

Table S1. Insect pest diversity in pigeon pea from 2016 to 2018 in eastern region of India

Sl. No	Family	Scientific name	Crop stages infested	Plant parts infested	Status		Relative abundance	
					2016-17	2017-18	2016-17	2017-18
Order: Lepidoptera								
1.	Arctiidae	<i>Spilarctia obliqua</i> (Walker)	Vegetative	Leaves	Minor	Minor	389	550
2.	Crambidae	<i>Omiodes indicata</i> (Fabricius)	Vegetative	Leaves	Minor	Minor	8	11
3.	Notodontidae	<i>Neostauropus alternus</i> (Walker)	Vegetative	Leaves	Negligible	Negligible	0	7
4.	Geometridae	<i>Hyposidra</i> sp.	Vegetative	Leaves	Negligible	Negligible	2	5
5.	Geometridae	<i>Pingasa</i> sp	Vegetative	Leaves	Negligible	Negligible	1	3
6.	Geometridae	<i>Spaniocentra</i> sp.	Vegetative	Leaves	Negligible	Negligible	2	0
7.	Geometridae	<i>ECTropis</i> sp.	Vegetative	Leaves	Negligible	Negligible	3	2
8.	Lymantriidae	<i>Orgyia postica</i> (Walker)	Vegetative-flowering	Leaves and flowers	Minor	Minor	4	5
9.	Lymantriidae	<i>Somena scintillans</i> (Walker)	Vegetative-flowering	Leaves and flowers	Minor	Minor	10	15
11.	Lymantriidae	<i>Euproctis fraterna</i> (Moore)	Vegetative-flowering	Leaves and flowers	Minor	Minor	36	0
12.	Lymantriidae	<i>Artaxa guttata</i> (Walker)	Vegetative-flowering	Leaves and flowers	Minor	Minor	3	0
13.	Lymantriidae	<i>Dasychira mendosa</i> (Hubner)	Vegetative-flowering	Leaves and flowers	Minor	Minor	2	5
13.	Lymantriidae	<i>Calliteara strigata</i> Moore (= <i>Dasychira strigata</i> Moore)	Vegetative-flowering	Leaves and flowers	Minor	Minor	1	0
14.	Noctuidae	<i>Mocis undata</i> (Fabricius)	Flowering	Leaves, buds and flowers	Negligible	Negligible	3	7
15.	Noctuidae	<i>Chrysodeixis eriosoma</i> (Doubleday)	Flowering	Leaves, buds and flowers	Negligible	Negligible	0	3
16.	Crambidae	<i>Maruca vitrata</i> (Fabricius)	Flowering-pod filling	Leaves, buds, flowers, pods and seeds within the pod	Major	Major	11	17
17.	Pterophoridae	<i>Exelastis atomosa</i> (Walsingham)	Flowering-pod filling Buds,	flowers, pods and seeds	Major	Major	21	27
18.	Pyralidae	<i>Etiella zinckenella</i> (Treitschke)	Pod filling	Seeds within the pods	Minor	Minor	3	2
19.	Noctuidae	<i>Helicoverpa armigera</i> (Hübner)	Flowering-pod filling	Leaves, buds, flowers, and seed	Major	Major	7	11
20.	Lycaenidae	<i>Lampides boeticus</i> (Linnaeus)	Flowering-pod	Flower buds and seeds	Minor	Minor	5	7

			filling					
21.	Lycaenidae	<i>Euchrysops cnejus</i> (Fabricius)	Flowering-pod filling	Flower buds and seeds	Minor	Minor	3	2
22.	Noctuidae	<i>Eublemma versicolor</i> (= <i>Autoba versicolor</i> Walker)	Flowering-pod filling	Flowers and leaves	Negligible	Negligible	1	0
23.	Tortricidae	<i>Anisogona hilaomorpha</i> (Turner)	Flowering-pod filling	Flowers and leaves	Minor	Minor	2	1
Order: Coleoptera								
24.	Curculionidae	<i>Mylocerus dorsatus</i> (Fabricius)	Vegetative	Leaflets	Minor	Minor	5	3
25.	Buprestidae	<i>Sphenoptera perroteti</i> Guerin- Meneville	Vegetative	Leaflets	Negligible	Negligible	1	0
26.	Scarabaeidae	<i>Oxycetonia versicolor</i> (Fabricius)	Flowering	Buds and flowers	Negligible	Negligible	6	9
27.	Meloidae	<i>Mylabris pustulata</i> (Thunberg)	Flowering	Buds and flowers	Minor	Minor	5	4
28.	Bruchidae	<i>Callosobruchus chinensis</i> (Linnaeus)	Pod filling-maturity	Seed	Negligible	Negligible	2	3
29.	Bruchidae	<i>C. maculatus</i> (Fabricius)	Pod filling-maturity	Seed	Negligible	Negligible	7	11
30.	Curculionidae	<i>Ceuthorhynchus asperulus</i> Faust	Flowering	Flower buds	Minor	Minor	39	51
Order: Hemiptera								
31.	Aleyrodidae	<i>Bemisia tabaci</i> (Gennadius)	Vegetative	Leaflets	Minor	Minor	27	123
32.	Cercopidae	Unidentified	Vegetative	Leafles	Negligible	Negligible	7	11
33.	Pentatomidae	<i>Piezodorus hybneri</i> (Gmelin)	Vegetative	Tender shoot and leaves	Negligible	Negligible	6	13
34.	Pentatomidae	<i>Plautia crossota</i> (Dallas)	Vegetative	Tender shoot and leaves	Negligible	Negligible	3	4
35.	Scutelleridae	<i>Chrysocoris stoll</i> (Wolff)	Vegetative	Leaflet	Negligible	Negligible	0	5
36.	Pentatomidae	<i>Dolichoris Indicus</i> (Stal)	Vegetative- flowering	Tender shoot, leaves and buds	Negligible	Negligible	5	8
37.	Pentatomidae	<i>Menida formosa</i> (Westwood)	Vegetative- flowering	Leaves and buds	Negligible	Negligible	1	5
38.	Pentatomidae	<i>Menida versicolor</i> (Gmelin)	Vegetative- flowering	Leaves and buds	Negligible	Negligible	0	2
39.	Pentatomidae	<i>Halyomorpha picus</i> (Fabricius)	Vegetative- flowering	Leaves and buds	Negligible	Negligible	1	3
40.	Aphididae	<i>Aphis craccivora</i> (Koch)	Vegetative-pod maturity	Pods, Tender shoot, leaves, buds, flowers	Major	Major	500	756
41.	Aphididae	<i>Myzus persicae</i> (Sulzer)	Vegetative-pod maturity	Tender shoot, leaves, buds, flower and pods	Minor	Minor	571	694

