Many developed countries are going to have to reduce the emissions from ruminant agriculture in order to meet their mitigation commitments. Evidence suggests that improving ruminant health could lead to significant reductions in carbon footprints. However, there is also evidence of growing resistance amongst some important parasites, which could render current treatments less effective. In this talk the evidence on trends in anthelmintic resistance in gastro-intestinal nematodes (GINs) and liver fluke (LF) are reviewed. The future trends in resistance are predicted and their potential impact on cattle and sheep performance, production and GHG emissions estimated.