

## ***Strengthening capabilities to monitor and control veterinary drug residues in food in Pakistan***

### ***The challenge...***

Around the world, food safety has become a focus of increasing public concern, fuelled by reports of food contamination and fraud. The effects of unsafe food are many: for example, chemically-contaminated foodstuffs can be hazardous to human health, detrimental to the environment, and can lead to curtailment or prevention of participation in international trade. The presence of food-borne diseases and veterinary drug residues underline the importance of continuous testing to verify the safety of both locally produced food and international food imports.

Pakistan's economy relies on the export of seafood products to major trading blocks. When over 130 food export consignments were rejected by European importers due to contaminants detected, Pakistan asked the IAEA for support in ensuring food safety.

### ***The project...***

To participate in international markets, countries must meet international standards for the production of safe, quality-assured foods. Accordingly, a technical cooperation project was launched to develop the necessary analytical capacities to monitor food contaminants in Pakistan.

By 'labelling' a veterinary drug with a radioisotope, such as tritium,  $^{14}\text{C}$  and  $^{32}\text{P}$ , the radioactive atom can easily be traced among scores of other natural, non-labelled chemicals found in animal tissue.

By following a coherent, phased approach—from procurement and protocol standardization to implementation—the project supported Pakistani laboratories as they built capacities in the detection of food contaminants, particularly the trace elements and residues of veterinary drugs.

Through the project, the IAEA provided a range of equipment, from rudimentary laboratory equipment to highly-sophisticated devices. The main focus of the project, however, was on training, and in total, six Fellows were trained, two scientific visits were launched, and an IAEA expert was dispatched to provide on-site support.

### ***The impact...***

Today, Pakistan's food export consignments are no longer rejected by European importers, nor by any other trading partners. Due to the comprehensive testing made possible by the efforts of the IAEA and project counterparts, health officials are able to ensure the absence of harmful contaminants in foodstuffs intended for international export.

Moreover, due in part to the efforts of IAEA experts, Pakistan's Nuclear Institute for Agriculture and Biology (NIAB) successfully established the country's first food safety analytical service, with the capacity to detect and analyse veterinary drug residues. Looking forward, plans have been developed to expand the established laboratories into Pakistan's first Food Safety Institute, providing full ISO accreditation and conferring added credibility to the safety of exported foodstuffs.



*IAEA-trained experts conduct residue analysis.*