Due to varietal and climatic differences **ORO AGRI** suggest you always test on small scale first to ensure your results are similar to studies portrayed in this brochure.

**ORO AGRI** is the proprietary trademark of Oro Agri International Ltd  
**ORO** is the registered trademark of Oro Agri International Ltd  
**WETCIT** is the registered trademark of Oro Agri Inc  
**OROWET** is the registered trademark of Oro Agri International Ltd
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WETCIT® Guide</td>
<td>4</td>
</tr>
<tr>
<td>Apple Spray Guide</td>
<td>8</td>
</tr>
<tr>
<td>Spray Coverage</td>
<td>9</td>
</tr>
<tr>
<td>Crop Safety</td>
<td>11</td>
</tr>
<tr>
<td>The effect of the addition of WETCIT to standard chemistry on the control of woolly apple aphid</td>
<td>12</td>
</tr>
<tr>
<td>Efficacy and crop safety of a standard spray program on apple scab</td>
<td>13</td>
</tr>
<tr>
<td>Efficacy and crop safety of a standard spray program on apple powdery mildew</td>
<td>14</td>
</tr>
<tr>
<td>Comparison of WETCIT and Petroleum spray oil as adjuvants with Lorsban™ 4E</td>
<td>15</td>
</tr>
<tr>
<td>The effect of WETCIT on apple scab spore germination</td>
<td>16</td>
</tr>
<tr>
<td>Dormant applications</td>
<td>17</td>
</tr>
<tr>
<td>The effect of the addition of WETCIT to standard chemistry on the control of mealybug in pears when applied as dormant spray</td>
<td>18</td>
</tr>
<tr>
<td>The effect of the addition of WETCIT to standard chemistry on the control of mealybug in pears when applied post harvest in a severely infested orchard</td>
<td>18</td>
</tr>
</tbody>
</table>
WETCIT GUIDE

WETCIT is registered as an adjuvant and will improve spreading and coverage of spray droplets on all plant surfaces.

Content and source of raw materials

The product contains a blend of natural plant derived extracts with bio-degradable wetting agents. This combination of components, collectively known as OROWET technology, is patented in various countries worldwide. This technology is unique and differentiates WETCIT from other adjuvants, giving the product a new mode of action and highly effective spreading properties.

Plant-derived oils have lipophilic (fat-loving) properties and are well known for their ability to penetrate and adhere to waxy substances. When they are used in combination with wetting agents at relatively low rates, like with a WETCIT recommendation, the plant-derived oils play a supporting role and assist with the wetting of waxy surfaces.

Only bio-degradable wetting agents are used. No NPE (nonyl phenol ethoxylate) components are included. The manufacturing process has a very low environmental impact and low energy consumption. Using WETCIT poses very little risk to the environment or the spray operator. The product is degraded naturally in the environment.

WETCIT AS ADJUVANT

In various independent trials it has been proven that the efficacy of commonly used insecticides, miticides and fungicides can be optimized through the use of WETCIT as wetting agent.

Addition of WETCIT effectively reduces the surface tension of spray water (Fig. 1). This significantly improves coverage and spreading of spray droplets on the target surface.

Surface tension of water after dilution of different WETCIT concentrations

IN DISTILLED WATER AT 25°C

The product assists with coverage of spray material into difficult-to-reach areas. Improved product distribution in the dense canopies will ensure better wetting of branches where scale populations often hide. The same applies to areas where mealy bug can be difficult to reach.

OROWET technology improves knockdown of pesticides through improved:

- Wetting of the waxy exoskeleton of insects.
- Wetting of hydrophobic external mycelia and spores of fungi.
- Penetration of insecticides into the respiratory openings and protective membranes of insects.

The use of WETCIT in spray mixes optimizes efficacy of contact herbicides (e.g. paraquat) and systemic products (e.g. MCPA and glyphosate) that are absorbed through foliage. This does not apply where weeds have become resistant to the herbicide. More uniform and effective weed control is observed where difficult-to-control weeds occur.

The efficacy of glyphosate is affected by pH and hardness (dissolved salts) in the spray water. If circumstances such as these require that a buffer or ammonium sulphate must be used, the water conditioning agent should be added first, followed by the herbicide and then WETCIT last of all.

