



UVAS Driving Economic Development

Vol. 2





Vice Chancellor's Message

Globally, universities and research institutions have proved their importance in innovating technologies and assisting industries in solving their problems through applied research. Today's commercialization in the world is an example of academia and industrial linkages. In Pakistan, Livestock sector has been playing a pivotal role in country's economic development by strengthening the agriculture industry. The University of Veterinary and Animal Sciences (UVAS), Lahore has remained a flagship institution for livestock, dairy, poultry, and other allied sectors. The UVAS has been rated among top 300-350 universities of Asia by QS- World Universities Ranking and is rated among top 10 universities by Higher Education Commission (HEC) of Pakistan. We at the UVAS are determined to continue aiding the livestock industry by identifying the problems and providing them solutions through applied research.

The UVAS scientists are busy in managing over 90 research projects of paramount economic significance worth of Rs 1,050 million. We have over 80 MOU (Memorandum of Understanding) with different national and international industrial stakeholders to build mutual capacities. The university is quite cognizant of importance of skilled human resource, research, policy framework, knowledge sharing, food safety, and food security of the country and hence managing programs to cater the needs of various sub-sectors of livestock and food. Office of Research, Innovation, and Commercialization (ORIC) and Business Incubation Center (BIC) at the university have been working on paradigm shift of students and helping in grooming its graduates to become successful entrepreneurs. The industrial linkages of the university have helped its research products to be commercialized for socio-economic benefit of the society.

I extend my gratitude to all our public, private, and international collaborators for their trust in us and their support in addressing the national needs. We are optimistic that the UVAS will keep on serving as a catalyst for sustainable economic development of Pakistan.

Long Live Pakistan.

Prof. Dr. Talat Naseer Pasha, S./
Vice Chancellor



Industrial Linkages





Industrial Linkages



University Advancement and Commercialization





UVAS Meat Shop

Providing Traceable Buffalo Calf Beef

In collaboration with the Livestock and Dairy Development Department, Punjab, UVAS has established a meat shop to provide the safe and healthy beef to the general public at a competitive price as well as create awareness among consumers about quality beef. The shop provides antibiotic- and hormones-free quality buffalo calf beef to people of Lahore. This is a unique project of its kind which helps people get quality, traceable, low cholesterol buffalo calf beef and help farmers to have easy access to market, consequently improving their economic status. The Department of Meat Science & Technology is being operated by a highly qualified faculty and it has its own slaughtering facility, a small scale meat processing plant and processing laboratory at UVAS Lahore campus. The department is equipped with the latest processing and packaging technologies such as vacuum packing and modified atmospherics packing are being introduced under the supervision of UVAS Meat Science experts to keep meat fresh and tasteful for a longer time.

Through this project the university has set an example for other industries/businesses to start such outlets to facilitate people/stakeholders of their respective areas.



UVAS Dairy Pure

Sure for Pure

University of Veterinary and Animal Sciences, Lahore has its own dairy farms of buffalos, Sahiwal cows and Holstein cows imported from USA, which provide not only the learning and hands on practice opportunities for its graduates but also the source of pure milk for its staff, students and surrounding community. This milk is free of any kind of preservatives and additives. The most qualified team of the department of Dairy Technology ensures the best quality of milk with good manufacturing practices and advent-grade dairy processing plant. In addition to UVAS Dairy Pure, the other brands also include Flavored milk, Labban, Lassi, Ice-Cream, Butter, Desi Ghee, Yoghurt, Cheese and value added Kheer.



UVAS Central Laboratory Complex

A correct diagnosis is three-fourths the remedy

UVAS has established a state-of-the-art set of integrated laboratories named as Central Laboratory Complex (CLC). The complex is comprised of 10 labs including Animal Nutrition Lab, Bio-Imaging Lab, Diagnostic Lab, Food Chemistry Lab, Food Safety Lab, Genetics and Genomics Lab, In-vitro Embryo Production Lab, Leather and Fiber Lab, Meat Technology Lab, and Sensory Evaluation Lab. The complex is a unique and only single facility of its kind in the country where scientist from various discipline of veterinary and animal sciences have provided the international standard research platform to work together for the uplift of academia and relevant industries in Pakistan. Moreover, each laboratory is equipped with the latest and hi-tech equipment and subsequently offering a range of services to the industry, for the very first time, which are not being offered by any other institution in the country. It is likely that CLC would go a long way and play a leading role in serving various industries of animal and dairy sector in Pakistan.



