**Table 1**. Powdery mildew on ‘Gold Rush’ apple, High Density Organic Orchard, 2008.

% Incidence 2  % Severity3

Shoots Spur Shoot

Treatment Rate/100 gal Timing1 5/23 8/7 5/23 8/7

1. MicroSulf WP 10.0 lb ½” GT-B

Lime Sulfur (LS) 1.5% 1.5 gal PF

MicroSulf WP 6.0 lb 1C-4C

Cueva Cu rot. w/ 1.5 gal 5C-7C

Lime Sulfur 1.5% 1.5 gal 6C ….. 16.7 a4 12.8 a 12.5 a 3.3 a

2. LS 2% rotate w/ 2.0 gal ½” GT-1C

MicroSulf WP rotate w/ 6.0 lb

Champion WP rotate w/ 1.0 lb 2C, 4C, 6C

MicroSulf WP+ 6.0 lb

Vigor Cal 3.0 qt 3C, 5C, 7C ….. 17.5 a 10.6 a 11.7 a 2.8 a

3. Cueva Cu 2.0 gal ½” GT-PF

LS2% rotate w/ 2.0 gal 1C, 3C, 5C,7C

\*\*Taegro + 3.5 oz 2C, 4C, 6C

Nufilm P 4 fl oz ….. 23.3 a 31.7 b 6.7 a 11.3 b

4. Champion WP 1.0 lb ½” GT-PF

LS 2% rotate w/ 2.0 gal 1C, 3C, 5C,7C

\*\*Serenade max + 3.0 lbs

Nufilm P 2C, 4C, 6C ….. 19.1 a 20.6 ab 11.8 a 5.6 ab

5. Oxidate 7-10 da 1.8 L ½” GT-H

MicroSulf WP + 5.0 lb

Nufilm P 4.0 fl oz 4C-7C ….. 20.9 a 23.9 ab 12.7 a 6.5 ab

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| |  | | --- | | *\*\* Ground and tree application for the first spray, then tree application only after the 1st spray*  *1 Timing: 1 = ½ in. green (18 Apr); 2 = TC (18 Apr); 3 = Pink – Bloom (1 May); 4 = Bloom –Petal fall (15 May); 5 = 1C (30 May); 6 = 2C (5 Jun); 7 = 3C (16 Jun); 8 = 4C (26 Jun); 9 = 5C (13 Jul); 9 = 6C (25 Jul); 10 = 7C (23 Aug.).* | | *2  Incidence on 30 spur leaf /3 tree – replicate.* | | *3 Severity on 30 shoots /3 tree – replicate based Severity rating is based on shoot leaves % infection: 0 = 0, 1 = 0-25%, 2 = 26-50%, 3 = 51-75% ,4 = 76-100% infected* | | *4 Means marked with the same letter(s) are not significantly different, Fisher’s Protected LSD, P < 0.05.* | |