Addition of WETCIT to tank mixes prevents build-up of spray residues in tanks and spray equipment. It will prevent clogging of nozzles and therefore improve efficacy of application.
SECONDARY EFFECTS

Use of WETCIT will cause drying (desiccation) of plant cells that were damaged by insect activity or fungal infections. Desiccation of these cells will further prevent the development of the insect or disease, for example the wounds caused by egg laying of leaf miners.

Furthermore, desiccation of these cells will prevent secondary infections from fungi that usually take place through these wounds.

Honey-dew that is secreted by insects such as aphids or mealy bug is dried out by WETCIT in the spray mix. The honey-dew then becomes less attractive for ants.

Sooty mould, that would normally develop on honey-dew, may affect the aesthetic appearance of fruit. With the use of WETCIT, sooty mould dries out and becomes flaky, making it easier to remove during the packing process, thereby improving fruit finish.

The regular use of WETCIT prevents repercussions of secondary pests such as mites, which can be a problem when certain other adjuvants are used.

Plant surfaces treated with WETCIT will be re-wetted if dew or light rain occurs after treatment. This will prevent the formation of large droplets and speed up drying time. Re-wetting also assists with re-distribution of chemicals on the plant surface.

Comparative properties of various types of adjuvants

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>SPREADING AND COVERAGE</th>
<th>PURPOSE OF USE</th>
<th>MODE OF ACTION</th>
<th>SECONDARY EFFECT ON PEST CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WETCIT</td>
<td>★★★</td>
<td>Spreading and optimized efficacy of pesticides at 100 ml or higher</td>
<td>Improved spreading and contact with protective waxy layers</td>
<td>Prevents secondary pests</td>
</tr>
<tr>
<td>Mineral oil</td>
<td>★</td>
<td>Optimized efficacy of pesticides</td>
<td>Smothering of insects</td>
<td>None</td>
</tr>
<tr>
<td>Silicone spreader</td>
<td>★★★</td>
<td>Spreading only</td>
<td>Improved spreading of pesticides</td>
<td>May lead to secondary pests</td>
</tr>
<tr>
<td></td>
<td>(★★)*</td>
<td></td>
<td>(Poor spreading)*</td>
<td></td>
</tr>
<tr>
<td>Standard non-ionic wetter</td>
<td>★★★</td>
<td>Wetting only</td>
<td>Improves spreading of pesticides</td>
<td>None</td>
</tr>
<tr>
<td>Water conditioner</td>
<td>★</td>
<td>Improved water quality</td>
<td>Prevent break down in alkaline water and/or binding to salts</td>
<td>None</td>
</tr>
<tr>
<td>Sticker</td>
<td>★</td>
<td>Improves rain fastness</td>
<td>Reduces wash-off during rain or overhead irrigation</td>
<td>None</td>
</tr>
</tbody>
</table>

* AT RECOMMENDED FIELD RATE
USE RECOMMENDATIONS

READ THE LABEL CAREFULLY
As a general wetter, use WETCIT at 25 - 50 ml per 100 L.
Use 100 - 300 ml per 100 L (0.1 - 0.3%) for optimizing efficacy of pesticides.
The higher rate should be used where:
• High insect or disease populations are prevalent.
• Relatively low water volumes are used.
• Hydrophobic (waxy) or hairy plant surfaces or insects with waxy secretions need to be sprayed.
• The product is used with non-selective herbicides.
Application of WETCIT may be made in various ways, for example: high volume mistblower, low volume concentrated spray, pivot, aerial application, backpack, etc. When applying by aeroplane, for example on cereals, a rate of 120 ml/ha is recommended.
Always add WETCIT last to the tank mixture when the tank is nearly full, to prevent excessive foaming.
Old spray residues in spray tanks may be dissolved by WETCIT. This could result in slight crop or leaf damage. If a grower uses WETCIT for the first time, it is recommended that the spray tank is left overnight with a solution of WETCIT and then flushed out the following morning.
Read the ORO AGRI Crop Guidelines for more specific guidelines on your crop.

