International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.07 pp 619-633, 2016

Impact of Silverleaf Nightshade(*Solanum elaeagnifolum* Cav.) organs powder on Germination and Growth of Wheat durum(Cham-5)

A.Alhemedy[1], S.Nader[1], B.Ebrahim[2]

[1]Botany department-science faculty-Damascus university, Syria
[2]Chemistry department-science- faculty-Damascus university,Syria

Abstract : Silverleaf Nightshade(*Solanum elaeagnifolum* Cav.) is a serious harmful weed, threats growth and producing of crops and it is one of invader plants for syrian lands.This plant has allelopathy impact or teletoxie, and it is a species of too secretly compitition that include secretion of substance and various chemical compounds that work to prevent germination and growth and this impacts nagatively on crop producing.
In order to studyteletoxie of (*Solanum elaeagnifolum* Cav.) on germination of wheat grains and seedling growth we prepare powders from plant organs (foliages – stems - roots) from this Plant during flowering stage, Then This powders were added to soil in different amounts and then wheat grain cultured and watered Then tested of germination and seedling growth of wheat durum (Cham-5).Results showed that Silverleaf Nightshade residues has a negative significant role on studied properties. It is presented by reducing germination of grainsof the studied wheat and increased the average of germination time, and also by decreasing the stem length with the apperance of clearly phytotoxicity. This impact increases with increasing concentration (0,5,10,15,20)g/kg and differs according to plant part, wheat and tested concentration. Results showed that foliagepowders have more impactin preventinggermination and growth of wheat than roots powders, In conclusion, powders of Silverleaf Nightshade contain allelochemicals that may contribute to its invasiveness and extreme competitiveness.
Key words: Allelopathy,Silverleaf Nightshade, Germination, Growth,Wheat.

1. Introduction:

The competition of the most prominent and the most important relationships that arise between plants individuals whether these individuals of one species or of different types, the competition occurs over the surface of the soil on the light and space, it happens under the surface of the soil on the water, mineral salts and place growth and spread the roots.

This relationship begins once the two together increases the growth of with increased density and with decrease concentrations of competitive materials and the lack of space[5],the result is always of competition for the strongest and most able to exploit theavailable resources in the media, another face of the competition was added to the classical image last result from the secretion of some of the plants the chemicals to the media and it works to inhibition or obstruct transpiration or growth, this case is known as Teletoxie or Allelopathy.

Many plants characterized this feature and all developmental levels.the most famous known weeds that accompany agricultural crops by force, which has necessitated disposed of in different methods was and still is notably herbicides in addition to the methods of manual and mechanical weeding.

Allelopathy phenomenon has drawn attention in the agricultural world especially since many of the secondary metabolic products of some plants with a strong toxicity can affect in any stage of the growth of other plants nearby[15], so it can be made this phenomenon if it was studied scientifically accurate, vibrant environmentally friendly alternatives for chemical pesticides herbal. In addition the study of this phenomenon contribute to understand the causes of grouping or dispersion of members of the same species or different species that existing side by side in different natural environmental systems field[18].

Perhaps Parthenium argentatum plant is a perfect example of the dispersion of members of the same species because of this phenomenon and the species of *Eucalyptus Sp.*, *PinusSp.*, *Cupressus Sempervirens*, *Juglans Regia* and other examples of the species level[5].

The detailed and accurate knowledge for any botanical species with aoriented toxicity can help to take this feature to control weeds and species of unwanted and harmful vital and control without any damage to the environment[19].The nature and quality of these detachment material, chemical composition and concentrationsis vary in It is a member of the plant to another and from one species to another, which is mostly alkaloids, saponins, flavones, tannins, anthocyaninsetc.

In 1976, Curvetto et al. have found that the saponin derived from the fruits of the Silverleaf Nightshade reduced root growth of Ecballiumsp, and in 1990 Bell et al. illustrated inhibitoryimpact of land eggplant in a delay in the growth of some plant species, in presence of extracts from blueberry fruit these materials contain alkaloids such saponins, solanine, etc[8].

Also isolated some of Alkaloids from Silverleaf Nightshade legs likesolasudine[16], β-D-Glucopyranosyl, and α-L-Rhamnopyranosyl, also[27] confirmed that the aqueous extract of the plant species *Solanum Forskalii*may inhibit germination wheat grain and growth of roots.

Also noted that *Solanum Mauritianum* significant impact on the germination of *JuglansNigra*[28], while[21] illustrated that there is no impact of the extracts water leaves kind *Solanum lycocarpum* in the germination of sesame seeds , but it increased the average time required for germination. The growth of roots most affected, in contrast (Nutan and Asha., 2005) confirmedthat solasudine located at the rhizosphere species of *Solanum Khasianum*was toxic to the roots of mutated and cause colorful parties rooted in brown.

The results of[4] study showed that the presence of 2 g of powder of rhizomes sorghum or *L. Sorghumhalepens* in 1 kg soil led to a decrease in vegetative growth and the weight wet to plant wheat rate in a significant, also[27] found that extracts *Brassica nigra* inhibitor and significant impact in transpiration and the length of the stalk and dry weight of plants wheat, and the length of the radicle is the most sensitive to the source of the extract compared *Bantah grain* and the length of the stalk of seedling wheat, as it was flowers and leaves extract more impactive in damping followed extract plant parts together and then the roots and stems extracts.

[2]reported that the concentration of 0.2% of the water extracts of some dried herbs of *Convolvulus Arvensis*and *Poa Annua* decrease in the length of the roots of seedling wheat to see reason by 47 and 93% consecutively, while the resulting concentration of 0.5% from the extract of the tongue pregnancy *Sinani Plantag Lanceolata* to cut the roots of wheat seedlings to grow by 10% and increased the impact of the extract with increased concentration used.

2% aquatic extracts of soil containing residues of *Raphanus Raphanistrum*or *Oats Avena* fatua led to maximum lowing in the length of the gesture and dry weight of roots of four varieties of soft durum wheat(spring mothers, Caronia Fathers -99, Abu Ghraib-3) when the period of incubation was one week compared to the control, and were significant differences between wheat varieties tested in terms of their sensitivity to the impacts of herbs[1].

[3]also noted to change durum wheat varieties in response *Triticum Turgidum Var Durum* four tested according to the stage of plant growth barley vegetable part used.

