

spicuous and may not extend beyond the leaves lying close to the ground, although it may affect the intermediate and even the topmost leaves. Marked rolling of the upper leaves, however, is often seen on plants not affected with Leaf Roll. The rolled leaves on plants affected with this disease begin to die early. The harsh, leathery texture of such leaves is a constant symptom. This point may be tested by feeling them with the fingers. The tubers of affected plants are small and are borne generally on very short tuber-branches (stolons) or even attached in a cluster to the stem.

Means by which Leaf Roll is spread.

—Leaf Roll is chiefly transmitted through the seed. Tubers from affected plants invariably produce diseased plants. There is also evidence to show that the disease may spread from plant to plant in the field. Just how, is unknown, as up to the present time no parasite has been found associated with Leaf Roll.

Prevention.—The surest way of avoiding loss from Leaf Roll is to secure fresh seed from districts free from the disease. Fortunately, this is possible, as Northern Ontario and certain sections of New Brunswick, Nova Scotia and Prince Edward Island are comparatively free from this trouble.

MOSAIC

The cause of this disease is also unknown. It has been observed in many fields in Ontario. When it is severe there is very noticeable reduction in the crop.

Symptoms.—The foliage of plants affected with Mosaic is somewhat wrinkled or corrugated and mottled, with faint, light green or yellowish spots. These symptoms vary considerably, being well marked in some cases and not so noticeable in others. The stalks of diseased plants are often

more bare near the ground than those of healthy ones, partly because the affected foliage does not spread out and droop down normally and partly because the lower leaves sometimes fall off in the last stages of severe attacks. The tubers of affected plants are normal looking and sound, and their keeping or eating qualities are not impaired.

Means by which Mosaic is spread.—

Like Leaf Roll, Mosaic is transmitted through the seed and is spread very largely by the use of seed from diseased plants. It is also spread from plant to plant in the field, probably by insects as is the case with related diseases.

Prevention.—If the disease is not very prevalent in a field, remove the affected plants so as to secure seed as free as possible from Mosaic. If the Mosaic is very abundant, secure fresh seed from a field or district free from the disease. It may be necessary to discard susceptible varieties in order to avoid loss from Mosaic.

CURLY DWARF

Is another disease of unknown cause, frequently met with in Ontario, especially in unthrifty fields of potatoes. It appears to cause a very noticeable reduction in the crop. Plants affected with Curly Dwarf are dwarfed and the foliage is markedly curled and wrinkled. This disease is known to be transmitted through the seed.

Prevention.—Remove affected plants so as to secure seed free from Curly Dwarf or secure fresh seed from a field or district free from the disease.

Since all these diseases are transmitted chiefly through the seed, the importance of disease-free seed is apparent. Where can such seed be obtained? At the present time these diseases, especially Leaf Roll, appear to be very prevalent throughout Southern