**Table 2.** Powdery mildew on ‘Crimson Crisp’ apple, High Density Organic Orchard, 2008.

% Incidence 2 % Severity

Shoots Spur Shoot 3

Treatment Rate/100 gal Timing1 5/23 8/7 5/23 8/7

1. MicroSulf WP 10.0 lb ½” GT-B

Lime Sulfur (LS) 1.5% 1.5 gal PF

MicroSulf Wp 6.0 lb 1C-4C

Cueva Cu rot. w/ 1.5 gal 5C-7C

Lime Sulfur 1.5% 1.5 gal 6C ….. 25.8 a4 6.1 a 15.0 a 1.9 a

2. LS 2% rotate w/ 2.0 gal ½” GT-1C

MicroSulf WP rotate w/ 6.0 lb

Champion WP rotate w/ 1.0 lb 2C, 4C, 6C

MicroSulf WP+ 6.0 lb

Vigor Cal 3.0 qt 3C, 5C, 7C ….. 34.2 a 14.4 ab 15.8 a 5.4 ab

3. Cueva Cu 2.0 gal ½” GT-PF

LS2% rotate w/ 2.0 gal 1C, 3C,5C,7C

\*\*Taegro + 3.5 oz

Nufilm P 4 fl oz 2C, 4C, 6C ….. 33.6 a 15.0 ab 14.5 a 6.0 ab

4. Champion WP 1.0 lb ½” GT-PF

LS 2% rotate w/ 2.0 gal 1C, 3C, 5C, 7C

\*\*Serenade max + 3.0 lbs

Nufilm P 4 fl oz 2C, 4C, 6C ….. 36.4 a 15.0 ab 17.3 a 6.3 ab

5. Oxidate 7-10 da 1.8 L ½” GT-H

MicroSulf WP + 5.0 lb

Nufilm P 4 fl oz 4C-7C ….. 44.2 a 27.8 b 27.5 a 9.9 b

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| --- | --- | --- | --- | --- | --- |
| |  | | --- | | *\*\* Ground and tree application for the first spray, then tree application only after the 1st spray*  *1 Timing: 1 = ½ in. green (18 Apr); 2 = TC (18 Apr); 3 = Pink – Bloom (1 May); 4 = Bloom –Petal fall (15 May); 5 = 1C (30 May); 6 = 2C (5 Jun); 7 = 3C (16 Jun); 8 = 4C (26 Jun); 9 = 5C (13 Jul); 9 = 6C (25 Jul); 10 = 7C (23 Aug.).* | | *2  Incidence on 30 spur leaf /3 tree – replicate.* | | *3 Severity on 30 shoots /3 tree – replicate based Severity rating is based on shoot leaves % infection: 0 = 0, 1 = 0-25%, 2 = 26-50%, 3 = 51-75% ,4 = 76-100% infected* | |  | | *4 Means marked with the same letter(s) are not significantly different, Fisher’s Protected LSD, P < 0.05.* | |