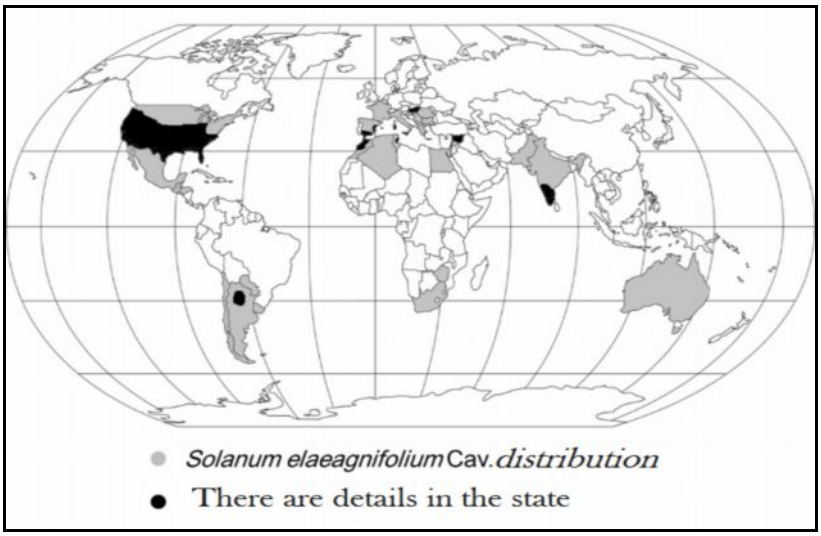
Roots of *Cirsium arvense* powderled to the low percentage of germination of wheat grain at a rate of 20%[7] also pointed out[6]. That the water extracts of *Circassians sativus* negatively affected the percentage of germination of grain and the length of radicle and the rate of growth and weight wet *Tertsm aestivum*, and the

water extracts of the type of *Prosopis juliflora* has reduced the percentage germination of wheat grain at a rate of 22% and 14% after one week and two weeks from agriculture fell shank length gesture with increased extract a moral focus, and it was the maximum impact of the extract of the leaves compared to extract the roots and the legs,the leg extract showed weaker impact on all traits compared to extract the leaves and roots[25].

Silverleaf Nightshade (*Solanum elaeagnifolum* Cav.) is an chiveherb height ranges between 40 and 60 cm, color gray similar to the color linden, it is covered by dense fur, leg list, many branching, barbed and elongated, resembling linden leaves, edge full barbed, lime cluster, purple flowers, fruits are yellow and sometimes white in color, about 1 cm in diameter (Figure 1).

Figure (1). Silverleaf Nightshade

The original home of Silver leaf nightshade is the south-west of the United States of America and northeast of Mexico [19], growing high density in various regions of the world, even in Syria, as the Ministry of Agriculture statistics indicate that a gas income in 1967 (Figure 2).



(Figure 2) the spread area of S. elaeagnifolium Cav. in different states of the world [29].

Silverleaf Nightshade start blooming from April until late May, and it grows in neglected land and fallow and parties roads, canals and drains, and lower rates of agricultural land, a fast-spreading and durable to the harsh conditions. It has become this plant preoccupation of many researchers in the study of the weeds and control at the level of the world, because of its adverse impacts due to the wide and rapid spread and joining invasive plants and is one of the most weeds and dangerous that threaten crops in Syria (Figure 3), etc. increases the severity of factors, it belongs to the perennial plants and has the ability to reproduce in a vegetative [26].

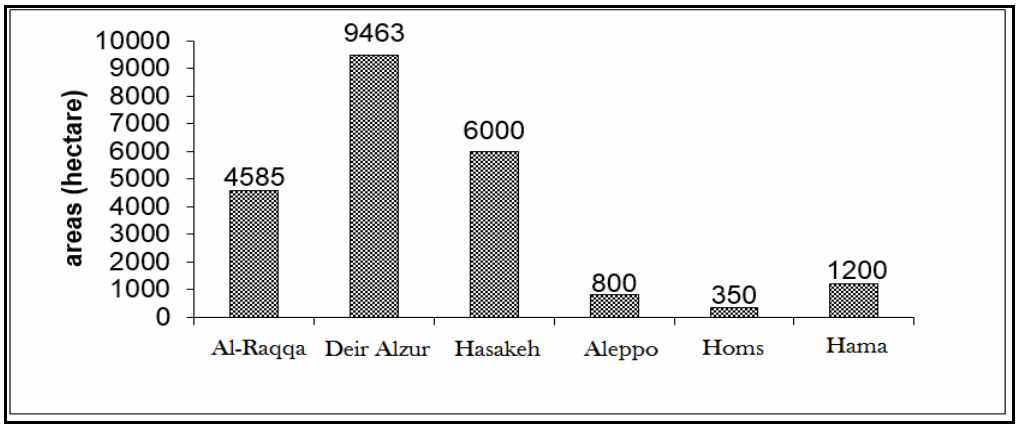


Figure (3) the area where the S. elaeagnifolium Cav.spread in 2007 in some Syrian provinces according to the Syrian Ministry of Agriculture statistics.

The chemical study shows that S. elaeagnifolium Cav. contains a high proportion of Steroid alkaloid glycosides [14], including the Solamargin, Solasonine, Solanine α-, β-Solanine.

The selection of wheat as a high-impact plant. elaeagnifolium Cav. was based on the economic importance for him and the area where it is grown and ease of cultivation and to monitor its growth as well.

The aim of this research is to study the impactiveness of Silverleaf Nightshade powder of fruit, leaves and roots during complete maturation phase within vitro conditions of germinal Triticum durum and its precursors.

2. Experimental:

Silverleaf Nightshade was collected as whole plant (fruits, leaves, legs and roots) in November 2014 during complete maturation phases, from 20 fields in Hama province distributed randomly. The fruits were gathering then leaves cutting and the legs also cutting by soil surface, the roots pulled out with soil deep (25- 30 cm[21].

The roots was washed with water and the with distilled water and sterilized using hypochlorite solution 10% for 5 minutes[10].

The samples were dried on air under the shadow and grinded and saved as powder;the sterilized soil was mixed with (0, 5, 10, 15, 20 g powder of each part/kg of soil).