WATER VOLUME
Use the normal water volume as planned for the specific growth stage of the crop.
Where low water volume is applied, as with herbicides or fungicides (e.g. on cereals) at approximately 100 L/ha, it will be advisable to use the higher rate of WETCIT (300 ml/100L).
The use of WETCIT is well suited for higher water volume applications. This was proven in many efficacy trials and commercial applications. Remember to always follow instructions on the labels of products that will be in the mixture with WETCIT.
Where a high water volume is used in season, e.g. on citrus, a maximum rate of 100-200 ml/100L WETCIT should be applied as adjuvant. If excessive run-off is experienced, calibrate to lower volumes as needed.
On surfaces that are difficult to wet, for example on the bark of deciduous fruit and grapevines during dormant applications, an adjuvant rate of 100-300 ml/100L can be used with high volume applications aimed at mealy bug or scale. In this case, the higher rate is to be considered where high infestation levels occurred during the previous season.

USE RESTRICTIONS
✔ Use WETCIT with caution during the growing season when fruit is present on Table grapes, Pears, Pomegranates or Persimmons since ringburn may occur on these fruit. Application pre-bloom or post-harvest may be done as recommended by your advisor.
✔ Use caution when using WETCIT with sulphur containing products during high temperature conditions. The addition of WETCIT may amplify the potential phytotoxicity of sulphur in cases where the crop is known to be sensitive to sulphur burn.
✔ Do not apply WETCIT with copper containing products during flowering or any other copper sensitive stage of the crop, or where the pH of the spray water is lower than 7.
✔ Trials are regularly being done in combination with new pest and disease control products on various crops. Contact your representative for the latest information.
Effect of **WETCIT** on bark

Use of **WETCIT** improves wetting and distribution beneath the bark during dormant applications on deciduous fruit and grapevines.

Mode of action of **WETCIT**

**WETCIT** effectively reduces surface tension of water and improves spreading into difficult to reach places. The knockdown action of pesticides is also optimized by **WETCIT** due to improvement of pesticide contact with waxy and chitin protecting layers of insects and external hydrophobic structures of fungi.

**WETCIT** and use of application equipment

The product **WETCIT** is suitable for use in various application techniques, for example: Full cover tractor application, low volume concentrated spray, pivot, aerial application, back-pack, etc.

---

Spreading on waxy cabbage leaf

- **WETCIT** 100 ml
- Pinolene sticker 50 ml
- Silicone spreader 5 ml

Recommended field rate

Spreading on hydrophobic peat tablet

- 1 Spray of **WETCIT** 250 ml
- 3 Sprays of water

---

Spreading on hairy tomato leaf
APPLE SPRAY GUIDE

**WETCIT**: An excellent tank-mix partner for your Pesticides, Herbicides, and Fertilizer sprays. It is now used on millions of hectares globally on an annual basis, and is rapidly replacing other adjuvants and surfactants, such as crop oils (COC), methylated seed oils (MSO), silicone surfactant (SS) and non-ionic surfactants (NIS). It should be one of your first choices in every spray.

### PESTICIDE PROGRAMS

**WETCIT**: The perfect adjuvant for your fungicides, insecticides and acaricides...
- Improves spreading and penetration into the waxy cuticle of the leaf
- Enhances effectiveness of pesticide
- Does NOT increase drift
- Fresh orange aroma

### HERBICIDE PROGRAMS

**WETCIT**: A great addition to your herbicide programs...
- IMPROVES herbicide efficacy on hard to control weeds
- Superior spreading, wetting and penetrating properties
- Enhanced rain fastness due to superior cuticle penetration
- Visible accelerated herbicide performance
- Ideal for herbicide resistance management

### NUTRITIONAL PROGRAMS

**WETCIT**: The product of choice...
- Improves plant canopy penetration
- Has no negative effect on stomatal conduction like petroleum oils
- Increases nutrient uptake into the plant

### Surface tension of WETCIT solutions

The **OROWET** technology in the **ORO AGRI** line of products set us apart from any other adjuvant or product on the market. Growers have successfully bridged a wide range of products with the use of **OROWET** technology. **OROWET** technology provides a versatile alternative to many of the products available today.
**SPray Coverage**

It is a known fact that optimizing efficacy of pesticides depends greatly on the coverage achieved. In order to maximize coverage, studies were conducted using both adjuvant and recommended spray application techniques in order to determine an ideal spray program for dormant sprays for mealybug control. Studies were conducted with and without **Wetcit** in both standard applications as well as recommended applications.

