

CHASE

SM6

Natural Seaweed Extract



Plant Growth Stimulant For all Crops

Produced in the UK by



Introducing SM6 A Plant Growth Stimulant

SM6 a natural plant growth stimulant, is manufactured from a combination of seaweed varieties responsibly harvested from the Atlantic shores of the British Isles and applied to an extensive range of crops world wide.

Plant growth stimulants are either synthetic compounds or plant hormones that modify plant physiological processes. They can regulate growth by mimicking hormones, by influencing hormone synthesis, destruction, translocation, or possibly by modifying hormonal action sites.

It can be said that all hormones regulate growth but not all growth regulators are hormones (Hartmann & Kester). Auxins, cytokinins and gibberellins have specific roles in plant growth, whether it be root formation, shoot growth, leaf and fruit abscission, cell growth and differentiation, stem elongation and many more effects.



Aqueous extraction is used to make a unique low pH product, readily available to plants, and which contains 30% soluble seaweed solids. SM6 contains cytokinins and betaines which have been isolated from seaweeds.

Betaines are considered the main active ingredient in seaweed extracts and are particularly prevalent in SM6.

Betaines are modified amino acids which act in a similar way to cytokinins (Wheeler 1973). Glycine betaine, in particular, assists in the plant's osmotic process, helping treated plants to withstand different forms of stress.

Other natural ingredients in SM6 include trace elements and sugars. However, apart from food grade preservatives, nothing is added, making SM6 eminently suitable for application to organically and conventionally grown crops. SM6 is registered for use on organic crops in several countries including the UK, Australia, New Zealand and Spain.

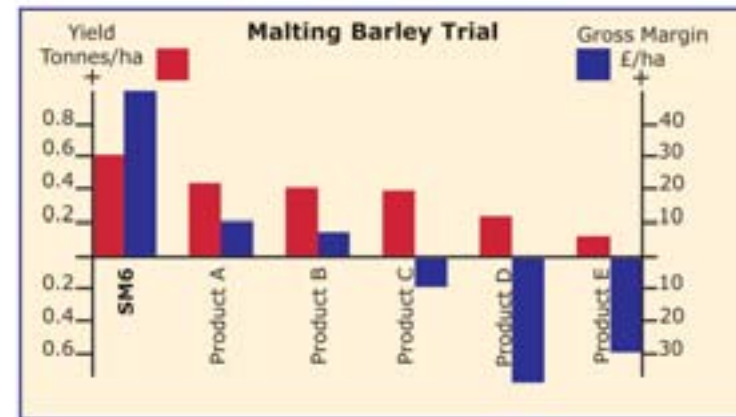


SM6 encourages

- plant cell division
- enlargement of rooting area
- maximum photosynthetic activity from increased chlorophyll content of foliage
- build up of soil microbial activity
- stimulation of plant's Systemic Acquired Resistance to pest and disease attack

Practical results using SM6

SM6 increases crop yield and quality, stimulated photosynthetic activity, increasing starch/sugar and protein production.



SM6 treated crops remain **productive longer** and can give an extra 'flush'

SM6 treated fruit, vegetables and flowers travel better and have a **longer shelf life**

SM6 can help **reduce the level of chemical inputs** on conventional crops

SM6 has been shown to provide **protection** against marginal frosts

SM6 encourages **healthy plant growth** which in turn better enables the plant to **withstand pest and disease attacks**

Scientific Research

Below is only a small list of scientific references supporting the claims that the use of seaweed extracts can significantly affect crop growth. **More details about these studies are available in the Chase Organics Seaweed Extracts Handbook available online at www.ChaseOrganics.co.uk.**

Increasingly modern research findings are confirming the practical experience of extract users for many years. For example, in the case of (4) below, it was noted in Australia that soil which had been treated with SM3 (predecessor of SM6) showed a 90% reduction in nematodes present. To claim that seaweed extracts act as pesticides would be incorrect but it is clear that they do **stimulate the plants natural defences to resist attacks through Systemic Acquired Resistance.**

1. Better Quality – Blunden

Effects of aqueous seaweed extract on sugar beet

2. Higher Yield – Blunden

Effects of aqueous seaweed extract on potato yields

3. Improved Root Growth – Van Staden

Effects of seaweed concentrate on tomato roots

4. Pest Resistance – Wu

Role of seaweed extracts in the reduction of root knot nematode

5. Disease Resistance – Tyihak

Levels of trigonelline and other.. compounds in tomato leaves

6. Increased Chlorophyll – Whapham

Increased chlorophyll content in tomato leaves treated with seaweed extract

7. Drought resistance – Bergmann

Effect of glycine betaine on water efficiency of wheat

8. Frost Resistance – Senn

S Carolina Res. Sta. Results

9. Improved Germination – Wilczeg

Promotion of beet germination by an aqueous extract

10. Nutrient Uptake – Steveny

Effect of seaweed extract on hydroponically grown barley

11. Pesticide Activity – Brain

Enhancement of herbicidal effects by seaweed extracts

SM6 Application Rates

CROP	LT/HA	Nº OF APPLICATIONS & TIMING
Cereals	1.4	3 - GS 11-14, 29-31 & 59
Malting Barley	1.4	3 - GS 11-14, 29-31 & 39
Permanent Grass	2.8	1 - Spring or autumn
Intensive Grass	2.8	2-3 Spring & after each cut
Amenity Grass	2.8	see amenity grass leaflet/ Chase Organics website
Potatoes	2.8	2 - See potatoes leaflet/ Chase organics website
Sugar Beet	2.8	2 - 6-8 true leaves and 14 days later
Vegetables	1.4	4 - At intervals, start at 4 leaf stage
Top Fruit	1.4	4 - At intervals, bud burst to fruit set
Currants/ Raspberries	2.8	2 - New growth and flowering
Fertigation	5.6	Split regularly through crop life
Transplants		Dip roots in 1 in 200 solution



Directions

SM6 is normally applied in 220-440 lt/ha water.

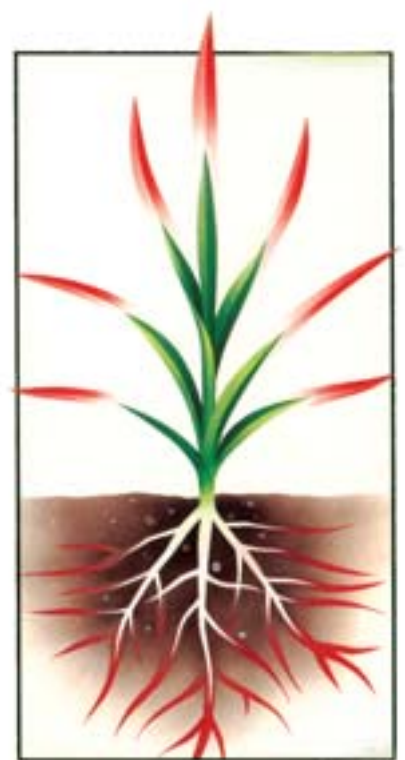
Shake well before use.

Avoid spraying in the middle of the day during hot, sunny periods.

Compatibility: SM6 may be mixed with most other spray materials unless otherwise specified by the manufacturer. If in doubt consult your distributor.

Produced in the UK by

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Can be used on certified organic crops with the consent of your certifier

Licence number IC08