The mixture wasput in a plastic pot diameter of 25 cm and humid once and then left the soil to the process of biodegradation Biolysis, a week later were planted durum wheat grains (Cham 5) in the laboratory at a rate of 10 pills / pot. Experience random design with four replications fully designed (the concentrations of 5 × 4 × 4 replicates vegetarian) part, were four replications for each concentration and preparation for each class and part botanical laboratory, including the treatment of the blank (Tajuddin et al., 2002). Potted and placed randomly on a table at a temperature 23 ± 2 for a period of 12 hours a day lighting. He studied germination of wheat grain counting the number of pills that Ni per week for 21 days.

The percentage of germination speed factor, distribute of germination interval of time (average of germination Time) according to the following equations[10,20].

The percentage of germination = (blank - parameter / blank) × 100
Central time for germination = sum (x_i. y_i)/N
whereas:
x_i : the number of grain germ during the day.
Y_i: the number of days that separates the germination of grain and date of planting.
N: the total number of pills germ.

It was measured along the stalk of wheat members every week until maturity and the results recorded in the appropriate table.

The statistical analysis of the data in accordance with the design random full account ANOVA coefficient of variation, and test teams less moral L.S.D. 7T GENESTA using the program to compare the blank samples with samples of various transactions, as well as comparable transactions Pinha.autamt compared results from all repeaters on the degree of probability of 5%[14,24].

3. Results and discussion:

3.1. The impact of SilverleafNightshade powder in the germination of durum wheat grains (Cham 5) and the duration of germination:

The powder Silverleaf Nightshade through full maturity impact on wheat grain germination and seedling growth and Tnamea have this impact varied depending on the plant part used in the preparation of the powder (fruits, leaves, legs, roots), the focus of the user of the powder.

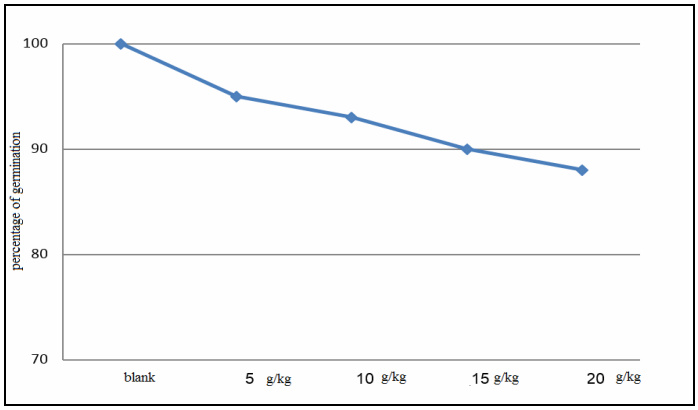
3.1.1. The impact of the leaves powder:

Table 1 and Figure 4 influencing inhibitory moral powder securities Silverleaf Nightshade includes through the process of full maturity in the germination of durum wheat grains Cham 5 compared with the blank at concentrations of 15 g / kg (in the first week after planting only) 0.20 g / kg (from the first week after planting until the third week). Where the percentage of germination at these concentrations 85.80% on the sequence in the first week after planting. Then this ratio rose to 90.88% on the sequence in the second week. This means that wheat grain germination able to follow up with a slight increase in the average time for germination of wheat grain, 10.60, 10.67 days for both concentrations on the sequence, compared with 10.54 on the blank. The limited impact of concentrations 5.10 g / kg on a slight increase in the average time for germination of wheat grain, 10.59, 10.60 days consecutively.

It was the differences were not significant in influencing the germination of durum wheat grain concentrations between Cham (5) 15.20 g / kg. The differences were not significant in influencing concentrations between 5.10 g / kg compared with each other and with the blank.

Table 1- The impact of the leaves powder in the production of wheat grain

Concentrations	The average number of germ grain	The average percentage of germ % after 21 days	The average duration of germination / day
blank	10	100	10.54
5 g / kg	9.5	95	10.59
10 g / kg	9.3	93	10.60
15 g / kg	9.0	90	10.60
20 g / kg	8.8	88	10.67
L.S.D = 11.84 CV% = 9.1			



(Figure 4) the impact of the leaves powder in the germination of durum wheat grains Cham 5.

3.1.2. The impact of the legs powder:

Table 2 and Figure 5 shows that the legs for powder through the full process of maturation inhibition impact was significant for germination of durum wheat grains Cham 5 compared with the blank when the concentration of 20 g / kg (in the first week after planting only). Where the percentage of the germination when the concentration of 53% in the first week after planting, then this figure had risen to 93 and 94% in the second and third week consecutively. This means that wheat grain germination able to follow up with the increase in the average time for germination 15.20 days, compared with 10.55 on the blank. In addition, the impact was limited concentrations 10.15 g / kg on a clear increase in the average time for germination 14.12, 14.25 days consecutively, while giving emphasis 5 g / kg slight increase for this time 10.59 days compared with the blank. The differences were not significant in influencing the germination of durum wheat grains Cham 5 between the concentrations of 5, 10, 15g/kg compared with each other and with the blank.

Table 2-The impact of legs powder in the germination of wheat grain

Concentrations	The average number of germ grain	The average percentage of germ % after 21 days	The average duration of germination / day
blank	9.8	98	10.55
5 g / kg	9.8	98	10.59
10 g / kg	9.8	98	14.12
15 g / kg	9.8	98	14.25
20 g / kg	9.4	94	15.20
L.S.D = 11.20 CV% = 8.6			

