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“Bridging the gap between increasing knowledge and decreasing resources”

## Integrated HPAI Control in Kampong Chicken in Indonesia — An Overview on ILRI’s Research and Lessons Learned

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### Abstract

Highly pathogenic avian influenza (HPAI) caused by H5N1 was first detected in poultry in Indonesia in 2003. HPAI affected all production systems from parent stocks to village (kampong) chickens. The island of Java hosts 60 % of the poultry population of the country. Avian influenza in poultry is considered to be endemic and fatal cases in humans are sporadic since its introduction. In an attempt to support the Indonesian government in making decisions to limit the spread of HPAI while minimising its impact on different socio-economic groups, research by the International Livestock Research Institute (ILRI) has focused on two main areas: (a) village chicken vaccination and (b) risk reduction strategies suitable for pro-poor households with backyard chicken.

The vaccination component, supported by the World Bank, the Indonesian government and the United States Agency for International Development (USAID), used an operational research approach, with the objective to determine the efficacy of backyard mass vaccination by testing alternative regimes under field conditions. The mass vaccination carried out between 2007 and 2009 in 16 districts of Java was supported by targeted studies such as, the value of booster vs. non-booster vaccination, the effect of single dosage (antigen content) vs. double dosage vaccine formulations and a cost-benefit analysis of backyard vaccination. Research on pro-poor HPAI risk reduction strategies, jointly carried out from 2007–2011 with the International Food Policy Research Institute (IFPRI) and supported by the UK Department for International Development (DFID), followed an integrated research design with four main components: disease risk, institutional analysis, livelihood impacts, and synthesis (risk mitigation analysis). Within the components a number of focused studies from epidemiology, to socio-economic and livelihood impacts were implemented focusing on the districts of Bogor and Bogor Kota. Key results indicate the need for an avian influenza booster vaccination with a quarterly re-vaccination schedule due to high population turnovers in kampong chicken. Risk assessment demonstrated the value of an appropriate biosecurity and visitor’s control.

**Keywords:** Control, HPAI, Indonesia, Kampong chicken