[103], [104], [105] and play a significant role in global trade. Potatoes are also one of the primary foods in many countries around the world [106], while sugar beets are also used in sugar production [107], [108]. Oilseed crops such as canola and soybeans are crucial for global oil production and play a great role in the global food industries [109], [110]. Vegetables such as tomatoes, cucumber, capsicum, and onion are important for daily nutrition and have a significant share in the horticulture industry [111], [112]. Fruits such as citrus, grapevine, apple, pears, and blueberries also contribute to the global fruit trade and consumption [113], [114]. Diseases such as rice sheath blight, rice blast, leaf rust, powdery mildew, fusarium head blight, leaf spot, potato virus Y, late blight disease, blackleg, downy mildew, yellow mosaic virus, soybean anthracnose, yellow leaf curl, gray mold, verticillium wilt, sour skin, citrus greening, citrus canker, and many more, can lead to significant crop losses, which threatens the food security and crunches the global economy [115]. A brief description of the globally common diseases is presented in the following.

Rice sheath blight is a fungal disease that occurs through a soilborne pathogen called *Rhizoctonia solani* [116]. When the plants are infected, the leaf blades become severely damaged as the fungi reduce the chlorophyll of the plant. This causes the green color to appear bleached and paper thin. From a distance, the leaves resemble a snake-like pattern [117]. It is considered one of the most destructive diseases. This is because if the plants are severely infected, the yield can reduce up to 50% [118]. Rice blast is another fungal type of disease, which is caused by *Magnaporthe oryzae*. It is also listed as a devastating disease as a severe infestation can even wipe out entire crops [116]. The rice blast symptoms appear as white to gray–green spots and dark borders on the shoot. The symptoms are observed in leaves, ears, and stems. Over the course of time, the spots turn gray, and the center appears to be like a straw color. The neck of the plant develops gray fluffy mycelium, which destroys the tissues of the plants [119].

Leaf Rust is a fungal disease and is caused by *Puccinia triticina Eriks*. It is one of the most common rust diseases around the world. Plants that have large uredinia and small orange–brown colored flecks that appear as clustered/scattered germ pores are considered to have leaf rust. Another common type of rust in wheat plants is stripe rust, which appears in more stripe shapes. They can damage the leaf cells and gradually deteriorate the plant health [120]. Powdery mildew is also a common fungal disease that destroys cereals, tuber crops, oil seeds, and fruits [121]. They are easily recognized as the fungi form white to gray patches and appear in fine talcum powder forms. A research presented by Conner et al. [122] shows that powdery mildew diseases caused approximately 20% reduction in the grain yield. Powdery mildew fungi are host-specific and can only infest a plant with corresponding genomes of the fungi. The infestation depends entirely upon the nutrient and water supply of the host plant cells [123]. Fusarium head blight is one of the critical cereal crop diseases across the world [124]. A recent global survey shows that every year, almost 21.5% of crops are lost yearly due to fusarium head blight diseases [125]. Fusarium head blight is a fungal disease, and the fungi can develop other diseases such as ear/root rot and sheath/blight [126]. Some Fusarium species can even produce mycotoxins such as trichothecenes deoxynivalenol, HT2/T2, and oestrogenic mycotoxin zearalenone [124]. The fusarium mycotoxins are alarming as contaminated grains cannot be fed or used for other purposes, leading to massive economic loss. Leaf spot disease is caused by *Cercospora arachidicola*, and Cercosporidium personatum is one of the destructive leaf diseases. Spots may appear with different colors (white, gray, and brown) on the leaves as the fungi attack the photosynthetic tissues and reduce the photosynthesis rate [127]. It is identified as a significant yield-limiting disease affecting cereal, tuber, oil crops, vegetables, and fruits [128].

Potato virus Y is a widespread disease that can significantly damage the cultivation of potato plants. The pathogen is viral in nature, and the pathogen is called genus *Potyvirus* (PVY). The virus belongs to the *Potyviridae* family, and it is known to be one of the top ten plant-destructive diseases around the globe. As the pathogen is viral in nature, different strains are available, and the symptoms can vary from mosaic leaf pattern with discoloration in the leaves (caused by the PVYO strain), leaf, and tuber spots that are necrotic (caused by PVYN and PVYTN strain) [129]. A survey from Polder et al. [129] showed that every year, Potato virus Y causes approximately 20 million euros to be lost for Dutch farmers [129]. Another fungal pathogen named late blight disease is also common in potatoes. The fungal pathogen is called *Phytophthora infestans*. The symptoms include the leaves appearing water-soaked and dark-colored lesions. With time, the lesions on the leaves become brown or black and eventually dry out. The lesions can also appear on the potatoes [130].

Blackleg disease, which is also known as stem canker, is mainly caused by the fungi called *Leptosphaeria maculans*. This disease is also considered a widespread disease in the oil seed crops, which can substantially impact the yield [131]. The most common symptoms of blackleg are the lodging and premature death of the stem. Dark lesions with pale centers develop in the stem, branches, and pods. The crops/fruits appear black in color [132]. Downy mildew is also a popular oil seed disease. It is caused by a fungus called *Hyaloperonospora parasitica (Gaum.) Goker*. The symptoms include irregular development of leaves, where the upper surface appears to have yellow necrotic lesions and the bottom surface of the leaves has white–gray looking mycelium [133].

Yellow mosaic virus is a viral disease, often identified as yellow spots on the leaf veins and then gradually spreading on the entire leaf, more like in a mosaic pattern. In some instances, severe infections can lead the leaf to turn chlorotic and then to necrotic [134]. The yellow mosaic diseases are transmitted through whiteflies and mostly affect the leguminous crops [135]. Soybean anthracnose is caused by a fungus called *Colletotrichum*. The symptoms appear as dark, irregular spots on the stems, pods, and cotyledons. The leaves appear to have necrotic laminar veins, which cause precocious defoliation. Soybean anthracose can also open the immature pods, germinate grains prematurely, and sometimes even rot the pods [136].