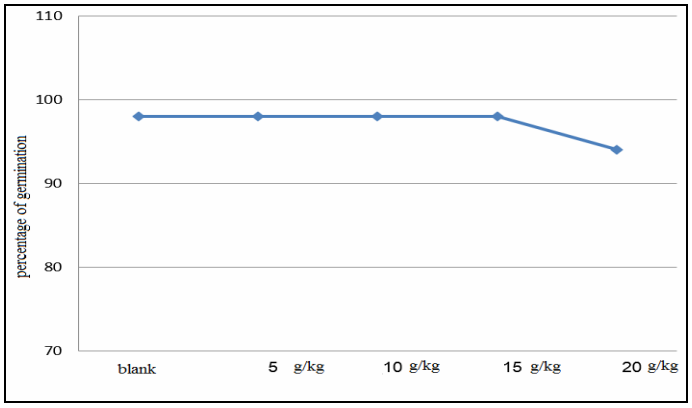


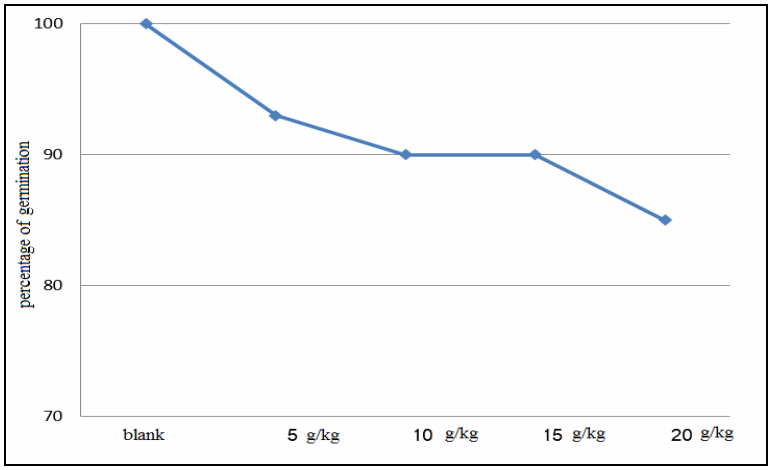
Fig. 5 the impact of legs powder in the germination of durum wheat grains (Cham 5)

3.1.3. The impact of roots powder:

Table 3 is shown in Figure 6 that the powdered roots of wild eggplant through the process of full maturity influential morally in the germination of durum wheat grains Cham 5 compared with the blank at concentrations of 15 g / kg (in the first week after planting only) 0.20 g / kg (from the first week after planting until the third). Where the percentage of germination at these concentrations 85.80% on the sequence in the first week after planting. Then this ratio rose to 90.85% on the sequence in the second week. This means that wheat grain germination able to follow up with the increase in the average time for germination of grain 10.60, 10.61 days for both concentrations on the sequence comparison with the blank 7 days. Moreover, limited the impact of the focus 10 g / kg on increased time for Central germination of wheat grain 10.54 that the differences were not significant in influencing the germination of durum wheat grains Cham 5 concentrations between 15.20 g / kg. The differences were not significant in influencing concentrations between 5.10 g / kg compared with each other and with the blank.

Table 3-The impact of powder roots in the germination of wheat grain

Concentrations	The average number of germ grain	The average percentage of germ % after 21 days	The average duration of germination / day
blank	10	100	7.00
5 g / kg	9.3	93	7.00
10 g / kg	9.0	90	10.54
15 g / kg	9.0	90	10.60
20 g / kg	8.5	85	10.61
L.S.D = 14.81	CV% = 11.6		



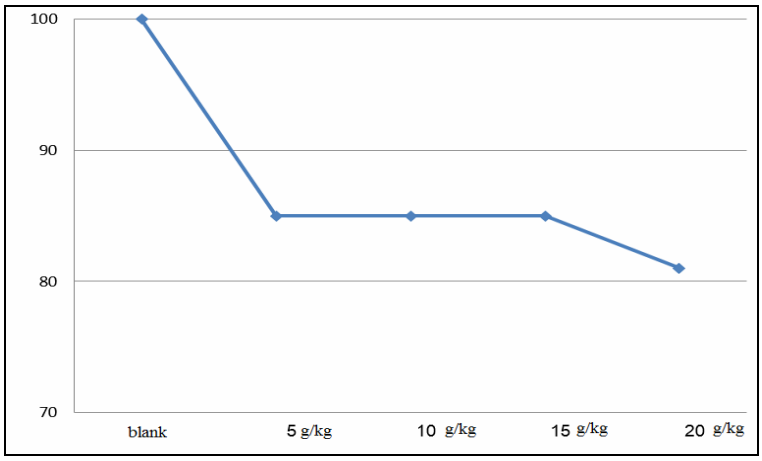
(Figure 6) The impact of powdered roots in the germination of durum wheat Cham 5

3.1.4. The impact of fruit powder:

Table 4 and Figure 7 influencing inhibitory moral powdered fruit shows through the process of full maturity in the germination of durum wheat grains Cham 5 compared with the blank when the concentration 10 g / kg (in the first week after planting only), and concentrations 15.20 g / kg (from the first week after planting until the third). Where the percentage of the germination at the concentration 10 g / kg 83% in the first week after planting, then this figure rose to 85% in the second week. The percentage of germination at concentrations 15.20 g / kg 78.58% on the sequence in the first week and this figure rose when the concentration of 15 g / kg to 80.83%. Moreover, to 80.81% at the concentration of 20 g / kg in the second and third weeks consecutively. This means that wheat was able to follow germination with increasing time of the middle germination 10.54, 14.15, 14.74 days at three concentrations mentioned on the sequence comparison with the blank 7 outweigh concentration of 20 g / kg in a significant inhibitory impact on germination of wheat grain harsh Cham 5 on concentrations 10.15 g / kg in the first week after planting, and the differences were not significant in influencing the percentage of germination concentrations between 10.15 g / kg.

Table 4-The impact of powder fruits in the germination of wheat grain

Concentrations	The average number of germ grain	The average percentage of germ % after 21 days	The average duration of germination / day
blank	10	100	7.00
5 g / kg	8.5	85	7.00
10 g / kg	8.5	85	10.54
15 g / kg	8.5	85	14.15
20 g / kg	8.1	81	14.74
L.S.D = 16.11	CV% = 13.5		



(Figure 7) The impact of powdered fruits in the germination of durum wheat Cham 5

The results showed that the fruit powder has a significant impact on germination largest durum wheat grains Cham 5 compared with both the stock legs and roots powder when the concentration of 20 g / kg (in the first week after planting). The differences were not significant in impact between each of the securities legs and roots.