24/7 Extension Services

Providing the clinical services at farmer's doorstep

Working with livestock, poultry and aquaculture, we at UVAS strive to improve the overall health, productivity and well-being of animals. The UVAS 24/7 Extension services provides emergency and routine veterinary patient care for all species of large and small animals, to strive to better understand animal disease processes, and to be leaders in the area of animal health and productivity for the betterment of livelihood of farming community. The team of highly qualified experts of all the concerned fields including medicine, surgery, animal reproduction, breeding, nutrition and livestock management is available round the clock for the provision of services at the farmer's doorstep. It is worth mentioning that UVAS 24/7 extension services are operated from UVAS City Campus Lahore, Ravi Campus Pattoki and CVAS Jhang simultaneously.

This initiative is not only a source of income generation for UVAS but also providing the professional services at a very economical rate, ultimately playing a leading role in the development of sector.



UVAS Jumbo Quail

Improved genetics with better taste

Quail meat is one of the traditional and delicious foods of the sub-continent but was not reared on the large scale for commercial purpose due to its low body weight and FCR. The UVAS scientists at Avian Research and Training Center have brought a remarkable improvement in its productive and reproductive performance. The Quail egg weight has been increased from 9.5 gm to 12.0 gm. The day-old chick weight has been increased from 6.5 to 8 gm. Hatchability has been improved from 55 to 65%. Market weight of live birds at the age of 28 days has been enhanced from 100 gm to 200 gm. Subsequently dressed weight of Quail has been improved from 50 to 100gm (meat weight).

This improved growth rate and FCR helped a lot to economize the prices of quail meat. Due to these two factors quail meat got popularity in the markets, in and around Lahore. Even people from the very less developed areas of Southern Punjab started getting very strong interest in quail farming. Thus quail farming is also being transformed into a promising cottage industry managed by rural women throughout Southern Punjab.



Anmol Camel Milk

Development of Camel Milk Value Chain

The milk production potential of camel breed in south and north Punjab as well as of the migratory camel breeds is not well documented or even questionable. In the present project, the camel milk will be procured from camel farmers of different regions of Punjab. Milk will be collected in chilled container from natural production systems of camel and will be transported to Department of Dairy Technology, University of Veterinary and Animal Sciences Ravi campus Pattoki in chilled state. The fresh milk will be packed in one liter pack. The packed milk will be marketed in chilled state to different locations of Lahore. The present study will also focus on compositional and nutritional value of camel milk affected with different camel rearing systems (feeding patterns) and season. Therefore, the project is quite relevant to the problem as it will not only help in the achievement of sustainable milk production from these animals but will also draw the attention of specific stake holders to develop camels to become a significant food source in the area.



UVAS Ducks Farms

Meeting protein deficiency by promoting duck farming

Pakistan is amongst top ten most populous countries of the world and more than 50% of the population lives in rural areas. Besides financial constraints the people are facing serious issues of disease outbreak because there are big reservoirs of waste water that are places of many pathogens. Control of these pathogens is necessary for the betterment of the inhabitants of rural areas. Rearing of ducks not only aids in biological control of insect pests but also enhances aesthetics of the rural areas. In addition, the meat and eggs of ducks are the source of income. Ducks rearing was a traditional source of protein in rural areas but during late 1990s the exotic breeds being better egg producer, replaced local traditional breed. The rearing of these ducks eventually faced a failure because of less resistance towards the local environmental conditions and peoples' preference towards meat and eggs of local breeds.

Keeping in view the importance of ducks in ecosystems and as source of protein, University of Veterinary and Animal Sciences has taken a step and established ducks farm at Ravi Campus. Raising of ducks will not only help in poverty alleviation in the country but also meeting protein deficiencies.