**The Goals Were to Compare:**

1. Coverage of water in single direction spray for one row (standard application) versus recommended alternate directional sprays for one row
2. Coverage of spray water only versus spray water plus **Wetcit** at 0.2% v/v

**Equipment:** A field trial was done to illustrate the optimum performance capable with standard high volume atomizer application on dormant apple trees.

**Location:** Grabouw, South Africa

**Tank Chemistries:** Fluorescent dye was added and coverage observed using UV light.

**Goal 1: Spray Shadow Evaluation**

Compare coverage of a single direction spray versus alternate directional sprays

- **Standard Application**
  (one row is sprayed from one direction and one row is sprayed from alternate directions)

- **Recommended Application**
  (every row sprayed from alternate directions)

On the traditional single direction sprays, spray shadows were observed on sides of upright branches and on top of horizontal branches high in the tree.

On the alternate directional sprays no spray shadows were observed in both the **Wetcit** and regular water treatment.

**Conclusion**

To minimize spray shadows, growers should consider alternate directional sprays for all rows.
GOAL 2: **SPRAY WATER MOBILITY**

Compare coverage of standard water only spray versus water plus WETCIT at 0.2% v/v

**OBSERVATIONS**

Coarse bark is hydrophobic and spraying with water results in uneven and blotchy wetting. Untreated water does not penetrate easily into cracks. WETCIT improved the wetting and spray penetration of coarse areas, cracks and forks of branches including the wetting on smooth bark.

**CONCLUSION**

Mealybugs hide in cracks and coarse bark – proper wetting of these hiding places is important for optimizing agro-chemical applications.

Sprays with the addition of WETCIT however did indicate additional improvement of wetting and penetration into coarse areas and cracks in the bark vs. water only.

**RECOMMENDATION FOR OPTIMUM SPRAY PROGRAM**

- Add **WETCIT** to each application for optimizing either standard or recommended application at a rate of 0.2% v/v
- For dormant applications, spray every row from alternate directions
- Drive slowly and do not spray in windy conditions
CONCLUSIONS

“The use of WETCIT at 0.25 % concentration applied to all seasonal sprays, was shown to be safe on Golden Delicious apples. This study indicated that the 0.25% (4.7 litres per hectare) rate was the safest and NON IONIC SURFACTANTS (NIS) SHOULD NOT BE TANK MIXED WITH WETCIT IN SEASON.

The combination of WETCIT at 4.7 litre per hectare with several pest control programs throughout the season did not cause any phytotoxicity problems to the fruit or foliage”. - Ron Britt

WARNING: DO NOT COMBINE WETCIT WITH OTHER OILS OR SURFACTANTS IN SEASON.

FIELD SITUATION

The objective of this study was to determine the potential for phytotoxic symptoms on foliage or fruit when applying WETCIT in tank mixtures with standard pesticides on Golden Delicious apples. The trial was located in a 50 year old Golden Delicious orchard producing high quality fruit on the Yakama Indian Reservation near Wapato, Washington, with trees spaced 6.1 meters between rows and 2.4 meters within rows. The orchard was irrigated with over tree solid set sprinklers. Each plot consisted of six adjacent trees in a row with foliage and fruit evaluated on the four middle trees of the plot.

Applications were made with a Rears miniblast sprayer calibrated to deliver 1870 l/ha for the thinning spray and 935 l/ha for the six cover sprays. Prior to each application, fruit and foliage on the middle four trees of each plot were inspected for phytotoxicity symptoms. Fruit were left on the trees for future ratings. At normal harvest time on 10 September 2013, fruit were harvested from the middle four trees of each plot.

At the evaluation date, 24 days after the last application, one hundred fruit were randomly taken out of each sample box and inspected for phytotoxicity symptoms. The total weight of each sample was also recorded.

