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### Phenological Development in Relation to Temperature of Winter Wheat Iwainodaichi Seeded Early in Southwestern Japan

[Akira Fukushima](#)<sup>1)</sup>, [Osamu Kusuda](#)<sup>1)</sup>, [Masami Furuhashi](#)<sup>1)</sup> and [Hiroshi Nakano](#)<sup>1)</sup>

1) Natl. Agr. Res. Cent. for Kyushu Okinawa Region

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**Abstract:** The phenological development of winter wheat Iwainodaichi seeded early was compared with that of spring wheat Chikugoizumi based on the temperature. In this paper, the developmental phase from the sowing to double ridge is referred to phase 1, that from double ridge to anthesis phase 2 and that from the anthesis to maturity phase 3. The duration of phase 1 in Iwainodaichi was almost constant independent of the mean temperature in this phase, but that in Chikugoizumi decreased as the mean temperature in this phase increased. When seeded early, the duration of phase 1 was obviously longer in Iwainodaichi than in Chikugoizumi since the mean temperature in this phase was higher when seeded early. The duration of phase 2 decreased in both varieties as the mean temperature and photoperiod in this phase increased. When seeded early, phase 2 was shorter in Iwainodaichi than in Chikugoizumi, since the mean temperature was higher and photoperiod longer in this phase in Iwainodaichi than in Chikugoizumi. The duration of phase 3 decreased as the mean temperature in this phase increased in both varieties and was shorter in Iwainodaichi than in Chikugoizumi at the same mean temperature. Consequently, Iwainodaichi reached the double ridge stage later but reached maturity at about the same time as Chikugoizumi when seeded early.

**Keywords:** [Early sowing](#), [Phenological development](#), [Photoperiod](#), [Spring wheat](#), [Temperature](#), [Winter wheat](#)

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