In August 2006, Bluetongue virus serotype 8 (BTV-8) was introduced into Central Europe and in 2006/2007 spread rapidly over Germany. In May 2008, Germany implemented a vaccination program with monovalent, inactivated vaccines against BTV-8. In 2008 and 2009, vaccination was mandatory for cattle, sheep and goats; since 2010, vaccination is optional. An economic model of the BTV-8 epidemic was developed based on data provided by the German Federal States, the animal health services, the animal disease compensation funds (Tierseuchenkassen), the German animal disease notification system and the Federal Statistical Office. Bluetongue disease had a high economic impact on the cattle and sheep industry in Germany. In 2007, the costs for a total of 43,000 animals (33,233 sheep, 10,240 cattle and 102 goats) were claimed from the animal disease compensation funds. On the basis of the animal market values, this corresponded to more than 20 Million Euros, including the safe disposal of the animal carcasses. Direct costs resulted from reduced milk and meat production, palliative veterinary care costs, and fertility problems. Indirect costs resulted from vaccination, movement restrictions, and adapted export certificates. The costs of BTV-8 were estimated at 10 million Euros in 2006, 79 million Euros in 2007, 72 million Euros in 2008, 38 million Euros in 2009, 16 million in 2010 and 7 million in 2011. While the direct costs (e.g. production losses, costs for fallen stock) caused the highest losses in 2006 and 2007, from 2008 to 2011 the vaccination costs played the main role. Options to improve control strategies will be discussed.