3.2. Impact the growth of wheat members considered.

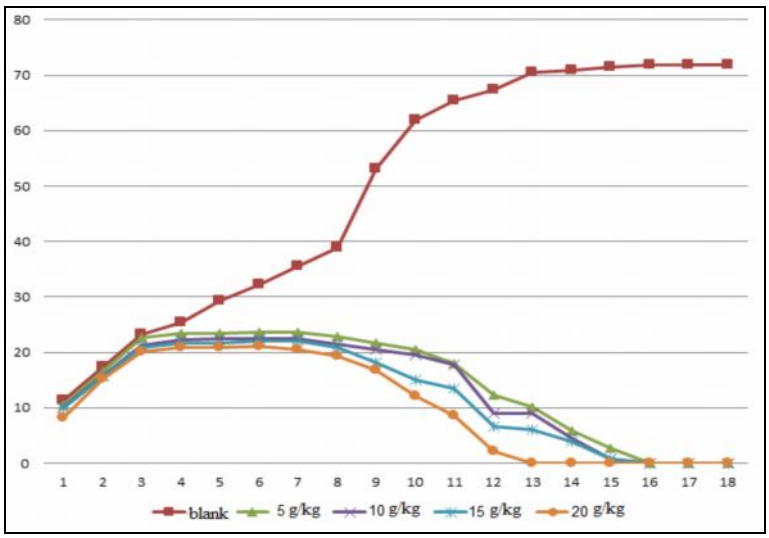
3.2.1. The impact of the securities powder in the growth of wheat gestures and height of its members.

Show of the negative impact of moral powder papers during the process of full maturity in the growth of plants and hard wheat cham 5 compared with the blank at all testes concentrations(The beginning of the fourth week of the fifth week after the cultivation grand concentration5,10,15g kg)Represent this impact the emergence of symptoms of clear toxicity (Toxic symptoms of severe drought and bombards capital securities with brown color wrap around the securities weak legs are stunted plant among the appearance of some salable small in size and devoid of grain)

Gradually the plant with the weakness of the growth in the emerging impact of moral clearer starting from the eighth week at concentrations 5,10,15 and seventh week atconcentration20 where the stopping the growth of wheat plants and consequently happened the difference in the average length of leg wheat plants because of drought and bombards securities as result of the gradual death of some plants and associated with symptoms of end toxic experience the death of all the plants of wheat in the third week of the sixth week after agriculture at 20 and 5,10,15 in table 5 and fig 8 table 5 shows the absence of moral differences in influencing the enactment of all concentrations tested in the eight weeks first we have more than concentration 20 on 5,10 (starting from ninth week until fourth week) on concentration15(on eleventh week, twelfth and thirteenth 15 on concentration5 (starting from tenth week until thirteenth week) and 10(in tenth and eleventh after cultivation) The distinctions moral in fluency among concentrations 5,10 differences have become moral impact among all concentrations tested starting from the fifth week until the end of the experiment.

Table (5) The impact of the securities powder in the length legs of wheat(cm)

20 g/kg	15 g/kg	10 g/kg	5g/kg	The blank	concentration / time/week
8.13	9.95	10.17	10.54	11.29	1
15.21	15.64	15.78	16.66	17.31	2
20.20	20.82	21.22	22.72	23.22	3
20.96	21.59	22.33	23.36	25.37	4
20.96	21.59	22.36	23.49	29.29	5
12.14	22.00	22.36	23.55	32.31	6
20.45	22.10	22.42	23.64	35.63	7
19.40	20.80	22.42	22.81	38.93	8
16.87	18.13	20.50	21.73	53.10	9
12.13	15.05	19.46	20.45	61.99	10
8.50	13.50	17.79	18.06	65.33	11
2.21	6.54	8.96	12.27	67.27	12
0	5.96	8.96	10.10	70.55	13
0	3.85	4.41	5.84	70.88	14
0	0.69	0.80	2.64	71.53	15
0	0	0	0	71.88	16
0	0	0	0	71.88	17
0	0	0	0	71.88	18
L.S.D = 4.234		CV% = 15.9			
Each number in the table represents an average of four duplicates,All bis represents the average length of ten members of wheat,The number0 indicates the death of all members of wheat					



Fig(8)The impact of the securities powder in the growth of the members of the hard wheat cham (5)

3.2.2.The impact of legs powder in the growth of wheat gestures:

Show of the negative impact of moral powder papers during the process of full maturity in the growth of plants and hard wheat cham 5 compared with the blank at all testes concentrations(The beginning of the fourth week of the fifth week after the cultivation grand concentration5,10,15g kg)Represent this impact the emergence of symptoms of clear toxicity (Toxic symptoms of severe drought and bombards capital securities

with brown color wrap around the securities weak legs are stunted plant among the appearance of some salable small in size and devoid of grain)

Gradually the plant with the weakness of the growth in the emerging impact of moral clearer starting from the eighth week at concentrations 5,10,15 and seventh week atconcentration20 where the stopping the growth of wheat plants and consequently happened the difference in the average length of leg wheat plants because of drought and bombards securities as a result of the gradual death of some plants and associated with symptoms of end toxic experience the death of all the plants of wheat in the third week of the sixth week after agriculture at 20 and 5,10,15 in table 5 and fig 8 table 5 shows the absence of moral differences in influencing the enactment of all concentrations tested in the eight weeks first we have more than concentration 20 on 5,10 (starting from ninth week until fourth week) on concentration15(on eleventh week, twelfth and thirteenth 15 on concentration5 (starting from tenth week until thirteenth week) and 10(in tenth and eleventh after cultivation) The distinctions moral in fluency among concentrations 5,10 differences have become moral impact among all concentrations tested starting from the fifth week until the end of the experiment.

Table 6- The impact of the securities powder in the length legs of wheat (cm)

20 g/kg	**15 g/kg**	**10 g/kg**	**5g/kg**	**The blank**	**concentration / time/week**
2.92	6.32	7.59	7.71	10.19	1
10.00	13.92	14.32	14.36	15.93	2
15.05	19.00	19.88	20.89	21.20	3
19.05	.6220	21.45	22.68	24.38	4
20.59	20.84	21.71	22.91	27.33	5
20.79	21.15	22.01	23.24	30.77	6
21.24	21.60	22.55	23.72	33.68	7
21.67	21.74	23.27	23.95	37.79	8
20.51	22.02	23.27	23.95	51.37	9
20.39	21.62	21.90	23.95	62.63	10
18.96	21.24	21.86	21.94	65.63	11
14.12	19.94	20.21	21.79	68.30	12
13.57	19.63	20.16	21.79	71.05	13
8.72	17.27	20.16	21.40	72.00	14
5.55	17.13	20.16	21.25	72.01	15
4.85	14.82	19.27	21.15	73.40	16
2.89	14.34	18.70	20.22	73.40	17
2.89	13.55	15.80	18.89	73.40	18
L.S.D = 5.314		CV% = 15.8			
Each nmber in the table represents an average of four duplicates,Allbis represents the average length of ten members of wheat,The number0 indicates the death of all members of wheat					

