Heart valve disease affects more than 74 million people worldwide and frequently requires valve replacement to restore normal cardiac function. Porcine aortic bioprosthetic valves are among the most widely used replacement options because they closely mimic native valve function, provide favorable hemodynamics, and typically do not require lifelong anticoagulation therapy. Despite these advantages, concerns regarding long-term durability continue to drive research into alternative valve replacement strategies. This literature review examined the clinical performance, durability, and future potential of porcine aortic bioprosthetic valves through analysis of over 30 peer-reviewed articles identified using the PubMed database. Articles were evaluated for findings related to valve function, structural valve degeneration, patient outcomes, and emerging tissue-engineered valve technologies.The literature demonstrates that porcine bioprosthetic valves remain an effective and well-established treatment option with a long history of clinical success. However, structural valve degeneration including calcification, fibrosis, and leaflet tearing remain a significant limitation and can ultimately necessitate repeat intervention. In response to these challenges, research efforts are increasingly focused on tissue-engineered heart valves designed to improve durability, biocompatibility, and regenerative capacity. These findings suggest that while porcine bioprosthetic valves remain clinically valuable, overcoming durability limitations will be critical to their long-term role in valve replacement as bioengineered alternatives continue to advance.