

CN880097  
H220  
SOK

06 88/038 SAI

PL ms. Res. 3 (1), 1988 : 67-68

## FUSARIUM ROT OF **POTATO** IN **MARKET** OF DAKAR (SENEGAL) AND ITS CONTROL

S. S. SOKHI\* AND D.G. GAIKWAD

I.S.R.A., C.N.R.A., B.P. 51, Bambey (Senegal) West Africa

Senegal imports potato from other countries for its consumption. Major import of the potato is from European countries. These potatoes were found packed in gunny bags and stored in ordinary godowns but not in cold storages. Potato tubers stored in the godowns were carrying soil sticking to the skin. In the market of Dakar the potatoes were oftenly found decayed due to dry rot alone or coupled with wet rot and the incidence was heavy under such storage conditions. From the market of Dakar potatoes are transported to retail markets where the incidence still goes high. If these are stored for a week in the kitchen after the purchase the losses are heavy.

Potatoes stored in gunny bags were purchased from the market of Dakar and identity of the pathogen was made from rotten potatoes. Symptoms of the disease were recorded in detail. The incidence of apparent infection was recorded by weighing diseased versus healthy potatoes. Effect of washing with tap water, sodium hypochlorite solution and thiram solution on disease suppression was studied.

**Symptoms:** Cut and wounded tubers were heavily infected and showed growth of the fungus. Tubers on which soil was sticking on the skin were more infected than the clean ones. The decay was fairly moist in cut and injured tubers due to soft rotting bacteria. Some infected tubers were light brown to dark brown and somewhat dry. Infected tubers showed wrinkles here and there. Whitish tuft of mycelium was observed out bursting the skin in some tubers. Shrinkage of tubers was noticed when stored under room conditions for longer period.

**Identity of the pathogen:** Potato tubers showing symptoms were kept in humid chamber for 2 days and the organism was identified as *Fusarium solani* var. *coeruleum* (Sacc.) Booth Comb. Although some other species of *Fusarium* are known to cause dry rot but during these studies all the samples yielded *F. solani* var. *coeruleum*. This seems to be a new record in this country.

**Disease incidence:** The disease was recorded in 3 bagful potatoes each of 25 kg when stored under room conditions. The observations are given below:

Date of purchase	Date of observation	% infection
15.08-87	16.08-87	32
15.08-87	24.08-87	61.6

Apparent *Fusarium* dry rot was observed in 32% tubers when observed soon after purchase. With additional time of storage of 8 days it went upto 61.6 per cent.

\* Punjab Agricultural University LUDHIANA (India)  
\*\* ISRA-CNRA Bambey (Senegal)

TABLE 1. Control of Fusarium rot of potato

Treatment	Period of Dipping (mta)	% infection
Sodium hypochlorite (4%)	10	14.3
Sodium hypochlorite (4%)	5	14.3
Thiram (0.2%)	10	16.6
Thiram (0.2%)	5	20.0
Tap water	Thorough washing	29.0
Potato from storage		61.6

Probably increase in infection is due to latent infection and secondary infection. Usually *Fusarium* rot remains undetectable when soil is sticking to the skin of the tubers. To record latent infection, potato tubers were washed thoroughly with water and apparently healthy tubers were incubated in bags for about 8 days. Thirteen percent tubers showed latent infection due to *Fusarium*. Such type of infection is known else where also (Surkova, 1977).

**Control:** During humid weather in months of August-September in Senegal, potato decay increases when stored under room conditions. Potato purchased from the market were sorted out and infected tubers showing rotting were removed. The remaining lot of potatoes which was apparently healthy given different treatments. Potatoes were dried and then stored under room conditions. Rotting of tubers due to *Fusarium* was recorded which is given in Table 1.

Sodium hypochlorite reduced the infection to the minimum. Thiram and even washing with water reduced the infection. Therefore, it is inferred that infected potato should be sorted out. Washing of potato with tap water or hypochlorite sodium should be done. Pre-storage treatment with systemic chemicals is known to reduce the infection (Leach, 1978; Lashin and Henriksen, 1977). Thiram also reduced the infection but washing is the safe and economical way of reducing the disease.

Lashin, S.M. and Henriksen, J.B. 1977. Rev. Plant Path. 57: 4099 (Abs.).

Leach, S.S. 1978. American Potato Jour. 55: 155-159.

Surkova, T.A. 1977. Rev. Plant Path. 57: 2237 (Abs.).