Effects of climate on black currant production

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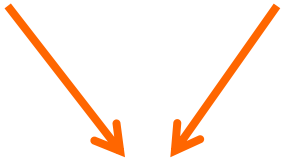
Climate affects black currant strongly

Climate factors:

- Temperature
- Day length

Plant responses:

- Bud break
- Shoot growth
- Growth cessation
- Flower initiation
- Dormancy induction
- Breaking of dormancy



Cultivar differences

Temperature – frost damage

Photo: S. Mogan

Photo: S. Strbac

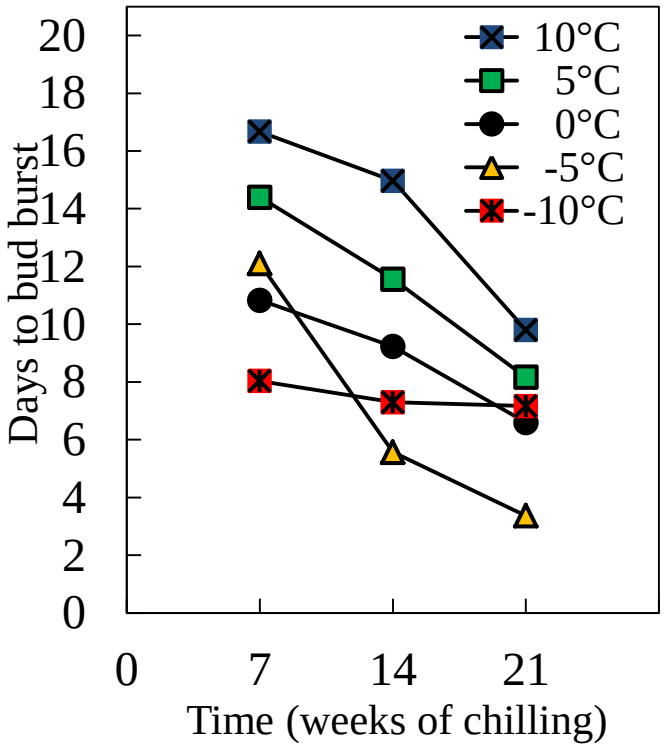
Temperature - growth

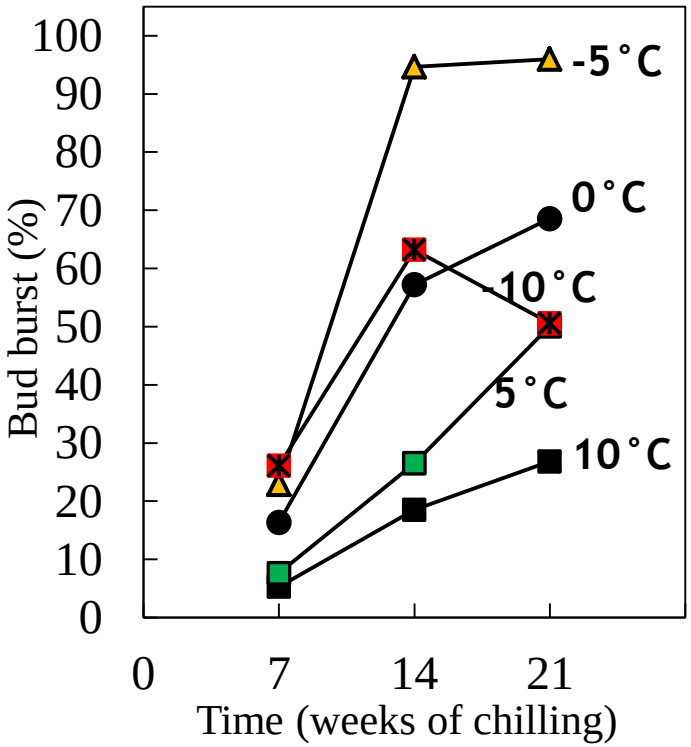
Temperature – breaking of dormancy

10°C 5°C 0°C -5°C -10°C -20°C

Shoots chilled for 14 weeks at different dormancy breaking temperatures

Temperature – breaking of dormancy





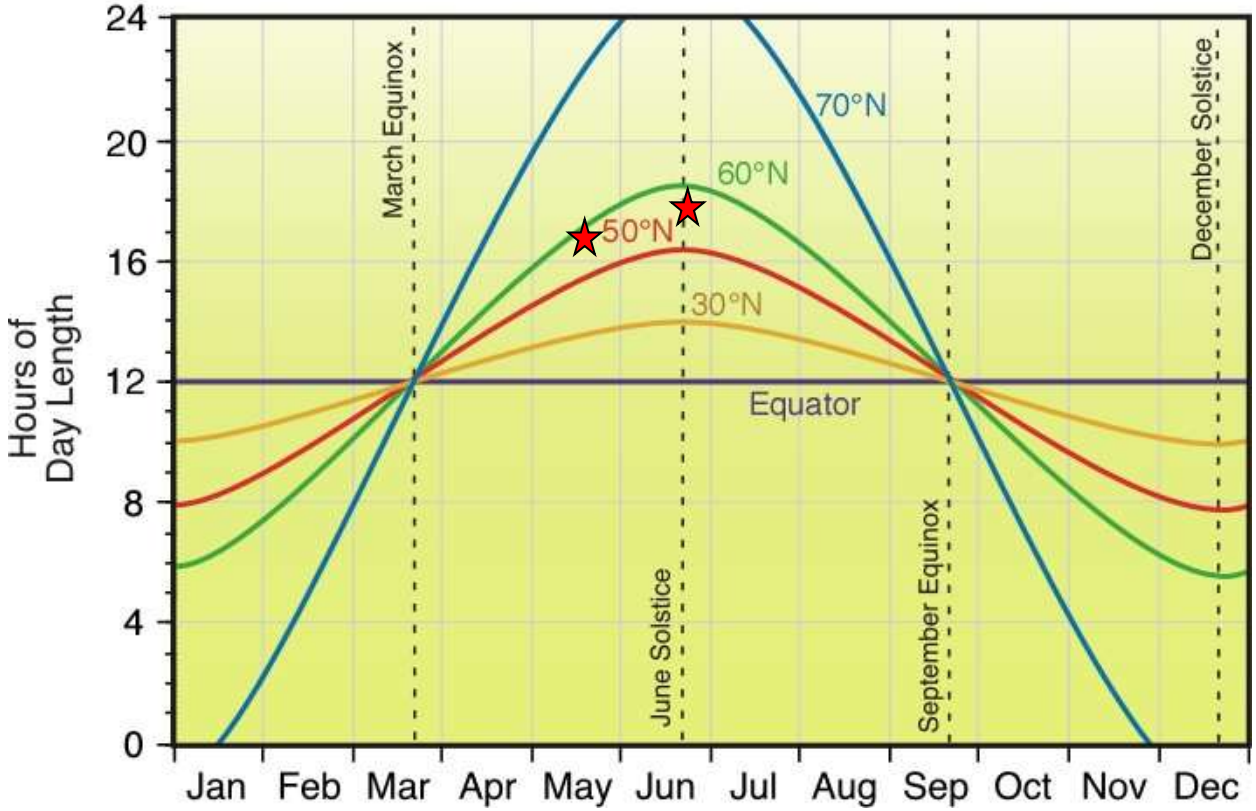
Cultivar 'Narve Viking'

Day length

Short day (10h) Long day (20h)

