

## **Progress Report of IR-4 Cherry Research**

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Cherry is a very important commodity for Michigan. As described in the web pages of Cherry Marketing Institute, a tart cherry variety particularly more than 94 percent of Montmorency tart cherries consumed in the U.S. are grown in the U.S. In fact, about 75 percent of the U.S. Montmorency tart cherries are grown in Michigan – the Cherry Capitol of the World. Utah, Washington, New York, Wisconsin and Pennsylvania are other prominent Montmorency tart cherry-producing states. Choosing this locally-grown varietal helps preserve generations-old family farms and supports North American agriculture. Thus, pest control is vital for production of safe, economical and high quality cherries.

Since 2002 through the IR-4 Project, 6 products are labeled for cherry insect, disease and weed control. However, many more products will be available soon. The GLP residue trials were conducted by John Wise and Tony VanWoerkom at Department of Entomology, and Bernie Zandstra, Michigan State University.

## IR-4 Project Labeled Products for Cherry

| Pesticide     | Pests Controlled                              | Product                                  | Use Pattern**  |
|---------------|---|--|--|
| <b>2002*</b>  |   |  |  |
| INDOXACARB    | ORIENTAL FRUITWORM,<br>PLUM CURCULIO          | Avaunt insecticide ( DUPONT)             | FOLIAR; 0.11 LB.AI/A; 4 APPLIC; 14 DAY<br>INTERVAL; 14 DAY PHI   |
| <b>2004</b>   |   |  |  |
| ETOXAZOLE     | TWO SPOTTED SPIDER<br>MITE, EUROPEAN RED MITE | Zeal miticide ( VALENT )                 | 0.17 LB.AI/A; FOLIAR AIRBLAST APPLIC; 1<br>APPLIC/SEASON; 7-14 DAY PHI   |
| <b>2006</b>   |   |  |  |
| ACEQUINOCYL   | TWO SPOTTED SPIDER<br>MITE, EUROPEAN RED MITE | Kanemite 15SC miticide<br>( ARYSTA)      | APPLY 31 FL.OZ. KANEMITE 15SC (0.3 LB<br>AI)/A; 14 DAY INTERVALS; 7-DAY PHI; MAX<br>OF 62 FL.OZ. (0.6 LB AI) OR 2 APPLIC./YR.        |
| <b>2008</b>   |   |  |  |
| SIMAZINE      | WEEDS   | Princep 4L herbicide ( SYNGEN )          | 0.5-1.0 LB AI/A; APPLY TO ORCHARD<br>FLOOR IN LATE FALL TO EARLY SPRING<br>PRIOR TO EMERGENCE, AT LEAST 6-9<br>MONTHS BEFORE HARVEST |
| <b>2010</b>   |   |  |  |
| FENPYROXIMATE | TWO-SPOTTED SPIDER<br>MITES                   | Portal XLO miticide/insecticide<br>(NAI) | 32 FL OZ/A; FOLIAR APPLIC; 1 APPLIC; 7-<br>DAY PHI; APPLY WHEN MITES REACH<br>THRESHOLD  |
| METRAFENONE   | POWDERY MILDEW                                | Vivando fungicide (BASF)                 | APPLY 15.4 FL OZ (0.3 LB AI)/A ON A 7-14<br>DAY INTERVAL; MAX 2 APPLIC AND 30.8<br>FL OZ (0.6 LB AI)/A/SEASON; 7-DAY PHI             |

\* year project initiated

\*\*Use pattern for reference only; please consult label for additional information

