Results

RESULTS

Fungal isolation:

Fifty three fungal isolates of *Curvularia* spp., *Alternaria* spp. and *Fusarium* spp. were isolated from different sources, i.e. wheat (5), potato (6), tomato (11), mandarin (2), fenugreek (1), bread (1), orange (1), lupine (4), chicken feed (13), soil (7) and air (2) as shown in Table (1).

From Table (1), five isolates were selected from each genus according to the difference in their morphological characters and the source of food. The five isolates of *Fusarium* were taken from wheat, potato, tomato, chicken feed and soil; the five isolates of *Alternaria* were taken from tomato, mandarin, fenugreek, bread and chicken feed; while one *Curvularia* sp. was selected from each of orange, soil, air and two isolates from lupine.

Table (1): Fungal genera isolated from different collected sources.

Sources	Genera	Total isolates	No. of selected isolates
Wheat (w)	*Fusarium*	5	1 (Fw)
Potato (p)	*Fusarium*	6	1 (Fp)
Tomato (t)	*Fusarium*	7	1 (Ft)
	Alternara	4	1 (At)
Mandarin (m)	*Alternaria*	2	1 (Am)
Fenugreek (f)	*Alternaria*	1	1 (Af)
Bread (b)	*Alternaria*	1	1 (Ab)
Orange (o)	*Curvularia*	1	1 (Co)
Lupine (*l*)	*Curvularia*	4	2 (C*l*)
Chicken feed (c)	*Fusarium*	7	1 (Fc)
	Alternaria	6	1 (Ac)
Soil (s)	*Fusarium*	5	1 (Fs)
	Curvularia	2	1 (Cs)
Air (a)	*Curvularia*	2	1 (Ca)
Total	53		15

F: *Fusarium*

C: *Curvularia*

A: *Alternaria*

w: Wheat, p: Potato, t: Tomato, m: Mandarin, f: Fenugreek, b: Bread, o: Orange, *l*: Lupine, c: Chicken feed, s: Soil and a: Air,

Effect of gamma irradiation on the linear growth of the selected fungal isolates:

The fifteen fungal isolates which were selected from the previous experiment were individually grown on Czapek's-yeast extract agar medium in petri-dishes at 25-28 °C for 10 days, then exposed to different increasing dose levels of gamma irradiation (0.0, 0.5, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0 kGy). Discs, measure 5mm in diameter, were taken from the different treatments and transferred to Czapek;s-yeast extract agar medium in petri-dishes (three dishes for each treatment).

All the dishes were then incubated at 25-28 °C the mycelial growth were measured daily till the mycelium of unirradiated isolate reached the edge of the dish (9.0 cm).

It is clear from the data given in Table (2) and Fig. (1) that all the radiation doses used affected the mycelium growth of the experimental five isolates of *Curvularia* but at different degrees, as the dose level increased the growth diameter decreased. The unirradiated isolates reached the petri-dishes edges before any of the treated one. Un-irradiated *Curvularia* sp. which was isolated from lupine (Cl_1) was the faster one in its growth comparing with other isolates of *Curvularia*, since its mycelium reached the edges of the petri-dishes after 6 days followed by Cl_2, Co (isolated from lupine and orange, respectively) and Ca (isolated from air) where they reached the petri edges after 7 days. *Curvularia* sp. isolated from soil (Cs) was the slower one in its growth and reached the petri edge after 8 days.

The results recorded in Table (2) also revealed that the selected *Curvularia* isolates differ in their resistance to gamma radiation. Cl_1 sp. showed the highest resistance to gamma radiation, since up to 2.0 kGy, the mycelia growth were slightly different from the control (8.7 cm) and gradual decrease occurred thereafter.

Table (2): Effect of gamma irradiation on linear growth (cm) of selected isolates of *Curvularia* spp. collected from different sources.

Irradiation dose levels (kGy) / *Curvularia* isolates	0.0	0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
Cl_1	9.0	8.9	8.8	8.7	8.0	7.8	7.7	7.5	7.3	7.2	7.1	7.0
Co	9.0	8.0	8.0	7.9	7.9	7.7	7.2	6.8	5.6	5.1	4.8	4.0
Cs	9.0	8.5	8.2	8.0	7.9	7.6	7.5	4.2	4.0	3.5	0	0
Ca	9.0	6.7	6.5	5.7	4.8	4.5	3.7	3.2	2.0	0	0	0
Cl_2	9.0	7.2	6.7	6.2	6.0	4.7	3.0	0	0	0	0	0

C: *Curvularia* spp.

l: Lupine, o: Orange, s: Soil, a: Air.

Maximum growth of Cl_1 at 6 days.

Maximum growth of Cs at 8 days.

Maximum growth of C*a*, Co and Cl_2 at 7 days.