



## 4Farmers information.



### HOT-UP? or just a standard tune-up?

It is possible to hot-up a racing car until it reaches F1 standard. Just add money. But if you live along a corrugated road it won't do anything your standard Commodore or Falcon can't.

It is possible to buy ready mixed wetter/oil/ammonium sulphate in a 20L drum. Just add to the spray tank. But why do this unless you have a tax problem?

Let's do some sums.

The ready to use mix costs \$158 for a 20L drum - \$790 for 100L.

It contains 140 g/L ammonium sulphate, 190 g/L mineral oil, and 340 g/L surfactants and emulsifiers.

That's 14 kg ammonium sulphate, 19 kg oil, and 34 kg surfactants/emulsifiers in 100L.

A 25 kg bag of 4Farmers ammonium sulphate costs \$28, and it is first rate spray grade. So 14 kg is \$15.70.

A 20 L drum of CropShield is \$81, and contains 838 g/L mineral oil and 70 g/L surfactants/emulsifiers.

So 22.7 L contains 19 kg of mineral oil, costs \$92, and you get 1.6 kg surfactants/emulsifiers as well.

A 20 L drum of 4Farmers Wetter 1000 is \$100, and it is 1000 g/L surfactant.

So 32.4 L contains  $(34 \div 1.6) = 32.4$  kg of surfactant, and costs \$162.

You can make the equivalent of 100L Hot-Up for  $\$15.70 + \$92 + \$162 = \$269.30$ .

No doubt Victorian Chemicals will say they have some special/secret/exclusive ingredient/wetter/emulsifier/surfactant that makes it worthwhile spending the extra \$530.

Only you can be the judge of that.

And remember:

Ammonium sulphate's main strength is when hard water must be used to spray out amine formulations – 2,4-D, MCPA, Clopyralid, Glyphosate etc. Swamping the spray solution with ammonium ions reduces the complexing between the amine and calcium/magnesium ions. The efficacy of the product is maintained.

Surfactants are especially needed when target weeds are hard to wet and the spray needs help to stick. Spraying small ryegrass and silver grass is the classic scenario. Surfactant's other strength is enabling spray droplets to spread over a leaf surface. This is most important for contact herbicides such as bipyridyls and bromoxynil. Spray topping of pasture or legume crops often needs extra wetter with the herbicide improve coverage.

Spray oils are needed most when weeds have been under stress and have a waxy leaf coating. Oils can improve the penetration of herbicide through this cuticle. Oils can also act as anti-evaporants and so reduce drift when spraying in warm conditions.

It makes sense to add just the adjuvants you need for a particular situation. Even if you need all three you may choose to add more of one and less of another.

Buying a pre-mix does not allow you this freedom.

The recommended rate of Hot-Up is 2.5L to 10L in every 1000L of spray solution.

That's 0.35 to 1.4 kg Ammonium Sulphate, 0.57 to 2.27 L CropShield, and 0.81 to 3.24 L Wetter 1000.