UVAS Model Ostrich Farm

Development of Ostrich Farming in Punjab



Climate and land of Pakistan is very much suitable for ostrich farming. UVAS has collaborated with Livestock and Dairy Development Department, Punjab for the development of ostrich farming in Punjab. The key objective of this project is to introduce the new entrepreneurships and diversified farming in Pakistan. For this purpose, the young chicks are provided to the farmers, free of cost. In addition to this, the farmer is given ten thousand rupees subsidy per bird. UVAS experts will visit these farms at least once in every three months to facilitate the farmers to cope up with the difficulties in farming.

This collaboration will not only lead to the socioeconomic uplifting of the farmers in the country but also will add on the red meat availability in Pakistan and make it surplus for the exports of Pakistan.



UVAS Mineral Mixture

Minimizing mineral deficiencies for enhanced production

A wide range of animals in Pakistan experience the significant minerals deficiencies driving towards different dietary ailments including rickets, osteomalacia, hemoglobinuria, pica, tetany, drain fever and so on and in the long run outcome is low profitability. This situation brings overwhelming financial misfortune for the livestock farmers. UVAS researchers at Animal Nutrition Department have taken step forward to develop an economical mineral blend for domesticated animals. UVAS Mineral Mixture is accessible on business premise in different packings and is broadly utilized as a part of the field both for small holder dairy farmers and also commercial dairy farms. UVAS delivered more than 30,000 Kgs of mineral blend amid 2014-15. With a brilliant yield at low cost, it has generously contributed in meeting mineral deficiencies and expanding profitability of the domesticated animals. That is the reason, UVAS encounters popularity of the item.



UVAS MAT Kit

Reforming the Milk Quality Testing in the Field



Milk adulteration is a significant problem for public well-being; consequently, detection of adulterants in milk is particularly important. UVAS scientists at unmatched Quality Operations Laboratory (QOL) have evolved milk-adulterant-testing (MAT) Kit for checking milk quality within the area for the farmers and the clients. By the use of this kit, a skilled person can screen the milk for adulterants in a couple of minutes. The tests are based on qualitative colorimetric techniques and provide dependable outcomes in monitoring milk quality. The MAT kit can detect starch, urea, hydrogen peroxide, soap, sorbitol, boric acid, cane sugar, sodium chloride (salt), carbonate, formalin, hypochlorite and quaternary ammonium compounds.

The UVAS MAT kit is available on commercial basis for all the stakeholders all across. It is now being used by Punjab food Authority and district administrations all over Punjab to manipulate milk adulteration. UVAS continues its efforts in supplying reliable & economical way to stakeholders.



Livestock & Poultry Vaccines

Premium Quality Research Based Vaccines Serving the Farmers

Diverse diseases lead to heavy monetary distress for farmers whilst vaccines play essential role in disease control and health management. UVAS scientists via their years of research experience, technical information and skills have advanced enormously powerful yet low-cost answers for immunization of animals against sicknesses of financial importance. The excellent vaccines prepared at UVAS Quality Operation Laboratory (QOL) consist of UVAS-HS-VAC, UVAS-FMD-VAC, UVAS-FMD+HS-VAC, UVAS-ND+H9-VAC and UVAS-ETV-VAC. These aforementioned vaccines are produced under extraordinarily controlled environment and strict SOPs the use of today's device at QOL that is an ISO certified lab.

UVAS has joined hands with Livestock & Dairy Development Department (L&DDD) Punjab to distribute the advantage of those vaccines at basic-level. UVAS scientists have produced millions of doses of research based vaccines and generated income for UVAS in the recent years.



Center for Applied Policy Research In Livestock (CAPRIL)

Policy and Institutional Reforms Promotion through Evidence - Based Research

University of Veterinary and Animal Sciences (UVAS) and USAID-PEEP joined hands to establish the Center for Applied Policy Research in Livestock (CAPRIL). The center is aimed at supporting policy makers, potential investors, and interest groups by providing input based on research to formulate effective policies, laws, regulations and standards for livestock and dairy sectors in Punjab. So far now, many different policy studies have been completed under the umbrella of this center. The policy paper on import of milk powder, Livestock vision 2025, Need-assessment of DVM graduates and policy paper on meat export are worth mentioning. Many round table discussions and consultative meetings with the different relevant stakeholders have also been organized to address the issues of the relevant sectors.