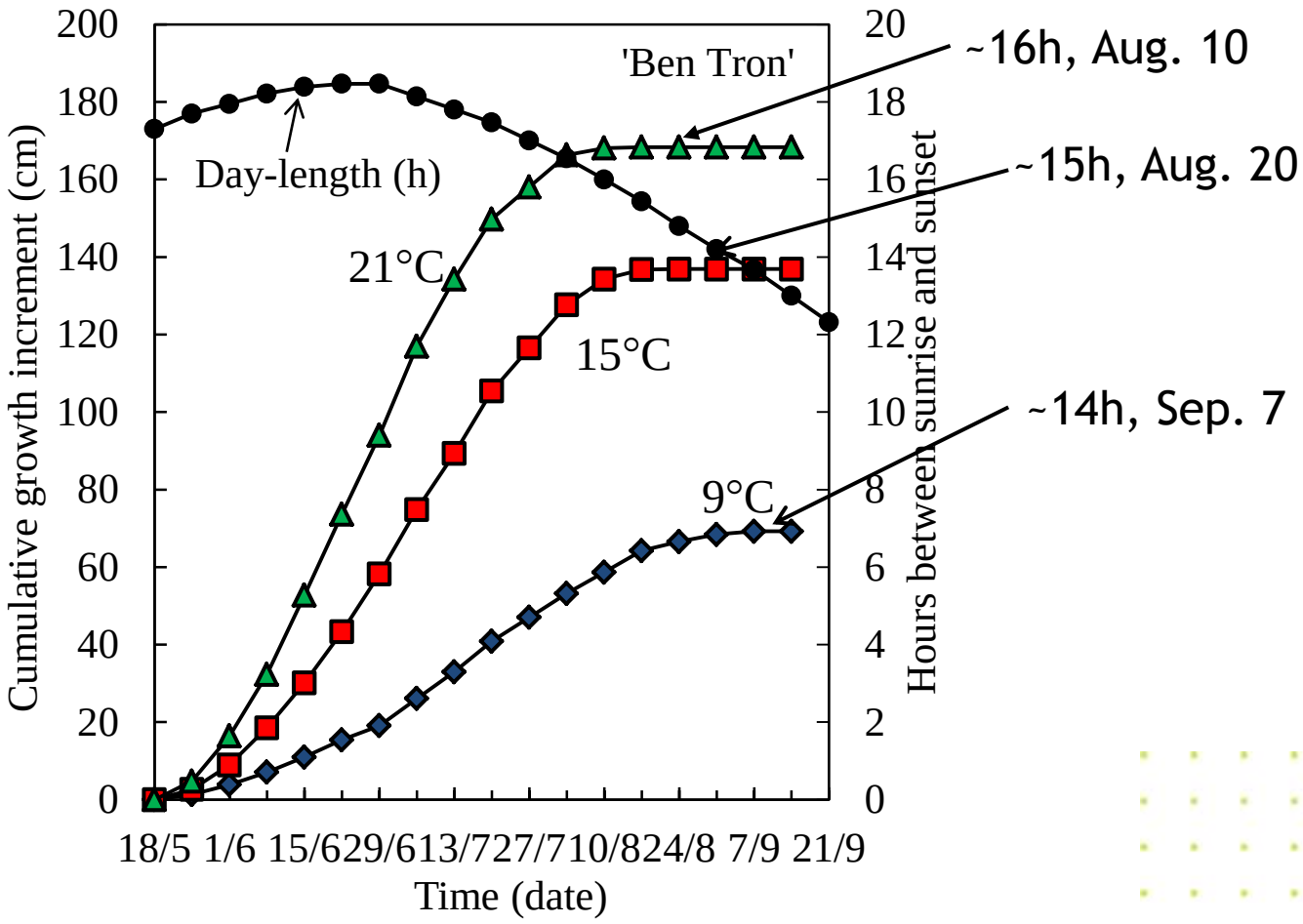

10h
14h
15h
16h
17h
18h
24h
Grown for 6 weeks at 18°C

Day length as a function of latitude and season



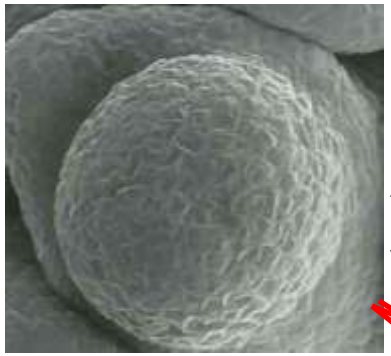
Interactions between day length, temperature and cultivars

