

CODACIDE

Making every drop count



WATER EQUALS WASTE

Water has many inherent qualities that make it inappropriate for spraying.

- There are many spray surfactants, additives and adjuvants available that try and improve the spray delivery qualities of water - from wetters, to stickers to drift controllers.
- Trying to make water behave less like water is a losing battle as such additives can perform only one or two specific actions that try to improve water's spray qualities.

WHY CODACIDE OIL IS UNIQUE

- Codacide Oil is unique in that it does not try and change water - it replaces water as the primary carrier.
- Codacide Oil protects each PPP (plant protection product) molecule from the negative attributes of water and significantly reduces ALL five major loss factors.

Codacide oil reduces **FIVE** loss factors associated with using water when spraying:

1) IMPURITIES IN THE WATER REACT WITH THE CHEMICAL

- Salinity
- Alkaline Hydrolysis

2) POOR PHYSICAL CONTROL OF THE DROPLET SPECTRA - WATER SHATTERS!

- Where droplets are too small-Drift and Evaporation
- Where droplets are too big-Bounce and Run Off

3) POOR STICKING - RUN OFF

Water Repellent Properties of the Target!

- Cuticle wax of plants and insect shells
- Pathogenic fungi

4) POOR SPREAD

- High surface tension of water!

5) NOT PROTECTING THE CHEMICAL ON THE TARGET

- Evaporation
- Volatilisation
- Rain Fastness

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10 REASONS TO USE CODACIDE

THE SCIENCE BEHIND CODACIDE

Codacide is based on vegetable oil emulsion technology. It is added to plant protection products (PPP's) and maximizes spraying applications by:

- Increasing deposition, spread and uptake of chemicals to the target
- Increasing rainfastness
- Significantly reducing spray drift and water volumes.

Codacide is a 95% natural vegetable oil adjuvant formulated with a series of compound emulsifiers. When Codacide is pre-mixed with a plant protection product, the emulsifiers latch onto the product forming a shell of oil around each molecule. When this is added to water in the spray tank, a 'controlled emulsion' is formed.

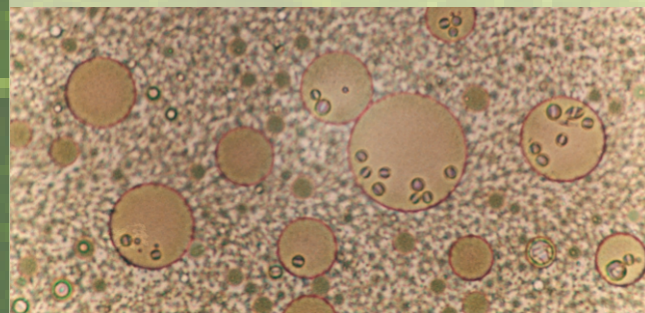


Minimal spread with water only



Increased spread with Codacide

It is this encapsulation that is the key to Codacide's unique efficiency as a carrier of the plant protection product.



Metarhizium spores encapsulated in Codacide

Improves Deposition and Adhesion

Plant cuticle wax, insects shells and even pathogenic fungi have water repellent properties, causing water carried chemical to run-off onto the soil.

Codacide, however, is made of a similar material (both are types of triglycerides) as the cuticle wax of plants and insect shells. This gives Codacide-carried pesticide a more natural affinity for sticking to the target.



Increases Spread and Uptake

When water is used as the spray carrier, once the water droplet evaporates, it leaves a pile of dried pesticide residue which is not easily available for uptake by the plant, insect or fungus.

The Codacide-encapsulated pesticide spreads 8 to 16 times on a leaf surface further than an equivalent sized water droplet. As a greater proportion of the pesticide is in contact with the target, there is more available for uptake by the pest - be it weed, insect or fungus.



Reduces Drift

One of the main causes for spraying inefficiency and spray pesticide loss is the wide range of different sized water droplets produced-small droplets drift and large droplets are too big to stay on the target and therefore run off. Independent research has shown that Codacide reduces the volume of very fine drift-prone droplets by 80%.



Improves Rainfastness

Due to its adhesion to the target, within minutes of being applied, Codacide gives a high degree of rainfastness protection to the pesticide it carries. So if rain is forecast you can still spray as long as the target is dry at time of spraying.



Reduces Evaporation

Encapsulation of the pesticide by Codacide protects the pesticide from loss factors such as evaporation and the breakdown of the pesticide by sunlight through photodecomposition. As many pesticides are petroleum based, they are volatile, and encapsulation in Codacide can reduce these volatilisation losses.

Codacide can reduce the interaction of pesticide with impurities in the water which can lead to neutralisation of the pesticide.



Increases Spraying Days

With few perfect spraying days during the year growers often have to spray in conditions that are not ideal. Codacide can help to minimise losses of rain wash-off and droplets drifting in windy conditions.



Reduces Chemical Rates and Environmental contamination

Codacide improves the accuracy of targeting your chemical, reducing losses, improving efficiency and making every droplet count. Using Codacide is a cost-effective way of reducing your chemical bills while enhancing results. As less chemical is wasted, less chemical, is needed. Good news for the grower and good news for the environment.



Organic, Biological and Biodegradable

Codacide has organic status. It is approved by the UK Soil Association and is a registered input of the Guild of Conservation Grade Producers in the UK. Codacide has been proven to be an effective aid in biological control with such products as *Metarhizium*, *Bacillus thuringiensis*, *Veticillium lacanii*.

Codacide is totally biodegradable, non-phytotoxic, safe for user and consumer and has no Harvest Interval.



Saves Water

Due to improved accuracy, growers have found they can reduce water volumes. It can also be used with all types of sprayers.

Enhances the Quality of your Produce
Grow healthy produce using less chemical...

