

ABSTRACT

- 1-Survey of seed- borne fungi of wheat and its relationship with seed weight was carried out. Nineteen seed- borne fungi were isolated and identified by the standard blotter method. Negative correlation between seed size and seed borne pathogenic fungi was negatively with high significant.
- 2-Repeated isolation procedure emphasized that the fungus *Alternaria alternata* was isolated at the highest frequency, being 43.6 %. While the fungi *Nigrospora* sp., *Trichothecium roseum* and *Verticillium* sp. exhibited the lowest frequency percentages, being 0.2 % for each.
- 3-The results proved that uniformly sized seeds (large, medium and small) on each cultivar had significant effect on pre-, post-emergence damping off, survived seedlings, plant length at vegetative stage, mean of number tillers , dry weight, plant length at adult stage, ear length and T.G.W. Large seeds produced strong seedlings with the least pre-, post- and the highest in survived seedlings and gave the highest values in (length, number of tillers, dry weight, ear length and T.G.W) as plants compared with values obtained from medium and small seeds.
- 4-*Fusarium graminearum* was the most aggressive to cause pre-,

post- emergence damping off.

5-Seed treatments:

a-The results showed that seed treatment with dry temperature at 80°C for 12 hr. was the most effective to eradicate pathogenic fungi and increased germination percentages.

b-Treatment with culture filtrate of *Trichoderma* spp. greatly reduced seed borne pathogenic fungi and improved seed germination.

c-Seed treatment with fungicides reduced fungi from dead seeds, abnormal seedlings and improved seed germination.

d-Treatment with biocides reduced percentages of seed transmission and gave high percentages of normal seedlings due to minimizing the pathogenic seed borne fungi.

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