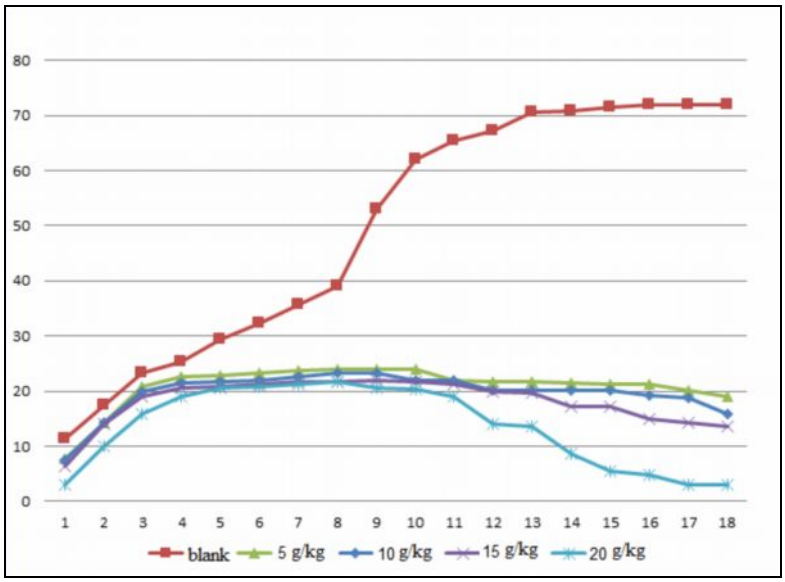


Fig. (9)The impact of the securities powder in the growth of the members of the hard wheat cham (5)

3.2.3.The impact of the deeply rooted powder in the growth of wheat gestures

Show of the negative impactt of moral powder papers during the process of full maturity in the growth of plants and hard wheat cham 5 compared with the blank at all testes concentrations(The beginning of the fourth week of the fifth week after the cultivation kgand concentration5,10,15g kg)Represent this impact the emergence of symptoms of clear toxicity (Toxic symptoms of sever drought and bombards capital securities with brown color wrap around the securities weak legs arestunted plant among the appearance of some sanablel small in size and devoid of qrain)

Gradually the plant with the weakness of the growth in the emerging impact of moral clearer starting from the eighth week at concentrations 5,10,15 and seventh week atconcentration20 where the stopping the growth of wheat plants and consequently happened the difference in the average length of leg wheat plants because of drought and bombards securities as aresult of the gradual death of some plants and associated with symptoms of end toxic experience the death of all the plants of wheat in the third week of the sixth week after agriculture at 20 and 5,10,15 in table 5 and fig 8 table 5 shows the absence of moral differences in influencing the enactment of all concentrations tested in the eight weeks first we have more thanconcentration 20 on 5,10 (starting from ninth week until fourth week) on concentration15(on eleventh week, twelfth and thirteenth 15 on concentration5 (starting from tenth week until thirteenth week) and 10(in tenth and eleventh after cultivation) The distinctions moral in fluence among concentrations 5,10 differences have become moral impact among all concentrations tested starting from the fifth week until the end of the experiment.

Table (7) The impact of the securities powder in the length legs of wheat(cm)

20 g/kg	15 g/kg	10 g/kg	5g/kg	The blank	concentration / time/week
9.64	9.83	10.28	11.23	11.29	1
13.57	13.71	14.64	16.66	17.31	2
17.01	17.16	19.10	22.89	23.22	3
17.43	17.49	19.53	23.19	25.37	4
17.59	17.63	19.55	23.30	29.29	5
17.66	17.94	19.55	23.41	32.31	6
17.72	18.07	18.52	23.54	35.63	7
15.31	16.75	17.50	23.34	38.93	8
14.10	15.10	16.44	22.58	53.10	9
11.64	13.83	16.20	21.71	61.99	10
9.59	11.77	14.90	19.83	65.33	11
6.23	10.53	12.77	16.04	67.27	12
6.21	9.89	10.55	12.10	70.55	13
5.46	7.24	8.46	8.54	70.88	14
1.79	2.30	2.92	4.34	71.53	15
0	0	2.37	2.43	71.88	16
0	0	0.57	1.20	71.88	17
0	0	0	0	71.88	18
L.S.D = 4.416 CV% = 16.8					
Each number in the table represents an average of four duplicates,All bis represents the average length of ten members of wheat,The number0 indicates the death of all members of wheat					

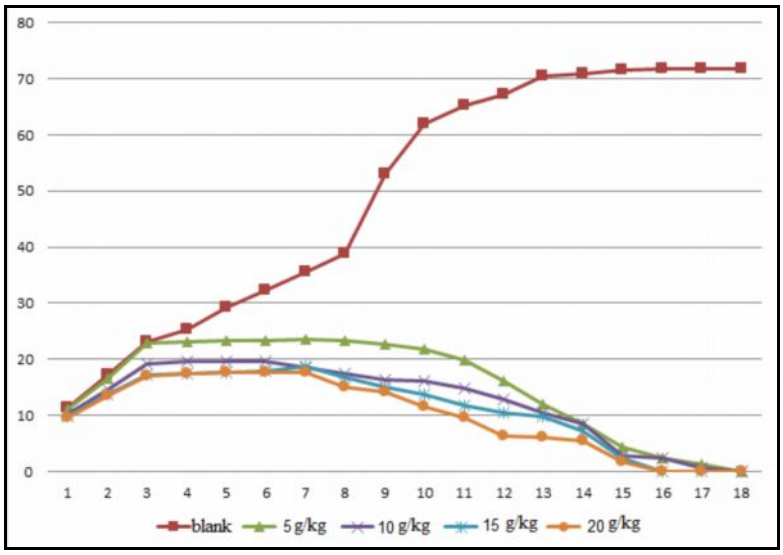


Fig. (10)The impact of the deeply rooted powder in the growth of plants and hard wheat

3.2.4.The impact of fruits powder in the growth of wheat gestures

Show of the negative impactt of moral powder papers during the process of full maturity in the growth of plants and hard wheat cham 5 compared with the blank at all testes concentrations(The beginning of the fourth week of the fifth week after the cultivation kgand concentration5,10,15g kg)Represent this impact the emergence of symptoms of clear toxicity (Toxic symptoms of sever drought and bombards capital securities with brown color wrap around the securities weak legs arestunted plant among the appearance of some sanablel small in size and devoid of qrain)