Spray mix

* FOR BEST RESULTS REPLACE RUGULAID WITH WETCIT

<table>
<thead>
<tr>
<th>APP 1</th>
<th>APP 2</th>
<th>APP 3</th>
<th>APP 4</th>
<th>APP 5</th>
<th>APP 6</th>
<th>APP 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 MAY</td>
<td>18 MAY</td>
<td>6 JUN.</td>
<td>22 JUN.</td>
<td>11 JUL.</td>
<td>28 JUL.</td>
<td>17 AUG.</td>
</tr>
<tr>
<td>Amidthin</td>
<td>Ulltor</td>
<td>Assail</td>
<td>Delegate</td>
<td>AgriMek</td>
<td>Altacor</td>
<td>Altacor</td>
</tr>
<tr>
<td>Rubigan</td>
<td>Rimon</td>
<td>Diazinon</td>
<td><strong>WETCIT</strong> 0.25%</td>
<td>Imidan</td>
<td><strong>WETCIT</strong> 0.25%</td>
<td><strong>WETCIT</strong> 0.25%</td>
</tr>
<tr>
<td>Regulaid*</td>
<td>Imidan</td>
<td><strong>WETCIT</strong> 0.25%</td>
<td></td>
<td>Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procure</td>
<td>Buffer</td>
<td></td>
<td></td>
<td><strong>WETCIT</strong> 0.25%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EXAMINING THE EFFECT OF THE ADDITION OF WETCIT TO STANDARD CHEMISTRY ON THE CONTROL OF WOOLLY APPLE APHID (Eriosoma lanigerum) IN APPLES

TRIAL AIM AND DESIGN

A replicated trial to determine whether the addition of WETCIT to standard chemistry would have an effect on the level of Woolly Apple Aphid control was done in a Jonagold apple orchard in the summer of 2012. A pre-application evaluation was made, in which the number of live aphids per twenty marked colonies was counted. Further evaluations were made three, seven and fourteen days after application.

DISCUSSION AND CONCLUSION

All treatments in the trial had moderately effective control of Woolly Apple Aphid. The treatments that included WETCIT (0.15% and 0.3%, respectively) showed faster knockdown three days after application. When compared to the standard treatment, the addition of WETCIT at 0.3% showed a clear improvement in the level of control fourteen days after application.

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>RATE</th>
<th>3 DAA</th>
<th>7 DAA</th>
<th>14 DAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calypso 480 SC</td>
<td>0.45 l / ha</td>
<td>49%</td>
<td>67.2%</td>
<td>52.5%</td>
</tr>
<tr>
<td>Calypso 480 SC + WETCIT</td>
<td>0.45 l / ha 0.15%</td>
<td>62.1%</td>
<td>70.5%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Calypso 480 SC + WETCIT</td>
<td>0.45 l / ha 0.3%</td>
<td>75.8%</td>
<td>83.9%</td>
<td>68.7%</td>
</tr>
</tbody>
</table>

THE EFFECT OF WETCIT AS AN ADJUVANT WITH CALYPSO 480 SC ON THE CONTROL OF WOOLLY APPLE APHIDS ON JONAGOLD APPLES

<table>
<thead>
<tr>
<th>Efficacy (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 DAA</td>
</tr>
<tr>
<td>49%</td>
</tr>
<tr>
<td>60.2%</td>
</tr>
<tr>
<td>68.0%</td>
</tr>
</tbody>
</table>
A standard commercial disease and insect control program was applied alone and in combination with two rates of WETCIT to blocks of 6 trees in a commercial orchard by means of high pressure hand guns. A total of 19 applications were from green tip stage through to harvest. Normal Calcium nitrate and Calcium chloride applications for the control of bitter pit were part of the spray program.

The orchard suffered from a heavy scab pressure with 100% of fruit on the untreated trees showing scab infection at harvest. Evaluations of scab infection on leaves and fruit were made during the season as well as close to harvest.

At the first evaluation date on 20 November, when fruit were between 26 mm and 32 mm in size, it was clear that the addition of WETCIT resulted in numerical improvements in scab control on leaves and fruit, with the 200 ml WETCIT rate performing the best. This trend was also apparent at the fruit infection evaluation just before harvest on 14 March. No phytotoxicity was observed on fruit or leaves for the duration of this trial and the use of WETCIT at 200 ml/hl with a standard disease and insect control program is recommended.

