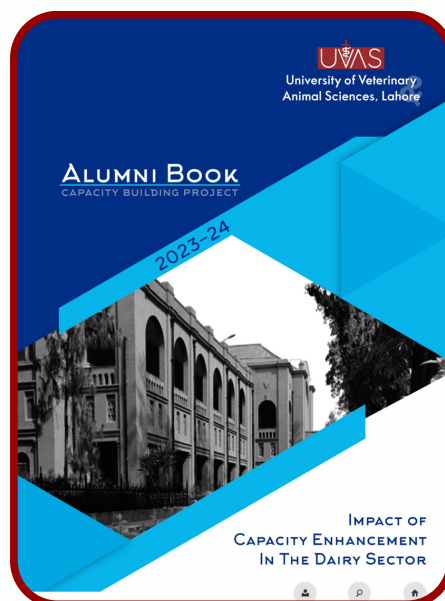
Alumni Books



Capacity Building Project Guide



Alumni Book 1



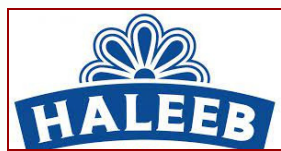
Alumni Book 2



Industrial Beneficiaries



Industrial Beneficiaries



With motivated, highly qualified & skilled faculty, the Department of Dairy Technology is fully equipped in conducting good training program. The Department has honoured the esteemed veterinarians, dairy farmers, dairy entrepreneurs and industry stakeholders at Faculty of Animal Production and Technology, UVAS Ravi-campus for an excellent learning experience on milk value chain



Prof. Dr. Saima
Dean FAP&T

Department of Dairy Technology



Dr. Saima Inayat
Chairperson



Dr. M. Nadeem
Associate Professor



Dr. Nabila Gulzar
Assistant Professor



Dr. Ishtiaque Ahmed
Assistant Professor



Dr. Muhammad Junaid
Project Director



Engr. Saqib Manzoor
Lecturer



Mr. Asim Ikram
Lecturer



Mr. Asif Ali
Senior Clerk

Project Team



Dr. Muhammad Junaid



Mr. Umer Iqbal



Ms. Dua Anwar



**Mr. Hafiz Syed
Haroon Ali Shah**



Mr. Nadeem Ali

