

CHASE

# SM6

Natural Seaweed Extract

## 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 manner 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
- stronger top growth
- 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

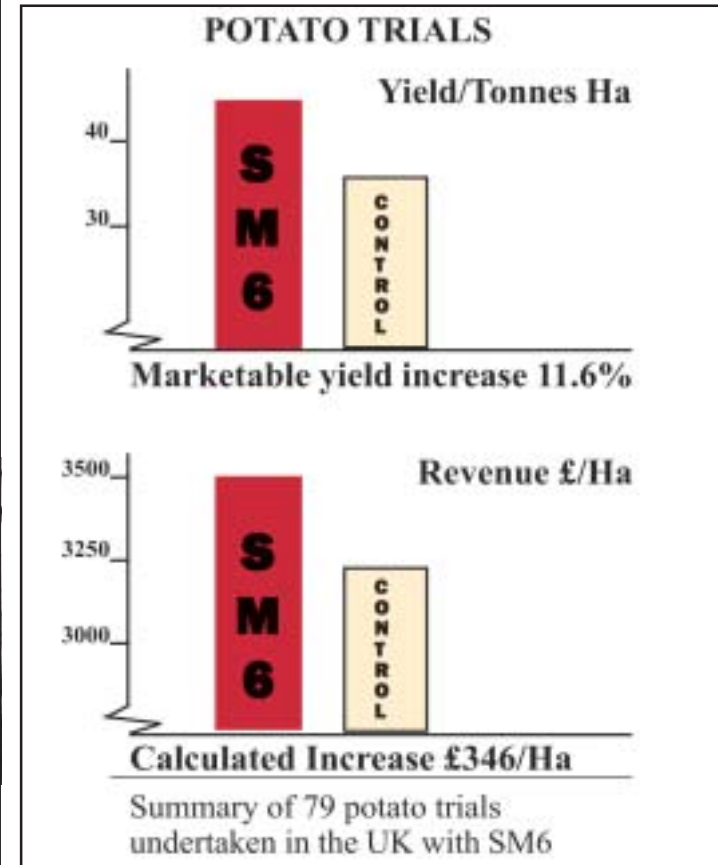
## Positive benefits will follow:

- improved nutrient/trace element uptake
- increased resistance to all forms of stress
- **improved marketable yield**
- **longer shelf life of produce**



## Plant Growth Stimulant for Potatoes

Produced in the UK by



For more information on seaweed extract, including studies and trials please see our technical handbook which is available online [www.ChaseOrganics.co.uk](http://www.ChaseOrganics.co.uk)

## Practical results using SM6 on Potatoes

- SM6 increases crop yield and quality by stimulating the plant to maximise photosynthetic activity, increasing starch/sugar and protein production
- SM6 treated crops remain productive longer due to delayed senescence, which can be important for maincrop varieties
- SM6 treated potatoes have a better skin finish and are more uniform in size.
- SM6 can increase tuber numbers, important for seed and salad crops
- SM6 has been shown to provide protection against marginal frosts, important for early planted crops and following removal of polythene/fleece covers
- SM6 encourages healthy growth, enabling the plant to better withstand stress conditions including water availability, temperature extremes, pest and disease attack.



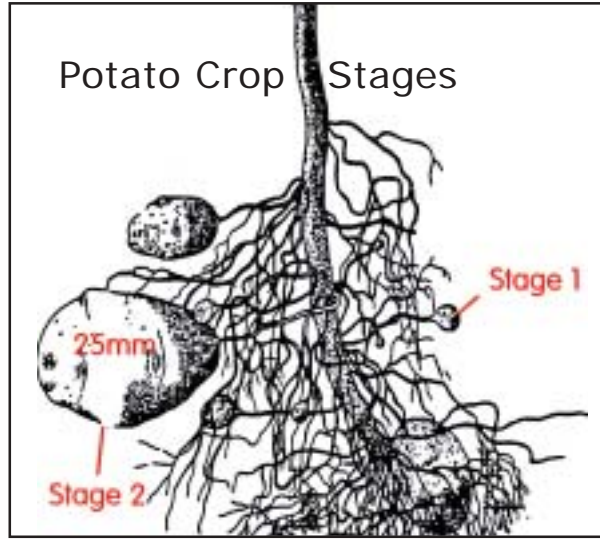
## Analysis

SM6 as a natural product, is environmentally friendly and an invaluable aid to potato production, both organic and conventional. It contains no less than 30% soluble seaweed solids, with a unique low pH, plus the range of micro-nutrients normally found in a combination of seaweeds.

## Cumulative Benefits:

Repeated applications of SM6 via conventional spray equipment, or through fertigation systems, will encourage a build up of the soil microbial activity, which can also benefit following crops. This leads to improved soil fertility and a corresponding reduction in dependence on chemical inputs.

## SM6 Application - Timing and Rates



Crop Stage	Application Rate
<b>Stage 1</b> Improve tuber numbers for early seed/salad crops	2.8 lt/ha at tuber initiation plus 2.8 lt/ha 10-14 days later
<b>Stage 2</b> Improve percentage of large tubers	
(a) rapid bulking varieties	(a) 5.6 lt/ha when tubers approx 25mm
(b) slow bulking varieties and general ware crops	(b) 2.8 lt/ha when tubers approx 25mm plus 2.8 lt/ha 10-14 days later
<b>Protected Crops</b>	2.8 lt/ha after cover removal and 2 weeks later

## 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 concerned. If in doubt consult your distributor.**

Produced in the UK by

Chase Organics Ltd  
 Riverdene Business Park  
 Molesey Road  
 Hersham  
 Surrey  
 KT12 4RG  
 01932 266630  
[www.chaseorganics.co.uk](http://www.chaseorganics.co.uk)



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

Licence number IC08