**Table 2: Phylogenetic Clustering of Cytochrome P450 Families and Clans in Seventeen *Fusarium* spp.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Phylogenetic  Clade | Sequence  Entry | CYP families | CYP clans | Species |
| I  II  III  IV  V  VI  VII  VIII  IX  X  XI  XII  XIII  XIV  XV  XVI  XVII | **20**  **14**  **33**  **15**  **22**  **27**  **16**  **12**  **37**  **16**  **15**  **28**  **8**  **19**  **7**  **6**  **25** | Cyp54, Cyp68, Cyp503, Cyp506, Cyp595, Cyp602, Cyp622, Cyp5085  Cyp559, Cyp606, Cyp623,  Cyp633, Cyp634, Cyp635, Cyp636, Cyp637, Cyp638, Cyp639, Cyp640, Cyp641, Cyp642, Cyp550  Cyp683, Cyp53, Cyp626, Cyp62, Cyp583, Cyp5078, Cyp625, Cyp577, Cyp537,  Cyp59, Cyp505, Cyp540, Cyp602, Cyp587  Cyp534, Cyp544, Cyp547, Cyp614, Cyp615, Cyp616, Cyp617, Cyp618, Cyp655  Cyp55, Cyp61, Cyp504, Cyp621, Cyp637, Cyp644, Cyp5156  Cyp505, Cyp645  Cyp527, Cyp531, Cyp535, Cyp570, Cyp573, Cyp629, Cyp631, Cyp632, Cyp5085, Cyp5109 Cyp5111  Cyp 53, Cyp57, Cyp673, Cyp675, Cyp528, Cyp5080, Cyp5104  Cyp548, Cyp628, Cyp671  Cyp65, Cyp551, Cyp552, Cyp561, Cyp567, Cyp580, Cyp643, Cyp679, Cyp682  Cyp626, Cyp684  Cyp62, Cyp537, Cyp577, Cyp583, Cyp625, Cyp5078  Cyp53, Cyp576, Cyp683, Cyp684  Cyp627  Cyp53, Cyp559, Cyp630, Cyp684 | CYP54, CYP68, CYP506  CYP559  CYP550, CYP637, CYP639, CYP640, CYP642, CYP526, CYP657  CYP53, CYP62, CYP583, CYP683, CYP531, CYP537, CYP578  CYP54, CYP59, CYP505, CYP540,  CYP52, CYP534, CYP544, CYP547, CYP589, CYP615  CYP55, CYP61, CYP504, CYP533, CYP637, CYP526, CYP5156  CYP505, CYP645  CYP507, CYP531, CYP58, CYP572, CYP632, CYP54, CYP572, CYP659  CYP53, CYP531, CYP673, CYP528  CYP548, CYP574  CYP58, CYP65, CYP643,  CYP62  CYP62, CYP537, CYP583, CYP578, CYP531  CYP53, CYP576, CYP683, CYP62  CYP627  CYP53, CYP559, CYP630, CYP62 | *F.o. conglutinans, F.o.cubense, F. cucurbiticola, F. graminearum, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.o.pisi,F. poae F.Oxyspurum 5176,F. proliferatum, F. pseudograminearum, F. verticillioides*  *F. graminearum, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176, F. poae,, F. pseudograminearum,, F.o. vasinfectum, F. verticillioides*  *F.o.cubense, F. fujikuroi, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.o.pisi, F. poae, F. proliferatum, F. pseudograminearum, F.solani, F.o. vasinfectum, F. verticillioides*  *F.o.cubense, F. fujikuroi, F.mangiferae, F.Oxyspurum 5176, F.o.pisi, F. proliferatum, F.solani, F.o. vasinfectum, F. verticillioides*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. graminearum, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176, F.o.pisi, F. poae, F. proliferatum, F. pseudograminearum, F.solani, F.o. vasinfectum, F. verticillioides*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176 , F. poae, F. proliferatum, F. pseudograminearum, F.o. vasinfectum, F. verticillioides*  *F. cucurbiticola, F. graminearum, F. langsethiae, F.o. lycopersici, F.o. melonis, F.Oxyspurum 5176, F. poae, F. pseudograminearum, F.o. vasinfectum,*  *F.o. conglutinans, F.o. lycopersici, F.o. melonis, F.Oxyspurum 5176, F.o.pisi, F.o. vasinfectum,*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176, F.o.pisi, F. poae, F. proliferatum, F.solani, F.o. vasinfectum,*  *F.o. conglutinans, F. graminearum, F. langsethiae, F.o. lycopersici, F.Oxyspurum 5176, F.o.pisi, F. poae, F. proliferatum, F. pseudograminearum, F.solani, F.o. vasinfectum, F. verticillioides*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176, F.o.pisi, F. poae, F.solani, , F. verticillioides*  *F.o. conglutinans, F.o.cubense, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.Oxyspurum 5176, F.o.pisi, F. poae, F. proliferatum, F. pseudograminearum, F.solani, F.o. vasinfectum,*  *F.o. conglutinans, F.mangiferae, F.o. melonis, F.o.pisi, F.solani, F.o. vasinfectum,*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. langsethiae, F.o. lycopersici, F.mangiferae, F.o. melonis, F.o.pisi, F. poae, F. proliferatum, F.solani, F.o. vasinfectum, F. verticillioides*  *F.o.cubense, F.o.pisi, F.solani, F.o. vasinfectum, F. verticillioides*    *F. fujikuroi, F.o. lycopersici, F.o. melonis, F. proliferatum,*  *F.o. conglutinans, F.o.cubense, F. fujikuroi, F. graminearum, F.mangiferae, F.Oxyspurum 5176, F.o.pisi, F. proliferatum, F. pseudograminearum, F.solani, F. verticillioides* |