Poor germination and erratic seedling growth were major factors to obstruct the seedling emergence and lower production of cucumber respectively. Effective results of seed priming on germination and seedling growth may be useful in making cucumber growers aware about the benefits of seed priming. Hence, the experiment was conducted to assess the effect of seed priming on germination and seedling growth of cucumber.

2 Materials and Methods

2.1 Experimental site

The study was conducted in high-tech polyhouse at the demonstration site of Agriculture Knowledge Center (AKC) Office, Putalibazar, Syangja from March to July, 2024. Syangja district lies in mid-hill region at altitude 300-2,266 masl. It lies at latitude 28º4'6"N and longitude 83º52'0"E.

The morning temperature at 6:00 am remained relatively stable (20 °C–23 °C) (Figure 1). The afternoon temperature at 2:00 pm consistently recorded the highest values (35 °C–40 °C), while the evening temperature at 6:00 pm was moderate (30 °C–35 °C). This pattern indicates a clear diurnal fluctuation, with peak temperatures occurring in the afternoon and minimum values in the early morning.

Relative humidity was highest during the morning (80%–100%), lowest in the afternoon (25%–35%), and moderate in the evening (35%–50%) (Figure 2). An inverse relationship between temperature and relative humidity was evident, with higher daytime temperatures corresponding to lower humidity levels.

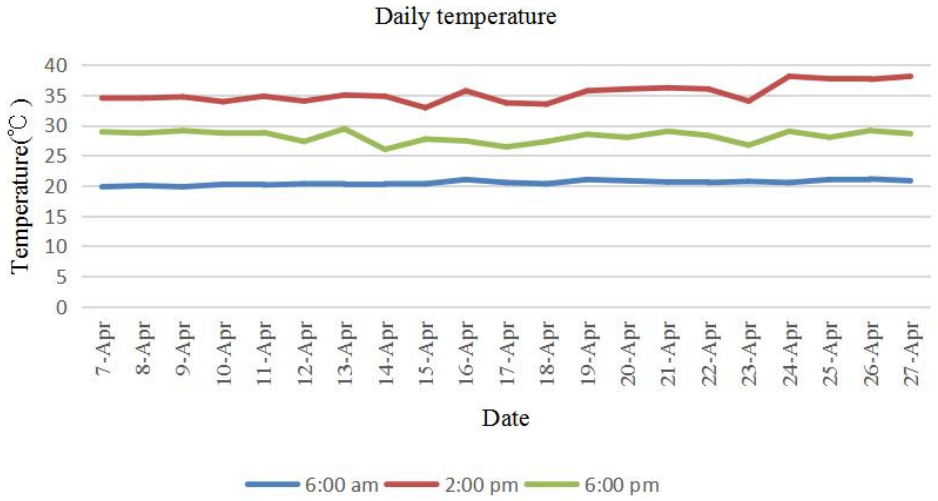

Figure 1 Daily temperature of the high-tech polyhouse during experimental period

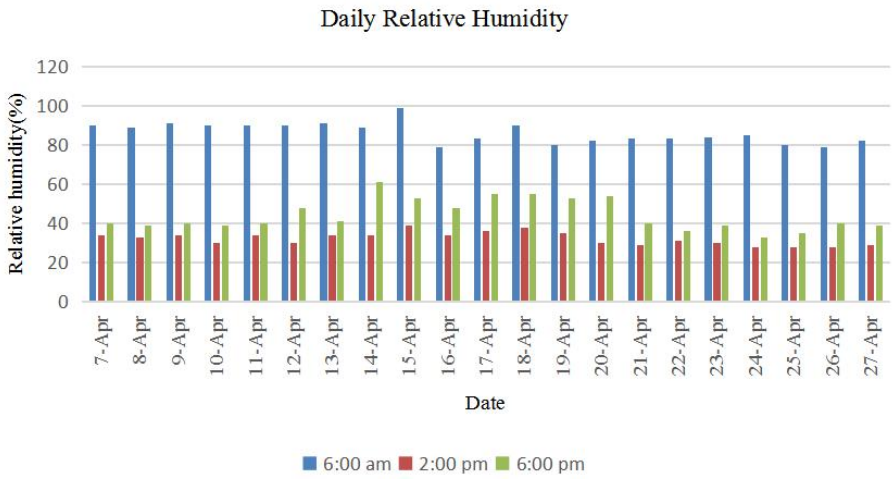

Figure 2 Daily relative humidity of the high-tech polyhouse during experimental period