Five single-tree replicates of 20 new apple cultivars and numbered selections were planted in Highland, New York, in 1999 as part of the NE-183 Multi-State Project. During 2001 and 2002, fungicide sprays were omitted to determine relative susceptibility of these cultivars and selections to cedar apple rust (CAR), hawthorn rust (HR), and quince rust (QR). Inoculum came from cedar trees growing adjacent to the planting. Most cultivars were highly susceptible to either CAR or HR, but not to both diseases. Ambrosia, BC 8S-26-50, Chinook, Coop 39, CQR 10T17, CQR 12T50, Golden Delicious, Mutsu, NJ 109, and Scarlet O’Hara were susceptible to CAR with more than 75% of rust-infected leaves showing aecia of CAR in August of 2002. The same group was relatively resistant to HR with 10% or less of the rust-infected leaves showing HR aecia. Cortland, Deblush, Hampshire, NJ 90, NY 65707-19, NY 79507-49, NY 79507-72, Runkel, and Zestar were relatively resistant to CAR with less than 15% of rust-infected leaves producing CAR aecia whereas 18 to 71% of leaves from this group had HR aecia. Pinova, Jubilee Fuji, and Sundance had 30 to 70% of rust-infected leaves with CAR aecia. All cultivars were susceptible to QR and would therefore need fungicide protection if grown where QR inoculum is present.