UVAS is not only providing an ideal environment for teaching and research but also playing its part to promote applied policy research and to facilitate policy dialogue and advocacy to further find the opportunities for sectoral development.



Agricultural Value Chain Collaboration Research (AVCCR)

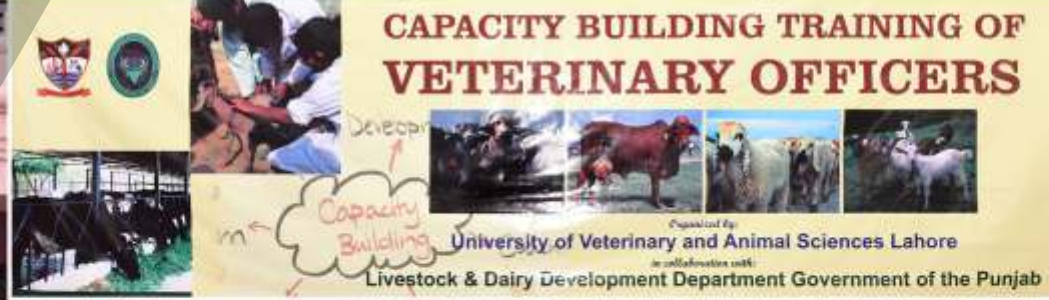
International collaboration to fulfil the Social Responsibility

UVAS has collaborated with Charles Sturt University of the Australia to launch the new program- Agricultural Value Chain Collaboration Research (AVCCR) targeting new opportunities across value chains that have been more purposefully selected for their capacity to alleviate poverty and engender inclusive growth. AVCCR provides opportunity to strategically link Australian Center for International Agricultural Research (ACIAR) research with Australia's broader development program in Pakistan, such as with Australian Investment Plan (AIP), and the associated Australian Economic Growth Investment Strategy (AEGIS). Thus it will make stronger account of social equity by focusing more on the issues of gender equity and the empowerment of women. Building on this successful record, ACIAR has established a Country Office in Pakistan, located within the Australian High Commission.

Therefore, not only on national level, UVAS international collaborations are also key role in the different areas of the sector to uplift the socio-economic status of our smallholder dairy and beef farmers and their recognition.

Training and Development





Capacity Building of L&DD Staff

Economic Empowerment by Trained Human Resource

UVAS has always been among the top notchers when it comes to giving support to the society & Veterinary fraternity, in this regard Directorate of University Advancement & Financial Aid, UVAS collaborated with Livestock & Dairy Development Department Punjab & FATA for the capacity building trainings of the staff of these departments. More than 2000 staff members of these departments were trained these training sessions which include Cattle attendants, Data Entry Operators, Veterinary Assistants/A.I Technicians, Veterinary Officers and Senior Veterinary Officers. Beside that special training sessions for newly recruited and promoted staff members were also organized. Living and recreation were also a part of the hospitality which trainees from L&DDD enjoyed at UVAS. These training sessions proved to be instrumental in the moral boosting and capacity building of staff members and their work efficiency has notably increased. We aim to strengthen our relations with sister institutions & departments for the development of skills and knowledge.



Skilled Human Resource Development

Develop Skills That Are Needed

Human resources are considered important type of resources for attaining economic development of a country. Among various types of resources, human resources are the most active type of resources. UVAS in collaboration with Punjab Skills Development Fund (PSDF), National Rural Support Program (NRSP), Technical Education & Vocational Training Authority has successfully organized a number of training programs. Artificial insemination technician, village veterinary worker and dairy herd management are the short courses offered by the aforementioned organization in collaboration with UVAS. The experts at Institute of Continuing Education and Extension have played a tremendous role in training the manpower required by the industry.

These capacity building training programs by UVAS in collaboration with the industry and NGO's are contributing a lot in economic drive of the country.



