



The Hidden Effects of Dairy Farming on Public and Environmental Health in the Netherlands, India, Ethiopia, and Uganda, Considering the Use of Antibiotics and Other Agro-chemicals

Maria J. Groot¹ and Katrien E. van't Hooft^{2*}

¹RIKILT, Wageningen University, Wageningen, Netherlands, ²Dutch Farm Experience, Maarsbergen, Netherlands

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*Correspondence:

Katrien E. van't Hooft
katrien@dutchfarmexperience.com

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The current and expected growth of the world's population warrants an increased production of high-quality animal protein. Dairy farming is regarded as one of the important ways of satisfying this need to meet the growing demand for milk, especially in developing countries. The focus on crossbreeding and increasing the productivity of dairy cattle has, besides enhanced milk production, also resulted in an increased use of agro-chemicals, mainly antibiotics and anti-parasite drugs. The residues of these agro-chemicals, if not managed properly, could leak into the environment, affecting natural processes, biodiversity, and soil life. Public health can also be affected due to residues in milk and meat, especially in countries with insufficient food quality controls. These processes contribute to the growing global threat to human and animal health posed by multi-resistant microbes. This article discusses the differences and similarities of dairy farming, and the effect on public and environmental health, between the Netherlands, India, Ethiopia, and Uganda, emphasizing the strategies that have been developed during the E-Motive exchange project to reduce the use of antibiotics and other chemicals in dairy farming. Proposed solutions include raising consciousness about the risk of antibiotics and their effect on food quality, and implementing the Natural Livestock Farming five-layer approach for reducing the use of antibiotics and other chemicals. This approach is based on improving animal and farm management, revitalizing ethno veterinary knowledge and the use of medicinal plants, genetic improvement through strategic use of local breeds, establishing quality control systems in the dairy chain, and extra payment to farmers for residue-free milk.

Keywords: dairy farming, antibiotic resistance, pesticides, milk quality, herbal medicine, Holsteinization

INTRODUCTION

The current and expected growth of the world's population warrants increased production of high-quality animal protein. Dairy farming is regarded as one of the important ways of satisfying this need, especially in developing countries (1). Therefore, dairy development programs have been started aiming at increasing animal productivity by crossbreeding with high yielding breeds