**Table 3.** Cedar Apple Rust on ‘Gold Rush’ apple, High Density Organic Orchard, 2008.

% Incidence 2  % Severity 3

Shoots Spur Shoot

Treatment Rate/100 gal Timing1 5/23 8/7 5/23 8/7

1. MicroSulf WP 10.0 lb ½” GT-B

Lime Sulfur (LS) 1.5% 1.5 gal PF

MicroSulf WP 6.0 lb 1C-4C

Cueva Cu rot. w/ 1.5 gal 5C-7C

Lime Sulfur 1.5% 1.5 gal 6C ….. 70.0 b 4 97.8 a 74.2 a 48.5 b

2. LS 2% rotate w/ 2.0 gal ½” GT-1C

MicroSulf WP rotate w/ 6.0 lb

Champion WP rotate w/ 1.0 lb 2C, 4C, 6C

MicroSulf WP + 6.0 lb

Vigor Cal 3.0 qt 3C, 5C, 7C ….. 62.5 ab 91.7 a 68.3 a 42.9 ab

3. Cueva Cu 2.0 gal ½” GT-PF

LS2% rotate w/ 2.0 gal 1C, 3C, 5C, 7C

\*\*Taegro 3.5 oz

Nufilm P 4 fl oz 2C, 4C, 6C ….. 55.8 a 94.4 a 63.3 a 37.4 a

4. Champion WP 1.0 lb ½” GT-PF

LS 2% rotate w/ 2.0 gal 1C, 3C, 5C, 7C

\*\*Serenade max + 2.0-3.0 lbs

Nufilm P 4 fl oz 2C, 4C, 6C ….. 59.1 ab 92.2 a 69.1 a 39.2 a

5. Oxidate 7-10 da 0.6 oz/gal ½” GT-H

Nufilm P 4 fl oz

MicroSulf WP 5.0 lb 4C-7C ….. 61.8 ab 95.0 a 70.9 a 48.8 b

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| --- | --- | --- | --- | --- | --- |
| |  | | --- | | *\*\* Ground and tree application for the first spray, then tree application only after the 1st spray*  *1 Timing: 1 = ½ in. green (18 Apr); 2 = TC (18 Apr); 3 = Pink – Bloom (1 May); 4 = Bloom –Petal fall (15 May); 5 = 1C (30 May); 6 = 2C (5 Jun); 7 = 3C (16 Jun); 8 = 4C (26 Jun); 9 = 5C (13 Jul); 9 = 6C (25 Jul); 10 = 7C (23 Aug.).* | | *2  Incidence on 30 spur leaf /3 tree – replicate.* | | *3 Severity on 30 shoots /3 tree – replicate based Severity rating is based on shoot leaves % infection: 0 = 0, 1 = 0-25%, 2 = 26-50%, 3 = 51-75% ,4 = 76-100% infected* | |  | | *4 Means marked with the same letter(s) are not significantly different, Fisher’s Protected LSD, P < 0.05.* | |

**Table 4**. Cedar Apple Rust on ‘Crimson Crisp’ apple, High Density Organic Orchard, 2008.

% Incidence 2  % Severity

Shoots Spur Shoot 3

Treatment Rate/100 gal Timing1 5/23 8/7 5/23 8/7

1. MicroSulf 10.0 lb ½” GT-B

Lime Sulfur (LS) 1.5% 1.5 gal PF

MicroSulf 6.0 lb 1C-4C

CuCueva rot. w/ 1.5 gal 5C-7C

Lime Sulfur 1.5% 1.5 gal 6C ….. 46.0 a4 85.0 a 34.0 a 21.7 a

2. LS 2% rotate w/ 2.0 gal ½” GT-1C

MicroSulf rotate w/ 6.0 lb

Champion WP rotate w/ 1.0 lb 2C, 4C, 6C

MicroSulf + 6.0 lb 3C, 5C, 7C

VC 3.0 qt 3C, 5C, 7C ….. 35.0 a 78.3 a 37.5 a 20.7 a

3. Cueva Cu 2.0 gal ½” GT-PF

LS2% rotate w/ 2.0 gal 1C, 3C, 5C

\*\*Taegro 3.5 oz 2C, 4C, 6C

Nufilm P ….. 33.6 a 78.9 a 33.6 a 20.0 a

4. Champion WP 1.0 lb ½” GT-PF

LS 2% rotate w/ 2.0 gal 1C, 3C, 5C

\*\*Serenade max 2.0-3.0 lbs 2C, 4C, 6C

Nufilm P 2C, 4C, 6C ….. 36.4 a 75.6 a 40.0 a 19.3 a

5. Oxidate 7-10 da 0.6 oz/gal ½” GT-H

Nufilm P

MicroSulf 5.0 lb from 4C ….. 35.8 a 75.0 a 43.1 a 19.0 a

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| --- | --- | --- | --- | --- |
| |  | | --- | | *\*\* Ground and tree application for the first spray, then tree application only after the 1st spray*  *1 Timing: 1 = ½ in. green (18 Apr); 2 = TC (18 Apr); 3 = Pink – Bloom (1 May); 4 = Bloom –Petal fall (15 May); 5 = 1C (30 May); 6 = 2C (5 Jun); 7 = 3C (16 Jun); 8 = 4C (26 Jun); 9 = 5C (13 Jul); 9 = 6C (25 Jul); 10 = 7C (23 Aug.).* | | *2  Incidence on 30 spur leaf /3 tree – replicate.* | | *3 Severity on 30 shoots /3 tree – replicate based Severity rating is based on shoot leaves % infection: 0 = 0, 1 = 0-25%, 2 = 26-50%, 3 = 51-75% ,4 = 76-100% infected* | | *4 Means marked with the same letter(s) are not significantly different, Fisher’s Protected LSD, P < 0.05.* | |