UVAS Training and Research Demonstration Dairy Farm

Providing practical training to the dairy farmers



Dairy sector of Pakistan is now entering a new era of development and is moving towards achieving international standards in the field of dairy technology. Dairy sector has evolved into a very attractive business since the induction of high yielding dairy animals from Australia. As corporate dairy is prospering in the country so it was the need of the time to explore high yielding animals from others countries, which are also well developed in dairy sector. In this regard Government of Pakistan, very graciously granted permission to import high yielding cows from USA & Netherlands, this proves to be influential in development of dairy sector in the country. UVAS collaborated with United States Department of Agriculture to establish a Training & Research Demonstration Dairy Farm at Ravi Campus, Pattoki. This dairy farm is equipped with state of the art modernized facilities and it houses the high yielding Holstein Friesian from USA. This farm is the unique of its kind in Pakistan and is only located at UVAS. This farm has adopted the most advanced practices in the field of dairy farming.

This dairy farm is also providing an excellent platform to young students & researchers to learn and explore more due to the availability of modernized practices and equipment at the farm. This farm is also a role model for new farmers to invest in this field. A considerable amount of milk production from this farm is also benefiting the society and it enabled us to move a step forward in this field and now UVAS is not only producing farm fresh milk but also different lavishing dairy products are prepared by Department of Dairy Technology UVAS.



Petsone.pk

All about your Pets...Pakistan's first online Pets store

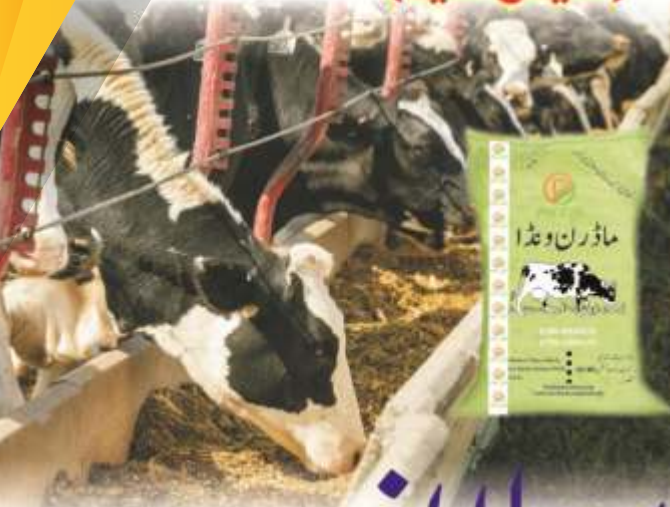
Pet's accessories used to be a niche market which has been successfully exploited by our enthusiast young veterinary pathologist Dr. Jawad Ahmad. He gave this market a new dimension by developing online pets accessories business by launching petsone.pk. This website is a one window shopping paradise for pet's lovers who can purchase almost all the necessary pets accessories at a competitive price from the market. The young entrepreneur has crossed Rs. 2/- million per month turnover and he has also created employment opportunities.



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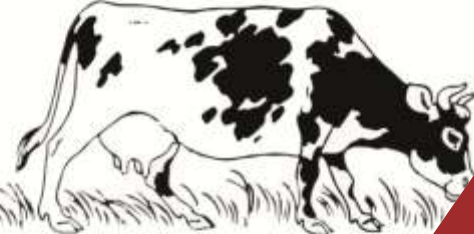
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Pro-Life

Agri-Business Solution

Dr. Taimoor Azeem is a young Animal Pathologist of the UVAS who had decided to start his career as an "Entrepreneur" in the field of Dairy Nutrition. His start-up business name is "Pro-life: Agribusiness Solutions", and targeting local dairy and fattening herds. The small company has relied on toll manufacturing in initial phase to market cattle feed with the brand name of "Modern Vanda". He has now managed to establish his own small dairy feed manufacturing unit where he is successfully producing over 2,000 cattle feed bags with sales revenue of around Rs. 2.5 million per month. His new product line is "Animal Mineral Mixture" which is a supplement for all sorts of cattle, buffalo, sheep, and goats.



Kitchenette

Providing healthy and nutritious food products



Food is a growing business in Pakistan and large academic institutions are becoming a niche market for food enterprises. Our young and endowed postgraduate student of Meat Science and Technology, Dr. Adeel Manzoor has exploited the same market but with an incremental innovative idea in the university. His business start-up is named as “Kitchenette” and it is focused on providing healthy and nutritious food products at an affordable price to the university staff and students. The university has provided the required equipment for the kitchen and the operations are being handled by Dr. Adeel Manzoor. This start-up business is extracting around Rs. 35,000 per day and works for six days a week.



