

**Text 3 – Sulphurgain range**

Learner's purpose for reading: To gain information for an Agriculture project

Text read:



## SULPHURGAIN RANGE

**What is the Sulphurgain range?**

**The Sulphurgain range of products has been designed to meet the sulphur and phosphorus needs of a variety of farming conditions within New Zealand.**

Sulphurgain products contain both elemental sulphur and sulphate sulphur, and can be blended with potash and trace elements to meet farm-specific needs. Blends should be applied as soon as possible after mixing, ideally within 24 hours.

To maintain product quality, Sulphurgain products should be stored in cool, dry conditions.

Sulphurgain 30S is Fertmark registered.

**Advantages of Sulphurgain products**

**Addresses immediate sulphur needs:** All of the products in the Sulphurgain range (with the exception of Sulphurgain Pure) contain sulphate sulphur. This is immediately available for plant uptake, and will meet short-term plant requirements.

**Meets long-term sulphur requirements:** All of the Sulphurgain products contain elemental sulphur. When added to the soil, elemental sulphur slowly degrades as a result of the action of specialised, naturally occurring soil bacteria called *Thiobacillus*. As these bacteria break down the elemental sulphur, they convert it to sulphate sulphur, which can be used by plants. Elemental sulphur is resistant to leaching, so it can be applied in autumn and it will still be present in the soil as a source of sulphur in spring.

**Provides maintenance phosphorus:** With the exception of Sulphurgain Pure, all of the Sulphurgain products provide soluble phosphate. In many cases, this will be sufficient to maintain soil phosphorus at target levels.

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**FIGURE 1**  
Sulphurgain 30S



**FIGURE 2**  
Sulphurgain Pure

Product	N (%)	P (%)	K (%)	S (%)	Ca (%)
Sulphurgain 15S	-	8.6	-	14.8	21
Sulphurgain 20S	-	8.0	-	20	19.8
Sulphurgain 30S	-	7.0	-	29.5	17.5
Sulphurgain 50S	-	5.3	-	44.6	13.1
Sulphurgain Pure	-	-	-	90	-

Product	Elemental S	Sulphate S
Sulphurgain 15S	30%	70%
Sulphurgain 20S	50%	50%
Sulphurgain 30S	70%	30%
Sulphurgain 50S	85%	15%
Sulphurgain Pure	100%	

**TABLE 2**  
The proportion of elemental and sulphate sulphur in Sulphurgain products (rounded to the nearest 5%)



### Sulphurgain 15S

Sulphurgain 15S is a good general purpose fertiliser for use in sulphur-responsive areas. The high proportion of sulphate sulphur in Sulphurgain 15S ensures a rapid plant response when growing conditions are good. The elemental sulphur component will provide long-term sulphur even after late autumn or winter rains.

A typical farm that would likely benefit from Sulphurgain 15S would be inland, and so receive little sulphur deposited by ocean spray. Farms with sedimentary soil may also benefit, as these soils do not have a particularly high capacity for storing organic sulphur or sulphate sulphur. Sulphurgain 15S is particularly suited for autumn application on sheep and beef farms, especially those on sedimentary soils. When applied at 200-250 kg/ha it provides moderate rates of phosphorus and sufficient sulphur to ensure that production is not limited.

### Sulphurgain 20S

Sulphurgain 20S is a good choice for farms where light rates of phosphorus are required in addition to immediate and long-term sulphur.

A typical use for Sulphurgain 20S would be on effluent areas. These often require light rates of phosphorus to supplement the phosphorus from the effluent, but they may need more sulphur than would be supplied if a superphosphate product was used.

Since Sulphurgain 20S contains equal amounts of elemental and sulphate sulphur, it provides both immediately available sulphur and a longer-lasting source of sulphur to support future pasture growth.



### Sulphurgain 30S

Sulphurgain 30S is a good choice if you are looking for a fertiliser to meet sulphur requirements in situations where phosphorus is not limiting production, i.e. where relatively low rates of phosphorus are required. This situation is likely to be found on sheep and beef properties on relatively developed land.

Other factors that would favour the use of Sulphurgain 30S include low levels of extractable organic sulphur and coarse-textured soils, particularly if accompanied by high annual rainfall.

Sulphurgain 30S may be applied in either spring or autumn, since the high proportion of elemental sulphur will minimise leaching losses.



### Sulphurgain 50S

Sulphurgain 50S is a good choice for high-loss soil environments where phosphorus is not limiting production, and also for situations where fertiliser is applied on a biennial or triennial basis, and a slow-release sulphur source is required. It is ideal for use on steep hill country, where fertiliser applications can only be made by aerial topdressing.

The high percentage of elemental sulphur in Sulphurgain 50S provides a reservoir of sulphur that will be converted into plant-available sulphur over a period of several years.

### Sulphurgain Pure

Sulphurgain Pure has been formulated for use in combination with other fertilisers. It is not designed for application as a straight-line product. It may be used on dairy farms in autumn, being of value on properties that have both high annual rainfall (>1500 mm) and soils with a low anion storage capacity (ASC<60).

On hill country, Sulphurgain Pure should be considered if sulphate sulphur levels are below 8. It may be applied at any time of the year. Common uses include blending with DAP for autumn application, or blending with MOP for promoting clover growth on south-facing slopes.

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Learner evidence:

#### **Sulphurgain Task Sheet**

**Read the information brochure and answer the questions.**

1. What is the purpose of this brochure?

③

*To explain about the different Sulphurgain products and convince people that they should purchase these products.*

2. What are the main messages of the brochure? Give evidence from the text.

②

Message	Supporting evidence
<i>Sulphurgain products are suitable for NZ conditions</i>	<i>"The Sulphurgain range of products has been designed to meet the sulphur and phosphorus needs of a variety of farming conditions within New Zealand."</i>
<i>The products can help provide sulphur in the short term and the long term</i>	<i>"Addresses immediate sulphur needs" "Meets long-term sulphur requirements" "Provides maintenance phosphorus"</i>

3. What are the advantages of the Sulphurgain products?

①

*They provide sulphur immediately and over time  
There are different mixes available to suit different farms / needs  
They are designed for NZ conditions*

4. How is Sulphurgain Pure different from the other Sulphurgain products?

①

*It only contains sulphur (no phosphate) and the sulphur is only elemental sulphur (not sulphate form).*

5. Evaluate this brochure.

④

*The brochure was helpful for explaining about the different products and which one is suitable for which type of situation. It also provided the specific sulphur percentages and explained how the different ingredients work. I also think the information was credible because it came from Ballance which is the producer / developer of the fertilisers.*