The aim of this study was to assess the economic efficiency of different control strategies for Post-weaning multi-systemic syndrome (PMWS) and porcine circovirus type 2 (PCV2) subclinical infections (PCV2SI). The strategies consisted in the combination of up to 5 different control measures: (1) PCV2 vaccination; (2) ensuring age adjusted diet for growers (diets); (3) reduction of stocking density (stock); (4) improvement of biosecurity measures (bios); and (5) total depopulation and repopulation. A model simulating the production of batches over 5 years of a farm with 100 sows was developed. A PMWS/PCV2SI economic model, based on PMWS severity scores, was applied to the production model to assess disease losses. Eleven different farm scenarios, differing on the number of risk factors present, were investigated. For each strategy an investment appraisal was performed to assess the extra costs and benefits of reducing the PMWS severity score of a farm to an average slightly affected score and to input other intervention costs. The net present value obtained for each strategy was multiplied by its probability of success. The resulting expected values were then compared within each scenario. A stochastic simulation was performed using @RISK. The model indentified PCV2 vaccination in combination with biosecurity measures as the most cost-efficient strategy for most farm scenarios. PCV2 vaccination alone, ‘bios+stock’ and ‘bios+diets’ were frequently identified as the second or third best strategy. The mean expected values of the best strategy for an average moderately and an average highly affected farm were £14,052 and £65,145, respectively. This is the first study comparing economic efficiency of different control strategies against PMWS and PCV2SI. The outcomes describe the economic benefits of PCV2 vaccination, but highlight the need of biosecurity measures to achieve optimal profitability. The model developed provides a useful decision support tool for farmers.