Temperature Effects On Flowering, and Yields

Please carefully read the attached article. The major point is very simple.at high temperatures plants do not produce sufficient IAA for cell division. This is very important during the time of flower formation. If the flower buds do not have sufficient IAA for cell division, they will become dormant.

This is true for any crop. This may be the most important lesson that you will learn in the year 2002. BUD DORMANCY, FLOWER PRODUCTION, AND FLOWER FERTILITY ARE EFFECTED BY HIGH TEMPERATURES BECAUSE PLANTS DO NOT PRODUCE SUFFICIENT IAA FOR CELL DIVISION.

Since canola is a member of the brassica family, they even have more problems producing sufficient IAA as the temperature increases.

From this article one can understand two simple principles:

1. Seed treatment with Stimulate on canola gives a very good yield response even though the rate per acre or hectare is very low.
2. During periods where temperatures exceed 86ºF or 27ºC, it would be very beneficial to foliar spray canola or rapeseed with a solution of Stimulate plus calcium boron. The Stimulate will add auxin to the plant, the calcium will cause auxin movement, and the boron will cause an increase in the auxins half-life.

When treating with Stimulate and calcium boron, I would suggest the following:

3 oz. per acre or 200 ml per hectare of Stimulate + 1 liter per acre or 2 liters per hectare of CaB, applied as a foliar spray every 10 days during the period preceding flowering. This application should be continued on 10 day intervals throughout the flowering period.only if the temperatures exceed the above amount.

It is now becoming increasingly evident that we must have a Stimulate, calcium, boron sprays, which are to be used only during periods of high temperatures. If the temperatures are not high, farmers will complain about adequate response to the expenditure of the treatments. If temperatures are high, farmers will get a tremendous

return on their investment.

We have long known that the use of boron on canola and rapeseed has been a profitable practice. We now know that the reason why it is so is because it increases the half-life of what little IAA the plant produces during hotter temperatures.

We are now positioned to understand and also correct the insufficiency of IAA in canola, brassica, and all other types of crops.

ALL FLOWERING CROPS ARE SENSITIVE TO HIGH TEMPERATURES BECAUSE CROPS DO NOT PRODUCE ADEQUATE IAA FOR THE NUMBER OF FLOWERS AND THE FERTILITY OF FLOWERS.

Jerry

Middle East Office: 9, El Shahid / Abdel Moniem Ismail St., Suite # 1, Golf Area, Heliopolis, Cairo, Egypt.
Tel & Fax: (+ 202) 4147599 – 4194265 - 4153410 - E-mail: a.elshiati@stollerme.com ♦ www.stollerusa.com ♦ www.stollerme.com