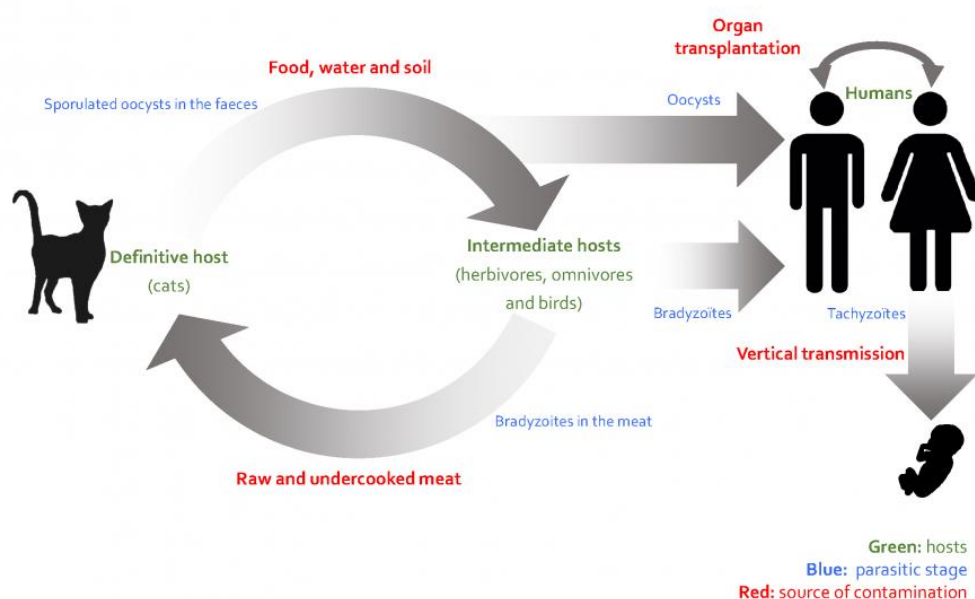


In Tunisia, seeking unified action to mitigate risk of toxoplasmosis

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Epidemiological cycle of toxoplasmosis

Toxoplasmosis is a communicable disease that affects both humans and animals through different transmission pathways. It is caused by a coccidian parasite called *Toxoplasma gondii* that uses cats as primary host and warm-blooded animals as secondary host. Toxoplasmosis is one of the most common parasitic zoonotic diseases in the world.

It is also a public health threat, as a large number of people are exposed to risk of infection. People get infected by eating raw or undercooked infected meat, unwashed contaminated produce, or through direct contact with oocysts in cat litter. It can cause stillbirths, blindness, psychomotor retardation and intellectual disability in children.

In Tunisia, as in the Near East and North African countries, toxoplasmosis is common in sheep, causing reproductive complications resulting in economic losses. Early infections may cause embryonic death resulting in abortion or expulsion of small embryos. At later phases of pregnancy, infection can result in abortion or birth of congenitally-infected lambs.

In order to discuss the risks of toxoplasmosis and to improve control options, ICARDA has been working together with the National School of Veterinary Medicine in Tunisia through its involvement in the CGIAR research program on Livestock. A recent joint workshop, for instance, brought together 70 health professionals, including medical doctors and

veterinarians, as well as biologists, university lecturers, and officials from the General Directorate of Veterinary Services and the National Center for Animal Disease Surveillance.

The workshop drew on the impact of toxoplasmosis, such as the human-animal-environment health risks, as well as the typology of livestock production systems and how they interact with animal diseases. Participants also discussed the organization of the meat value chain and its potential weakness points in relation to the spread of the disease and risk of infection. Also reviewed were a number of studies assessing the prevalence of *Toxoplasma gondii* in meat and milk, and the extent of losses due to toxoplasmosis in commercial sheep flocks.

“Considering the complexity of toxoplasmosis epidemiology and the importance of developing comprehensive control programs, we need to adopt a more comprehensive and holistic approach of control,” said Mohamed Aziz Darghouth from the National School of Veterinary Medicine.

“This means looking into the actual production system, capacity of livestock owners, hygiene policies, and practices in slaughtering and meat handling,” he explained. Toxoplasmosis is a perfect example of a parasitic disease where transmission and health effects are determined by the interaction between the environment, humans, and animals.

As a way forward, the participants agreed on the need to advocate “One Health” approach, combining multi-disciplinary solutions, for better control of toxoplasmosis. The next step aimed at providing new epidemiological data on toxoplasmosis in humans and animals, including the development of a concept note for a multidisciplinary holistic project.

The workshop in Tunisia was part of activities under the [CGIAR Research Program on Livestock](#).