## IR-4 Studies Submitted / To be Submitted for Cherry

| Pesticide                   | Pests Controlled                              | Product  | Proposed Use Pattern/Status   |
|-----------------------------|---|--|---|
| <b>2001</b>                 |   |  |   |
| AVG                         | REDUCING FRUIT SOFTENING, DECAY & RESPIRATION | ( VALBIO )   | 0.075 LB AI/200,000 LB/ FINAL REPORT SIGNED; READY FOR SUBMISSION   |
| <b>2005</b>                 |   |  |   |
| DIURON                      | WEED CONTROL                                  | Karmex 80DF herbicide (ADAMA)                      | .8-1.6 LB AI/A; GROUND /FINAL REPORT SIGNED; READY FOR SUBMISSION   |
| <b>2006</b>                 |   |  |   |
| PYRIMETHANIL (POST HARVEST) | BROWN ROT, GRAY MOLD                          | Penbotec 400 SC fungicide ( JANSEN)                | 1000 ML PRODUCT (400 G.AI)/200,000 LB FRUIT POST-HARVEST; HIGH AND LOW VOLUME SPRAY APPLIC SYSTEMS / TOLERANCE ESTABLISHED  |
| <b>2008</b>                 |   |  |   |
| FLUTIANIL (V-10118)         | POWDERY MILDEW                                | V-10118 0.4 lb ai/gal fungicide ( LANDIS,OATAGRIO) | 0.04 LB AI/A; MAKE 4 FOLIAR APPLIC IN 60-300 GPA, AT 7-DAY INTERVALS, 3-DAY PHI; A NON-IONIC SURFACTANT IS ADDED (AT 0.125-1% V/V) IN SOME TRIALS TO COMPARE RESIDUES WITH AND WITHOUT SURFACTANT /NOTICE OF FILING ISSUED/PROPOSAL |
| <b>2009</b>                 |   |  |   |
| CLETHODIM                   | ANNUAL GRASSES                                | Select Max herbicide ( VALENT )                    | 0.25 LB AI/A; 2 APPLIC; 14 DAY INTERVAL; 0.5 LB AI/A/SEASON MAX./ TOLERANCE ESTABLISHED   |
| KASUGAMYCIN                 | BACTERIAL CANKER                              | Kasumin 2L bacteriocide (ARYSTA)                   | 37.85 GRAMS (2 QTS PRODUCT)/100 GAL WATER; FOLIAR APPLIC; 3-5 APPLIC; 2-WEEK RE-TREATMENT INTERVAL; 30-DAY PHI; THOROUGH COVERAGE WITH AIRBLAST SPRAYER/ PETITION SUBMITTED TO EPA  |
| <b>2011</b>                 |   |  |   |
| EMAMECTIN BENZOATE          | OBLIQUEBANDED LEAFROLLER                      | Proclaim 5SG insecticide (SYNGENTA)                | 6.7 G AI/A (4.8 OZ AI/A); 2-3 FOLIAR APPLIC; 14-DAY RE-TREATMENT INTERVAL; 3-7 DAY PHI; GROUND SPRAYER WITH 60-100 GPA/FINAL REPORT SIGNED; READY FOR SUBMISSION  |

|                 |   |   |  |
|-----------------|---|---|--|
| <b>2013</b>     |   |   |  |
| CHLOROTHALONIL  | CHERRY LEAF SPOT & BROWN ROT  | BRAVO WEATHER STIK fungicide ( SYNGEN ) | 4.125 PT/A (3.1 LB AI); 4-5 FOLIAR APPLIC; 14-DAY RE-TREATMENT INTERVAL; 7, 14 OR 21-DAY PHI; APPLY WITH GROUND SPRAYER AT 60-150 GPA; USE IS ONLY FOR FRUIT ENTERING A WATER RINSE PROCEDURE BEFORE PROCESSING; MFG REQUESTS MAX 6 APPLIC/YR, 7-DAY INTERVAL, 7-DAY PHI (PHI SHOULD BE SELECTED BASED ON THE INTERVAL THAT RESULTS IN RESIDUES WITHIN CURRENT TOLERANCE), SPRAY IN MINIMUM 10 GPA BY GROUND AND 5 GPA BY AIR/ FINAL REPORT SIGNED; READY FOR SUBMISSION |
| <b>2014</b>     |   |   |  |
| DINOTEFURAN     | BROWN MARMORATED STINK BUG  | Safari 20SG insecticide ( VALENT )      | MAKE FOLIAR APPLIC VIA AIRBLAST, MAX 0.304 LB AI/A (PER SECTION 18 LABEL - 6.75 OZ VENOM PRODUCT OR 12 FL OZ OF SCORPION PRODUCT/A), 2 APPLIC PER SEASON, 7-DAY INTERVAL; DO NOT APPLY UNTIL AFTER PETAL FALL; 3-DAY PHI/ALL DATA RECEIVED AT HQ   |
| OXYTETRACYCLINE | PSEUDOMONAS SYRINGAE PV. SYRINGAE (CAUSES BACTERIAL CANKER AND BACTERIAL BLOSSOM BLAST) | Mycoshield bacteriocide (NUFARM)        | 200 PPM AI; MAKE 4 FOLIAR APPLIC IN 100 GPA DURING DORMANT PERIOD PRIOR TO COLD RAINS AND FROM POPCORN TO PETAL FALL DURING THE BLOOM PERIOD; 7-DAY INTERVAL; 45-DAY PHI/ PETITION SUBMITTED TO EPA  |
| <b>2015</b>     |   |   |  |
| QUIZALOFOP      | GRASSES, JOHNSONGRASS   | Assure II herbicide ( DUPONT, GOWAN )   | 0.017-0.034 LB; POSTEMERGENCE APPLIC; DIRECTED APPLIC ON ACTIVELY GROWING GRASS; AVOID DRIFT ON FOLIAGE AND FRUIT /ALL DATA RECEIVED AT HQ   |