This study examines the impact of entrepreneurship skills training on agricultural productivity among small-holder coffee farmers in Kenya. Entrepreneurship in coffee farming involves innovation, effective resource management, risk-taking, and market adaptation—all essential for the entrepreneurial process. Given the critical role of coffee farming in Kenya's economy and the challenges faced by small-holder farmers, this research explores how entrepreneurial skills can enhance productivity and sustainability. A mixed-method approach was employed, with data collected from 12,000 farmers using questionnaires. A sample size of 387 was determined using Yamane's formula, and stratified random sampling was applied across 17 factories. Data analysis was conducted using SPSS software. The results indicate that training in business planning, technology, financial management, and leadership significantly improves coffee farming performance. The study concludes that ineffective entrepreneurship training is closely linked to poor performance in coffee farming. It recommends that the government, through the ministries of agriculture and co-operatives, prioritize entrepreneurship training for small-holder coffee farmers to enhance productivity. These findings can guide future interventions aimed at reviving the coffee industry and ensuring its sustainability in Kenya.