Wet seasons and wet harvests pose particular challenges for harvesting and storing potatoes. Various combinations of disease development in the field and storage as well as erratic and fluctuating pile temperatures and humidity levels provide ample challenges.

Introduction of oxygen from fresh air through the pile is required for wound healing, as is removal of carbon dioxide. The temperature and the relative humidity of the introduced air as well as the pile conditions need to be monitored and adjusted as conditions and situations warrant. Condensation, from reaching a dew point either through cooling or heating, is to be avoided. Potatoes harvested in wet conditions need high air flow and heat to dry the pile. Potatoes provide heat (and humidity) through respiration which needs to be factored in during storage management. Five thousand hundredweight of healthy potatoes can produce 21,000 BTU per hour, which is enough to raise the pile temperature one degree Fahrenheit per day. Potatoes in less than ideal conditions can produce more heat as well as a large amount of humidity to the storage atmosphere. Diseased potatoes need additional monitoring and adjust of conditions, depending on the disease.