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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PhylogeneticClade | Sequence Entry | CYP families | CYP clans | Species |
| IIIIIIIVVVIVIIVIIIIXXXIXIIXIIIXIVXVXVIXVII | **20****14****33****15****22****27****16****12****37****16****15****28****8****19****7****6****25** | Cyp54, Cyp68, Cyp503, Cyp506, Cyp595, Cyp602, Cyp622, Cyp5085Cyp559, Cyp606, Cyp623, Cyp633, Cyp634, Cyp635, Cyp636, Cyp637, Cyp638, Cyp639, Cyp640, Cyp641, Cyp642, Cyp550Cyp683, Cyp53, Cyp626, Cyp62, Cyp583, Cyp5078, Cyp625, Cyp577, Cyp537,Cyp59, Cyp505, Cyp540, Cyp602, Cyp587Cyp534, Cyp544, Cyp547, Cyp614, Cyp615, Cyp616, Cyp617, Cyp618, Cyp655Cyp55, Cyp61, Cyp504, Cyp621, Cyp637, Cyp644, Cyp5156Cyp505, Cyp645Cyp527, Cyp531, Cyp535, Cyp570, Cyp573, Cyp629, Cyp631, Cyp632, Cyp5085, Cyp5109 Cyp5111Cyp 53, Cyp57, Cyp673, Cyp675, Cyp528, Cyp5080, Cyp5104 Cyp548, Cyp628, Cyp671Cyp65, Cyp551, Cyp552, Cyp561, Cyp567, Cyp580, Cyp643, Cyp679, Cyp682 Cyp626, Cyp684Cyp62, Cyp537, Cyp577, Cyp583, Cyp625, Cyp5078Cyp53, Cyp576, Cyp683, Cyp684Cyp627Cyp53, Cyp559, Cyp630, Cyp684 | CYP54, CYP68, CYP506CYP559CYP550, CYP637, CYP639, CYP640, CYP642, CYP526, CYP657CYP53, CYP62, CYP583, CYP683, CYP531, CYP537, CYP578CYP54, CYP59, CYP505, CYP540, CYP52, CYP534, CYP544, CYP547, CYP589, CYP615CYP55, CYP61, CYP504, CYP533, CYP637, CYP526, CYP5156CYP505, CYP645CYP507, CYP531, CYP58, CYP572, CYP632, CYP54, CYP572, CYP659CYP53, CYP531, CYP673, CYP528CYP548, CYP574CYP58, CYP65, CYP643, CYP62CYP62, CYP537, CYP583, CYP578, CYP531CYP53, CYP576, CYP683, CYP62CYP627CYP53, 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* |