**FIELD SITUATION**

**DISCUSSION AND CONCLUSION**

**BASIC INFORMATION**

<table>
<thead>
<tr>
<th>TARGET</th>
<th>Apple scab (Venturia inaequalis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP</td>
<td>Apples  Variety: Braeburn</td>
</tr>
<tr>
<td>SPRAY WATER VOLUME</td>
<td>started at 1100 l/ha, increased to 4000 l/ha</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Mara Farm, Grabouw • South Africa</td>
</tr>
<tr>
<td>TRIAL DATE</td>
<td>2007/8 summer season</td>
</tr>
<tr>
<td>RESEARCHER</td>
<td>Sapsford Agricultural Services</td>
</tr>
</tbody>
</table>

**DISCUSSION AND CONCLUSION**

At the first evaluation date on 20 November, when fruit were between 26 mm and 32 mm in size, it was clear that the addition of WETCIT resulted in numerical improvements in scab control on leaves and fruit, with the 200 ml WETCIT rate performing the best. This trend was also apparent at the fruit infection evaluation just before harvest on 14 March. No phytotoxicity was observed on fruit or leaves for the duration of this trial and the use of WETCIT at 200 ml/hl with a standard disease and insect control program is recommended.

**TREATMENT TABLE**

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>INFECTION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>Frequency 65.3, Intensity 17.9</td>
</tr>
<tr>
<td>Standard*</td>
<td>Frequency 40.7, Intensity 8.4</td>
</tr>
<tr>
<td>Standard + WETCIT 100 ml/hl</td>
<td>Frequency 18.7, Intensity 6.5</td>
</tr>
<tr>
<td>Standard + WETCIT 200 ml/hl</td>
<td>Frequency 28, Intensity 4.1</td>
</tr>
</tbody>
</table>

*Standard = Chlorpyrifos, Mancozeb, Strobilurin, Indoxacarb and fertilizers
A standard commercial disease and insect control program was applied alone and in combination with two rates of WETCIT to blocks of 6 trees in a commercial orchard by means of high pressure handgun. A total of 12 applications were from green tip stage through to harvest. Normal Calcium nitrate and Calcium chloride applications for the control of bitterpit were part of the spray program.

Powdery mildew of apple is a particularly difficult disease to eradicate once present in the orchard. The trial orchard had a very high primary infection carried over from the previous season and this resulted in a very high leaf infection with 75% of the untreated leaves being infected.

At the evaluation date on 24 November, when fruit were 25 mm in size, it was clear that the addition of WETCIT at 100 ml/hl resulted in numerical improvements in powdery mildew control whilst the addition of WETCIT at 200 ml/hl resulted in a statistically significant improvement in powdery mildew control over the standard program.

No phytotoxicity was observed on fruit or leaves for the duration of this trial and the use of WETCIT at 200 ml/hl with a standard disease and insect control program is recommended.
FIELD SITUATION
To determine the effect of WETCIT versus petroleum spray oil as adjuvants with chlorpirifos for the control of San Jose Scale on apples, an application of Lorsban™ 4E (chlorpyrifos) and Nu-Cop® 50 WP (copper), combined with WETCIT at 0.25% concentration and petroleum spray oil at 5% concentration respectively, was made at the greentip stage of Fuji apple trees on 19 April 2012 using a commercial airblast orchard sprayer delivering approximately 935 l/ha.

DISCUSSION AND CONCLUSION
When fruit were evaluated at harvest on 6 September 2012 for scale infestation, 100% of fruit in the Untreated treatment were infested with San Jose Scale. It was clear that the petroleum spray oil could successfully be replaced with WETCIT at 0.25% concentration.

GRAPH 02
PERCENTAGE FRUIT INFESTED BY SAN JOSE SCALE AT HARVEST

Nu-Cop® is registered trademark of Micro Flow Company. Lorsban™ is a trademark of Dow AgroSciences LLC.
DISCUSSION AND CONCLUSION

A slight reduction in germination of conidia could be seen 3 days after the 1st application and a much stronger effect was clear after the 2nd application. Both the 100 ml/hl and 200 ml/hl rates reduced the germination of conidia visibly.