E-Darzi

Online fabric and stitching services

A brilliant innovative business start-up which focusses on online selection of fabric, body measurement, tailor made stitching, and finally delivered at home address is called as E-Darzi. This is success story of the UVAS young undergraduate business student Mr. Hassan who thought of developing an android based software application and a website of E-Darzi who has been mentored by the university BIC. It is initially catering the needs of Lahore city and eventually aims to target full Pakistan in the days to come.





90-X Media Photography

Life through the lens



Mr. Sajjad Maqsood has skills and passion for photography and he has decided to adopt it as a profession. This young business undergraduate of the UVAS is aiming to make his mark in media production. His business start-up is with the name of "90 X: Media Photography" and focuses on still photography, short film, documentary, event management, and designing. He is based at the UVAS Business Incubation Center and expanding his business gradually.



UVAS Out-Sourcing





Milk Processing Plant

Industrial Collaboration for Producing Pasteurized and Quality Dairy Food Items



Pakistan is among the top milk producing countries in the world. UVAS has played a tremendous role in Pakistan by taking various initiatives for the development of the dairy sector. UVAS has a well operational milk processing plant at its Ravi campus, Pattoki. This plant has the pasteurization capacity of 2,000 Liters per hour. Currently UVAS has collaborated with DOCE Foods to run the plant on commercial basis. This joint venture has not only been a source of income generation for UVAS but also provides hands on training opportunities for dairy technology graduates. UVAS graduates are also playing their part as employees after completing their study. Whereas, in return, UVAS leadership and dairy experts provide technical support to the DOCE Foods in order to ensure the smooth operations.



UVAS Feed Mill

Industrial Collaboration for Producing Livestock Nutritional Products

UVAS has a well-established feed mill at its Ravi campus spreading over the area of 2 acres. The feed mill is equipped with the state of the art equipment with the production capacity of 5000 Kgs of pellet feed per hour. UVAS in collaboration with Solve Agri Pak (Private) Limited has functionalized the feed mill for commercial scale feed production. The UVAS scientists from Department of Animal Nutrition provide technical support to the feed mill operations. UVAS scholars get an opportunity to conduct their research work related to animal nutrition whereas Solve Agri Pak produces different types of livestock feeding products at this feed mill and sells via marketing and distribution channels all over Pakistan.

This collaboration is not only providing the quality nutritional products to the farmers for the better growth of their animal but also playing role in the economic drive of the UVAS.



UVAS Poultry Farms

Industrial Collaboration for Poultry Production

The poultry industry of Pakistan is recognized all over the world. Pakistan is among top 10 broiler producing countries in the world. Most of the poultry industrialists of Pakistan are the prominent alumni of this institution. UVAS has its own well developed poultry farms and hatchery at its Ravi campus. Having the close liaison with the industry, UVAS has collaborated with the Big Bird Group of Companies to functionalize the poultry farm on commercial basis.

UVAS students are lucky for having the opportunity to learn and work in a commercial environment to get prepared for their professional career. UVAS scientists at the Poultry Production Department furnish the requirements of applied research in line with the requirements of the industry. This collaboration is playing a pivotal role in the long term economic development of the industry as well as UVAS.



Intensive Fish Culture Unit

Industrial Collaboration for Fisheries Production in Controlled Environment

The fisheries sector in Pakistan makes a significant contribution to the national economy, contributing about one percent to GDP and providing jobs to about one percent of the country's labor force. It is the most important economic activity in the coastal area of Pakistan. It is estimated that 400 000 fishermen and their families are dependent on the fisheries sector for their livelihood. The Department of Fisheries and Aquaculture at Ravi Campus, UVAS is also playing its part for the development of the sector by producing technical human resource as well as close collaboration with industry for fisheries development. From past few years, UVAS has collaborated with Royal Fish (Private) Limited to develop the intensive fish culture unit spreading over 5 acre land at Ravi campus. This unit has brought in the revolutionary changes in the fisheries production in the controlled environment.

UVAS fisheries expert provide the issue based research support to the industry and UVAS graduates get the opportunity of practical training. This collaboration is creating the economic opportunities in the fisheries sector.



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