Clinical tests of *Imrestor™* have proven **a reduction in the incidence of mastitis in calving cows by 28 percent in the U.S. and 26 percent in the EU** in the 30 days post calving — thereby decreasing the need for antibiotics and other treatments, along with reducing the amount of milk discarded during the treatment cycle.

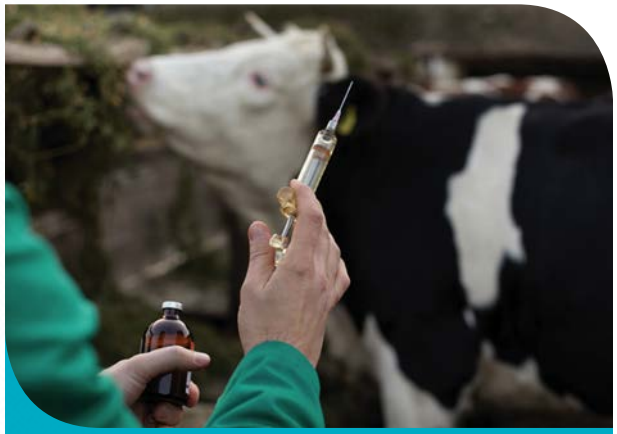
As a result, 43 countries have moved to approve the use of *Imrestor™*, including Canada, the U.S. and the EU. Embracing science-based innovation will lead to significant gains in improving animal and human health and reducing food loss and waste along the livestock value chain.

Building Capacity to Promote One Health in Food Systems in the LAC Region

Microorganisms (such as parasites, bacteria, fungi and viruses) have become increasingly resistant to antimicrobial drugs, raising the level of health risks for humans. Agriculture must play a central role to address these issues, and to reduce the disruptive impact that these new strains of microbes would have on food production and the lives of producers across **Latin America and the Caribbean (LAC)**.

Recognizing this threat and the need for urgent action, the **Inter-American Institute for Cooperation in Agriculture (IICA)**, in collaboration with the **Ohio State University Department of Veterinary Preventive Medicine** and supported with funds from the **European Union's 10th Economic Development Fund (EDF)**, is working to build technical capacity of veterinarians, diagnosticians, epidemiologists and other public health professionals in the LAC Region.

This capacity building program provides foundational and applied knowledge on the use of antibiotics and related antimicrobial agents in various animal production systems. It helps the livestock industry understand the emergence and epidemiology of antimicrobial resistance in agriculture and its impact on the health of humans, animals and the environment, as well as on international trade and commerce. The program also provides guidance to establish or enhance surveillance and monitoring systems for antimicrobial resistance in zoonotic and foodborne pathogens. It discusses the development and implementation of prevention and control interventions (including surveillance programs) specific to each country, with an emphasis on minimizing the potential impacts of antimicrobial resistance on public and animal health as well as trade and commerce.



IICA is establishing pilot programs in many Caribbean countries to provide surveillance and monitoring for antimicrobial resistance.

Credit: IICA

As of 2016, this program has trained more than 28 government officials from 14 countries, over 300 producers and more than 100 private technicians in how to identify and address these issues. The program has produced several guides covering best practices and use of veterinary drugs in bovine and aquaculture production as well as a report assessing the state of surveillance systems of veterinary drugs in livestock production throughout the region.

Bio-Innovation Promotes One Health for the Planet

More than 40 countries are on the cusp of building completely new **bio-innovation economies** that supply food, create jobs, reduce waste and improve health. **Bio-innovation is the invention, development, production and use of biological products and processes, often harnessing the power of microorganisms and enzymes that naturally improve processes across many business sectors, including agriculture, feed, fiber and fuel.** Bio-innovation contributes to new economies that improve health outcomes, boost the productivity of agriculture and industrial processes, and enhance environmental sustainability.

Bio-innovation also involves creating products that are derived from plants and renewable agricultural, marine and forestry materials to provide an alternative to conventional petroleum derived products. These products include lubricants, cleaning products, inks, fertilizers and bioplastics, as well as biodiesel and biofuels made from switchgrass, soybeans, sweet sorghum, cane, corn, jatropha, animal fats, algae and trash.

Building a bio-innovation economy creates jobs that are sourced and anchored in rural and urban areas, bringing development and well-paying technology sector positions. **Estimated direct revenue will reach $250 billion annually in the United States alone, with a total economic impact in the U.S. of $660 billion including indirect and direct economic outputs by 2030**.[12]

Realizing the benefits of bio-innovation will require coordinated policy action by governments, investments in research and development, smart regulations that encourage advanced scientific development and government's help communicating the value of such innovation to the wider society and consumer base.