The inclusion of WETCIT in an apple spray program may reduce the infection pressure of apple scab by virtue of reducing the percentage germination of V. inaequalis conidia.

FIELD SITUATION

A non replicated trial was done on apples to determine if the application of WETCIT has any effect on the germination of V. inaequalis conidia present during the application. Leaf samples with sporulating lesions were taken 3 days after the 1st application and again directly after the 2nd application (as soon as the spray had dried).
**WETCIT** is a premium surfactant containing OROWET Technology based on natural, cold-pressed orange oil and a unique blend of surfactants. **WETCIT** enhances the activity of dormant sprays on deciduous fruit and vineyards through improved coverage and penetration into coarse and hydrophobic bark surfaces.

**DORMANT APPLICATIONS**

**WETCIT** is a premium surfactant containing OROWET Technology based on natural a unique blend of surfactants and essential oils. **WETCIT** enhances the activity of dormant sprays on pomme fruit through improved coverage and penetration into coarse and hydrophobic bark surfaces.

Dormant applications are generally accepted as a crucial part of any Integrated Pest Management (IPM) strategy intended to control overwintering populations of mealybug, scab, scale and various other pests while the impact on predatory insects (which are mainly active in the summer season) is minimised. When properly planned and executed, dormant sprays can drastically reduce infestation in the following season.

**WETCIT: HOW CAN IT HELP?**

**WETCIT** significantly improves the coverage of hydrophobic bark and penetration into the deep crevices of coarse bark, where mealybug usually hide. This was shown by applying **WETCIT** with fluorescent dye and observing coverage with a UV light. ➤See black light study

**WETCIT IN DORMANT SPRAYS: GUIDELINES FOR USE**

• For standard dormant applications with an atomizer against mealybug, add **WETCIT** at 100ml/100L as surfactant to registered insecticides.

  **ALWAYS USE THE HIGHEST REGISTERED RATE OF THE INSECTICIDE.**

• For dormant application in problem orchards (higher than 2% of mealybug infestation in the previous harvest), the rate of **WETCIT** may be increased to 200ml/100L when added to registered insecticides.

• For control of scale **WETCIT** at 150ml/100L will be as effective as 500ml mineral oil, when added to registered insecticides.

**CROP GUIDELINES**

• **WETCIT** is compatible and safe to use with copper on autumn leaf drop or bud-swell sprays.

• **WETCIT** should not be added when mineral oil for delayed foliation sprays is applied on pome fruit.

• Do not spray **WETCIT** beyond the point of run-off on pears after green-point stage, or at any time during the fruit bearing stage.

• Please contact your representative for more specific recommendations.

**NOTE**

Control of mealybug and scale should consist of a full season integrated program, including various cultural practices and weed control. Dorman sprays are only one component of the control strategy, and these guidelines should not be regarded as the only means of control.
A replicated trial to determine whether the addition of WETCIT to standard chemistry would have an effect on the level of mealybug control, when applied as a dormant spray, was done in a Forelle pear orchard near Wolseley, South Africa. Two applications were made during the late dormant stage on 23 August and 4 September respectively, using air assisted motorised knapsack sprayers. The mealybug infestation on fruit was evaluated by visual inspection and cutting fruit open on 17 January 2013.

The addition of WETCIT at 0.15% to standard chemistry resulted in a improvement of mealybug control at harvest when compared with standard chemistry (chlorpyrifos) alone or in mixture with mineral oil at 0.5% concentration.

A replicated trial to determine whether the addition of WETCIT to standard chemistry would have an effect on the level of mealybug control in a severely infested orchard was done in a Forelle pear orchard in Western Cape, South Africa. A single, post harvest application was made on 10 May and evaluations of the live mealybug infestation were done on the spurs on 16 May and 30 May 2006.

The addition of WETCIT at 0.2% to standard chemistry resulted in a faster knockdown (see 16 May evaluation) and improvement of mealybug control at the second evaluation date when compared with standard chemistry (chlorpyrifos) alone or in mixture with mineral oil at 0.5% concentration.