which was not significantly different from KNO_3 1% (2,506.23) and GA_3 200 ppm (2,502.24), while the lowest SVI-I (1,828.13) was found in control.

Table 3 Effect of seed priming on seed vigour index and speed of germination of cucumber (*Cucumis sativus* cv. Bhaktapur Local) in Syangja, Nepal, 2024

Treatments	Seed vigour index (SVI)		Speed of germination
	SVI-I	SVI-II	BRI
Control	1,828.13^{d}	16,823.33^{d}	0.40^{d}
Hot water (45 °C for 5 minutes)	2,643.83^{a}	22,555.33^{a}	0.46^{bc}
GA_3 100 ppm	2,202.97^{bcd}	21,026.00^{ab}	0.47^{abc}
GA_3 200 ppm	2,502.24^{ab}	21,933.33^{ab}	0.46^{bc}
KNO_3 1%	2,306.23^{abc}	22,006.67^{ab}	0.49^{a}
KNO_3 3%	2,031.86^{cd}	17,776.00^{cd}	0.48^{abc}
Cow urine 5%	2,044.51^{cd}	19,702.67^{bc}	0.47^{abc}
Cow urine 10%	2,167.02^{bcd}	20,877.33^{ab}	0.47^{abc}
Vermiwash 10%	1,966.06^{cd}	17,946.00^{cd}	0.48^{ab}
Vermiwash 20%	2,106.60^{cd}	19,580.67^{bc}	0.45^{c}
CV (%)	9.40	6.41	0.46
$LSD_{0.05}$	349.07	2,188.86	0.02
Grand mean	2,179.94	20,022.73	0.46
SEm (±)	118.30	741.98	0.00
F-test	**	***	***

Note: Mean within the column followed by the same letter/s are not significantly different at 5% level of significance by DMRT. * Significant at 5% (p<0.05), ** Significant at 1% (p<0.01), *** Significant at 0.1% (p<0.001), NS= non-significant at 5% (p>0.05), SEm= Standard Error of mean, LSD= Least significant difference, CV= Coefficient of variance, SVI-I= Seed vigour index-I, SVI-II= Seed vigour index-II and BRI= Speed of germination

Significantly the highest SVI-II (22,555.33) was found in hot water which was not significantly different from KNO_3 1% (22006.67), GA_3 200 ppm (21,933.33), GA_3 100 ppm (21,026.00) and Cow urine 10% (20,877.33), while the lowest SVI-II (16,823.33) was found in control. This finding was also supported by Sowmya et al. (2013), where KNO_3 1% had highest SVI-II.

Significantly the highest BRI (0.49) was found in KNO_3 1% which was not significantly different from KNO_3 3% and Vermiwash 10% (0.48), Cow urine 5% and 10% (0.47), GA_3 100 ppm (0.47), while the lowest BRI (0.40) was found in control.

3.3 Shoot length and root length (cm)

The results on shoot length and root length are presented in Table 4. The effect of different seed priming treatments on shoot length did not show significant differences. Similar finding was reported by Al Sahil (2016).

Root length was highly significant for different seed priming techniques. Significantly, the highest root length was found in GA_3 200 ppm (21.15 cm) which did not differ significantly from the hot water (20.09 cm) treatment, while the lowest root length was found in control (15.49 cm). Vermiwash 10% (15.75 cm), Cow urine 5% (16.56 cm), Vermiwash 20% (16.62 cm), KNO_3 3% (16.67 cm), GA_3 100 ppm (17.08 cm), Cow urine 10% (17.26 cm) and KNO_3 1% (17.76 cm) also showed lower root length but were non-significant among themselves.

3.4 Fresh shoot weight and fresh root weight (g)

The results on fresh shoot and fresh root weight are presented in Table 5. The effect of different seed priming treatments on fresh shoot weight did not show significant differences. According to Farooq et al. (2007), Osmo-priming or chemo-priming did not improve the seedling fresh weight in melon. Seed pre-soaking treatments were recorded non-significant for seedling fresh weight in cucumber (Al Sahil, 2016).