Gradually the plant with the weakness of the growth in the emerging impact of moral clearer starting from the eighth week at concentrations 5,10,15 and seventh week atconcentration20 where the stopping the growth of wheat plants and consequently happened the difference in the average length of leg wheat plants because of drought and bombards securities as aresult of the gradual death of some plants and associated with symptoms of end toxic experience the death of all the plants of wheat in the third week of the sixth week after agriculture at 20 and 5,10,15 in table 5 and fig 8 table 5 shows the absence of moral differences in influencing the enactment of all concentrations tested in the eight weeks first we have more thanconcentration 20 on 5,10 (starting from nineth week until fourth week) on concentration15(on eleventh week, twelfth and thirteenth 15 on concentration5 (starting from tenth week until thirteenth week) and 10(in tenth and eleventh after cultivation) The distinctions moral in fluency among concentrations 5,10 differences have become moral impact among all concentrations tested starting from the fifth week until the end of the experiment.

Table (8) the impact of the securities powder in the length legs of wheat(cm)

20 g/kg	**15 g/kg**	**10 g/kg**	**5g/kg**	**The blank**	**concentration / time/week**
60.2	10.54	10.91	11.23	11.29	1
13.14	14.60	14.92	15.98	17.31	2
16.06	16.55	16.56	17.81	23.22	3
16.81	16.94	18.11	18.50	25.37	4
14.56	17.73	17.27	18.27	29.29	5
12.48	13.11	13.54	17.27	32.31	6
10.26	10.54	12.18	15.59	35.63	7
3.85	4.22	4.30	10.03	38.93	8
0	0	0	0	53.10	9
0	0	0	0	61.99	10
0	0	0	0	65.33	11
0	0	0	0	67.27	12
0	0	0	0	70.55	13
0	0	0	0	70.88	14
0	0	0	0	71.53	15
0	0	0	0	71.88	16
0	0	0	0	71.88	17
0	0	0	0	71.88	18
L.S.D = 3.398 CV% = 16.7					
Each number in the table represents an average of four duplicates, All bis represents the average length of ten members of wheat, The number0 indicates the death of all members of wheat					

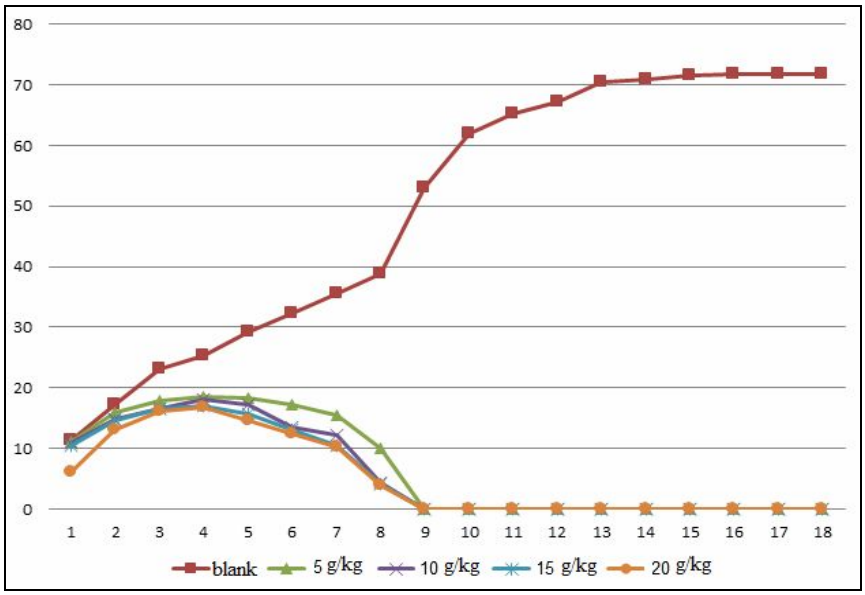


Fig (11)The impact of fruits powder in the growth of plants and hard wheat cham(5)

The comparison between the impact of the stock market and roots powder in wheat seedling growth confirms that there Tthbyttiya impact of growth increases proportional to the increase in the amount of powder added whatever vegetable member.

The impact of the fruits, leaves, roots powder even worse in terms of speed and size of the market powder due to the high concentration of toxins in the plant organs where these toxins affect the absorption of nutrients by the plant by modifying a porous membrane roots, thus inhibiting the absorption process[9,22].

The graphs of the effect of the inhibitory powder members of the wild eggplant-shaped one year despite the differences in intensity inhibitory and speed, focus and this indicates that the plant wild eggplant seriously affected the cultivated plants, particularly wheat, which calls for uprooting the plant at full parts so they do not remain in the soil something out of it.

Results agree completely with the findings of the researchers[13,11]. about the inhibitory plant wild eggplant influence in the growth of the roots of cucumber ass Ecballium elaterium and delay the growth of some other plant species. They also agreed the results with what was said[26] about the inhibitory type S. forskalii influence germination grains and root growth and Ahtaouat wheat, and Del him[12]. about the negative impact of the extracts type S. lycocarpum in growth seedlings sesame and increase the time for Central germination seeds[4,27], as well as pointed out by[28] on the inhibitory moral type Solanummauritianum influence germination nut seeds, as well as the agreed results of this research with the results[17,25], about the negative impact of moral various types of weeds in wheat seed germination and seedling growth.

References:

1. Tai, Salah Mohammed Saeed al-Rawi, EmanJassim Mohammed Reza. 2003. Alolilubathi effect of water extracts container soils on the remnants of wild radish, wild oats in the germination and growth of wheat varieties. Eighth Arab Congress of Plant Protection, Libya, October 12-16.
2. Tabash, and Moroccan Samir, morning. 2003. Alolilubathi effect of some weeds. Eighth Arab Congress of Plant Protection, Libya, October 12-16.
3. Tariq Ali Deeb and Haherla unfaithful. 2004. The effect of the phenomenon of secretion inhibitor (effects Alolalobacah) extracts barley germination and growth of seedlings varieties of durum wheat. Basil al-Assad Journal of Engineering Science, No. 20, pp. 169-185.
4. Architecture, Anwar and Kosgei, Mohammed Tawfiq. 2002 type plants properties Sorghum halepense L. competing species cultivated plants. Damascus University of Agricultural Sciences magazine. Volume 18, Issue (1) 0.83 to 94 pages.
5. Nader, Sohail and others,. 2012. Plant Ecology (theoretical part) Damascus University Press, Faculty of Science 0.333 pages.

