APPLE DISEASES I

Apple Scab – Leaf symptoms
Fungus: Venturia inaequalis
Dari

Apple Scab – fruit damage
Fungus: Venturia inaequalis
Dari

Pathogen/Disease description: Apple Scab is widespread in most apple growing regions. The fungus survives the winter on infected fallen apple leaves from the previous year.

Cultural control: Use resistant varieties if available. Prune so the tree has good light and air penetration and branches are not too close together. Rake up and burn the old leaves each fall.

Chemical control: Fungicide sprays are needed throughout the growing season for most apple varieties to produce healthy fruit.

Photos: ipmimages.org and Purdue Univ.
APPLE DISEASES II

Bitter Rot
Fungus: *Colletotrichum sp.*
Dari

Pathogen/Disease description: Bitter rot begins as small light brown spots on the fruit and may expand quickly under warm moist conditions. The fungus produces spores on the surface which are spread to other fruit by wind and rain. Rotted fruit hangs on the tree until the next year and is a source of spores for the new crop.

Cultural control: Prune out all dead wood and removed dead fruit each fall.

Chemical control: None needed for Afghanistan

Photos: ipmimages.org and Purdue Univ.
Black rot
Fungus: *Botryosphaeria obtusa*
Dari

**Pathogen/Disease description:** This disease is caused by a fungus that grows on many woody plants and trees and is spread by wind. Leaves may have many large brown spots that start round and become patches as they grow together. The spots are dry and like paper. Spots on fruit may appear any time during the season and infected fruit rot and hang on the tree. The fungus also causes cankers on branches.

**Cultural control:** Prune out and burn branches with cankers and dead wood. Prune to open up the tree for good air movement and light penetration. Remove dead fruit from tree each fall.

**Chemical control:** Probably not needed in dry climates.
Powdery Mildew
Fungus: *Oidium sp*
Dari

Pathogen/Disease description: Powdery mildew is a serious problem on susceptible apple varieties. The fungus may attack twigs, fruit, leaves and flowers. On leaves a white powder like covering appears. If the entire tip of a branch is affected then growth is stunted or new growth may be killed. Infected flowers do not produce fruit. Fruit with powdery mildew are of reduced quality and have a rough discolored skin.

Cultural control: Rake and remove fallen leaves.

Chemical control: Fungicides are required for most apples to produce a healthy crop. Sprays are applied starting in the early flower bud stage until mid-summer.
APPLE DISEASES  V

Sooty Blotch
Fungus: *Gloeodes pomigena*
Dari

Flyspeck
Fungus: *Schizothyrium pomi*
Dari

**Pathogen/Disease description:** Both sooty blotch and flyspeck are surface problems on the skin and the only loss is poor appearance, although they may shorten storage life. These two problems usually appear together in mid-summer.

**Cultural control:** Prune properly so branches are not too close together and there is good air movement in the tree.

**Chemical control:** Fungicides such as Captan can help prevent this problem.
Cedar-Apple Rust on Apple leaf  Cedar-Apple Rust gall on Redcedar

Fungus: *Gymnosporangium juniperi-virginina*
Dari

Pathogen/Disease description: On apple leaves the spots begin as yellow spots soon after blooming that later become bright orange. Fruit may occasionally be attacked. On cedars look for bright orange “horns” in wet weather.

Cultural control: Many apple varieties have good resistance. If nearby cedar trees have rust galls prune them out each spring before rains begin.

Chemical control: Fungicides can be sprayed every 7-10 days to protect new leaves from bloom until 3 weeks after petals have fallen.
Fire Blight
Bacterium: *Erwinia amylovora*
Dari

**Pathogen/Disease description:** Fire blight is caused by a bacterium that is spread to flowers of apple by bees, insects, rain and wind. The disease infects the flowers first then causes dieback and cankers. Hail storms make the disease worse by opening wounds that may become infected with the bacterium. This is one of the most destructive diseases of apple.

**Cultural control:** Use varieties of apple that tolerate or resist fire blight. Use only enough fertilizer to give good steady growth. Prune out all shoots with blight during the dormant season. Cut at least 6 inches below any sign of dead or discolored wood. Clean pruning tools between each cut.

**Chemical control:** Apply Bordeaux mixture before bud break.

Photos: ipmimages.org and Purdue Univ.