

PROGRAM ACTIVITY REPORT (PAR)



AFRICAN SWINE FEVER RESEARCH IN KENYA

Last year, NWDP began collaborating with Army Medical Research Unit – Kenya to enhance the appreciation of potential for wildlife to serve as virus reservoirs or to spread diseases detrimental to humans or agricultural resources. Victor Ofula is the principle contact to develop outreach activities in Kenya. After meetings and discussion with ministry officials, nongovernmental organizations and foreign aid programs, it was decided that conducting activities which address African Swine Fever (ASF) would be both economically beneficial and also generate interest to further increase capacity to address wildlife disease issues.

NWDP is collaborating with multiple partners to enhance an understanding of ASF in Eastern Africa. ASF is a lethal, hemorrhagic disease which, when it infects domestic swine, has major socio-economic consequences. Swine mortality can be severe and trade is often restricted from outbreak areas. The relationship of ASF in common warthogs (*Phacochoerus africanus*) and ticks (*Ornithodoros porcinus*) has been fairly well documented. Considerably less is known about ASF in bush pigs (*Potamochoerus larvatus*). Bush pigs are known to interact with domestic swine, which generally



Bush pig

roam freely around farms. Also not well understood is the prevalence of ASF in Desert warthogs (*Phacochoerus aethiopicus*).

In Uganda, NWDP is joining an ongoing cooperative effort among Uganda ministries, Makerere University, Swedish University of Agriculture, and the International Livestock Research Institute (ILRI) to address ASF issues. Objectives of activities to be conducted in Uganda include: 1) assess the prevalence of African swine fever virus in a bush pig population in an area with ongoing or recent outbreaks of ASF, and correlate findings to spatial distribution of domestic pigs versus warthogs; 2) monitor movements of bush pigs to understand behavior and possible interactions with domestic pigs and warthogs; 3) assess genetic relationship between viruses detected in bush pigs and viruses detected during outbreaks in domestic pigs versus its relation to viruses detected in warthogs and ticks, and possible genetic diversity in a gradient from national park to communal land; and 4) assess the genetic population structure of captured bush



Warthog

pigs and correlate findings with genetic population structures of domestic pigs to confirm or rule out bush pigs x domestic pig hybridization and its possible role in ASF epidemiology.

In Kenya, NWDP will be working with AMRU-Kenya, Kenya Wildlife Services, Kenya Veterinary Services (KVS), and the ILRI. Objectives to be addressed in Kenya are: 1) increase capacity with KVS to conduct active surveillance of ASF in targeted areas to determine the prevalence of ASF in Kenya; 2) conduct entomological surveillance of ticks implicated with transmission of ASF in these targeted areas; 3) strengthen laboratory capacity of Kabete veterinary laboratories to conduct ASF diagnostic testing for responding to ASF outbreaks and for early warning of the virus across Kenya; 4) conduct surveillance of ASF in warthogs to determine if findings previously reported can be repeated; and 5) conduct surveillance activities to determine whether ASF is carried by desert warthogs as known to be present in common warthogs. For more information please contact Dale Nolte, Dale.L.Nolte@aphis.usda.gov

The original artwork on this page was created by the National Wildlife Disease Program's Erika Kampe and Sarah Goff