6. Abbassi, F., 2005. Allelopathic Impacts of Saffron Corms on Germination of Several Important Crops. Fourth World Congress on Allelopathy. 21-26 August. 2005. Charles Sturt University WaggaWagga, NSW, Australia.
7. Al mouemar, A., 2006. Ĺetatactuelle de Ì extension de (Solanum elaeagnifolium Cav.) enSyrie. Workshop Solanum-ssousa-Tunsia.
8. Alvarez, M. A., J. R. Talou, N. B. Paniego and A. M. Giulietti., 1994. Solasodine Production in Transformed Organ Cultures (Roots and Shoots) of Solanum elaeagnifolium Cav. BiotechnologyLetters. 16 (4): 393-396. {a} Biotecnologia y [9] Microbiol. Industrial, Fac. De Farmacia y Bioquimica, Univ. de Buenos Aires, Junin 956, 1113 Buenos Aires, Argentina.
9. Assali, F., 1995. EffetAllelopathique Des Extraits de la Luzerne (Medicagosativa L.) sur la Germination de la MorelleJaune (SolanumelaeagnifoliumCav.) Mém. Troisieme Cycle Agron., Opt. Prpduction des Végétaux. Inst. Agron, Vét. Hassan II, Rabat.
10. Bell, C. E., I. G. EleftheRohorinos and E. Koutoula-Syka., 1990. Biology and Control of Silverleaf Nightshade (Solanumelaeagnifolium Cav.). Zizaniologia. Vol.2 (3): 135-143.
11. Caldas Oliveira, S. C., A. G. Ferreira and F. Borghetti., 2004. EfeitoAlelopático de Folhas de Solanumlycocarpum A. St., Hill. (Solanaceae) na Germinação Crescimento de Sesamum indicum L. (Pedaliaceae) sob Diferentes Temperaturas. Acta Bot. Bras. Vol.18 (3): 401-406.
12. Curvetto, N. R., T. Montant, E. E. Delmastro and O. A. Fernandez.,1976. Impactos Alelopatricos de Saponinasdel Fruto de Solanum elaeagnifoliumCav. Sobre la Germination y Crecimiento de OtraEspecies. III-Congreso Asociacion Latino-Amercana de Malezas y VIII Reunion Argentina de Malizas y su Control, Argentina, Vol.1: 147-152.
13. Dagnelie, P., 1981. Principesd'Expérimentation. Pesses Agronomiques Gembloux. P: 182.
14. Delabays, N., G. Mermillod, J. P. De Joffrey and C. Bohren., 2004. Demonstration, in Cultivated Fields, of the Reality of The Phenomenon of Allelopathy. XII Colloque International sur la Biologie des MauvaisesHerbes. PP: 97-104.
15. Hanna, A. G. And M. H. A. Elgamal., 1996. Solanelagnin, a Novel Glycoalkaloid from Solanum elaeagnifolium Cav. Fitoterapia 67 (3) 223-226. {a} Natural Products Dep., Natl. Cent., Dokki, Cairo, India.
16. Horvath, J., G. Kazinczi, I. Béres and A. Takacs., 2005. The Impact of Cirsiumarvense Plant Residues on The Germination of Some Crops. Fourth World Congress on Allelopathy. 21-26 August 2005. Charles Sturt University WaggaWagga, NSW, Australia.
17. Inderjit J. and S. O. Duke., 2003. Ecophysiological Aspects of Allelopathy. Planta. 217: 529-539.
18. Khan, M. A. and K. B. Marwat., 2006. Allelopathy: Problems and Opportunities-Areview. Ninth Arab Congress of Plant Protection, Damascus, Syria, 19-23 November, 2006.
19. Khanas, M., 2005. Etude Botanique, Écologiqueet Physiologique de la MorelleJaune (Solanum elaeagnifolium Cav.) et la Stratégie de saLutteDans le Cotonnier et les Zones Non Cultivées en Syrie. Thesis, Universié de Techrine 144.
20. Koger, C. H., and C. T. Bryson., 2004. Impact of Cogongrass (Imperata Cylindrica) Extracts on Germination and Seedling Growth of Selected Grass and Broadleaf Species. Weed Technology. Vol.18 (2): 236-242.
21. Nutan, M., and J. Asha., 2005. Plantlet Regeneeration Enhances Solasodine Productivity in Hairy Root Cultures of Solanum khasianum CLARKE. In Vitro Cellular and Development Biology-Plant. Vol.41(3): 291-295.
22. Osman SF. Glycoalkaloids of the Solanaceae.The Resource Potential in Phytochemistry, 1981;14:75-96.
23. Steel, R. G. and J. H. Torrie., 1984. Principles and Procedures of Statistics. Mc Grow-Hill Book Co., Inc., New York. P. 200.
24. Sulieman, R., A. Al-Mouemar and G. Ibrahim., 2010. The Impact of Mesquite Plant Extracts on Germination and Growth of Wheat, Wild Barley and Wild Oat Seedlings Under Laboratory Conditions. Egypt. J. of Appl. Sci. (In Press).
25. Tajuddin, Z., S. S. Shaukat and I. A. Siddiqui., 2002. Allelopathic Potential of Solanum forskalii Dunal. A Tropical Ruderal. Pakistan Journal of Biological Sciences. Vol.5 (8): 866-868.
26. Truk, M. A. and A. M. Tawaha., 2002. Inhibitory Impacts of Aqueous Extracts from Black Mustard (Brassica nigra L.) on Germination and Growth of Wheat. Pakistan Journal. Biological Science. Vol.5 (3): 278-280.
27. Vandenbosch, E., B. G. Ward and B. D. Clarkson., 2004. Woolly Nightshade (Solanum mauritianum) and Its Allelopathic Impacts on New Zealand Native HebeStricta Seed Germination. 57 th Conference Proceedings (2004) of The New Zealand Plant Protection Society Incorporated. PP: 98-101.
28. (EPPO) European and Mediterranean Plant Protection Organisation Reporting Service Call for information on Solanum elaeagnifolium geographical distribution., 2006.

*****