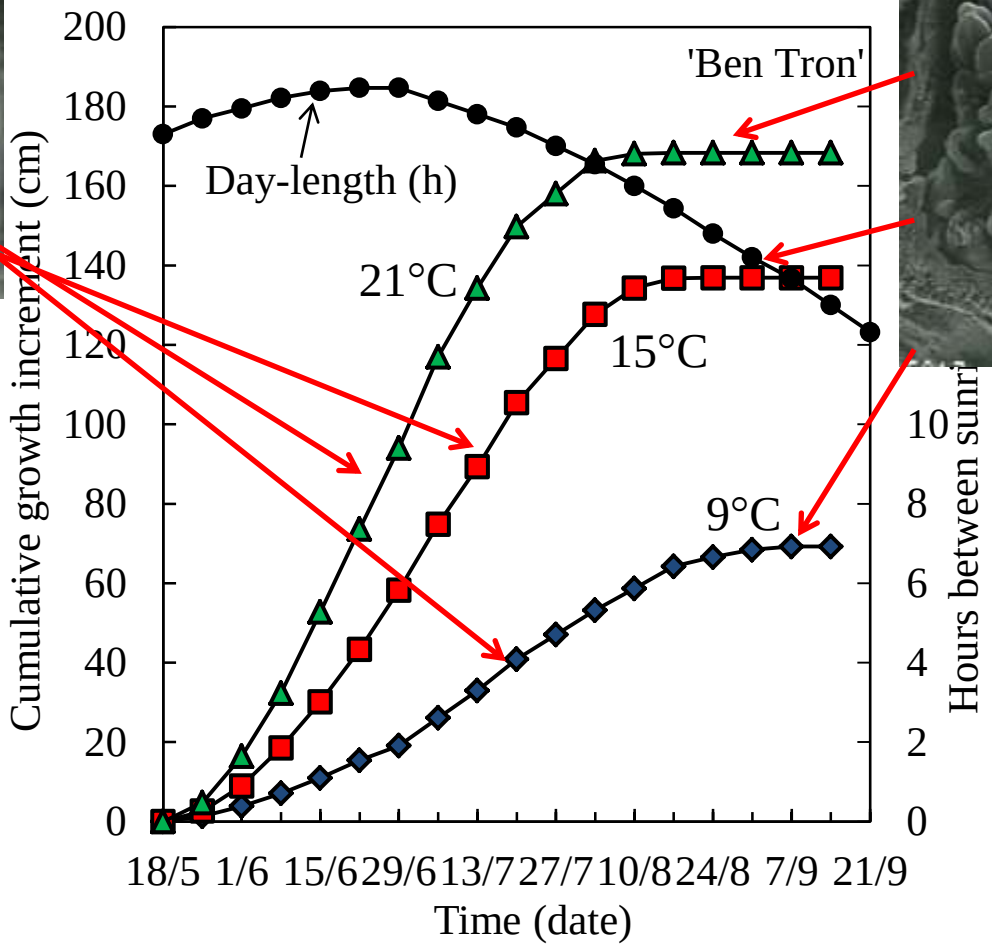
Temperature x day-length interactions



Grown at natural day-length at 59°N, Norway

Floral initiation short after decline of growth





Grown at natural day-length at 59°N, Norway

9°C 12°C 18°C 24°C

Warm summer temperature increases flowering and yield

Temp. (°C)	No. of flowers per plant	Flowers per inflor.	Yield (g/plant)
9	80	8.5	122
12	205	10.7	309
18	385	13.4	334
24	383	13.0	322