42.	Cicadellidae	<i>Empoasca kerri</i> (Pruthi)	Vegetative-pod maturity	Leaves	Major	Major	17	23
43.	Plataspididae	<i>Coptosoma cribreria</i> (Fabricius)	Vegetative-pod maturity	Tender shoot and branches	Minor	Minor	53	69
44.	Plataspididae	<i>Coptosoma fimbriatum</i> (Distant)	Vegetative-pod maturity	Tender shoot and branches	Minor	Minor	0	5
45.	Plataspididae.	<i>Coptosoma</i> sp	Vegetative-pod maturity	Tender shoot and branches	Minor	Minor	2	7
46.	Ricaniidae	<i>Ricania spECulum</i> (Walker)	Vegetative-pod maturity	Stem, branches and leaves	Negligible	Negligible	1	5
47.	Flatidae	<i>Lawana conspersa</i> (Walker)	Vegetative-pod maturity	Stem, branches and leaves	Minor	Minor	0	2
48.	Flatidae	<i>Flata ocellata</i> (Fabricius)	Vegetative-pod maturity	Stem, branches and leaves	Negligible	Negligible	1	3
49.	Coccidae	<i>Drepanococcus cajani</i> (Maskell)	Vegetative-pod maturity	Stem and shoot	Minor	Minor	275	493
50.	Pseudococcidae	<i>Coccidohystrix insolita</i> (Green)	Vegetative-pod maturity	Stem, shoot and leaves	Minor	Minor	1247	1589
51.	Pseudococcidae	<i>Ferrisia virgata</i> (Cockerell)	Vegetative-pod maturity	Stem, shoot and leaves	Minor	Minor	58	43
52.	Pseudococcidae	<i>Phenacoccus solenopsis</i> (Tinsley)	Vegetative-pod maturity	Stem, shoot and leaves	Minor	Minor	32	53
53.	Membracidae	<i>Leptocentrus taurus</i> (Fabricius)	Vegetative-maturity	Green stems and branches	Minor	Minor	327	461
54.	Miridae	<i>Poppiocapsidea biseratense</i> (Distant)	Flowering	Flower buds	Negligible	Negligible	13	10
55.	Miridae	<i>Eurystylus</i> sp.	Flowering	Flower buds	Negligible	Negligible	0	2
56.	Pentatomidae	<i>Nezara viridula</i> (Linnaeus)	Pod filling	Seeds through pod walls	Negligible	Negligible	5	7
57.	Coreidae	<i>Riptrotus pedestris</i> (Fabricius)	Pod filling	Green pods	Minor	Minor	25	17
58.	Coreidae	<i>Riptrotus linearis</i> (F.)	Pod filling	Green pods	Minor	Minor	5	9
59.	Coreidae	<i>Cletus punctiger</i> (Dallas)	Flowering-pod filling	Tender shoot, buds and pods	Negligible	Negligible	3	5
60.	Coreidae	<i>Clavigralla gibbosa</i> (Spinola)	Pod filling	Green pods	Minor	Minor	57	71
61.	Coreidae	<i>Anoplocnemis phasiana</i> (Fabricious)	Pod filling	Green pods	Minor	Minor	0	7
Order: Diptera								
62.	Agromyzidae	<i>Melanagromyza obtusa</i>	Pod filling	Seed	Major	Major	457	621

		(Malloch)						
Order: Thysanoptera								
63.	Thripidae	<i>Megalurothrips</i> sp.	Flowering	Buds and flowers	Major	Major	52	67
Order: Isoptera								
64.	Termitidae	Unidentified	Seedling- pod maturity	Basal stem and root	Major	Major	47	56
Order: Hymenoptera								
65.	Megachilidae	<i>Megachile</i> sp.	. Vegetative	Leaflets	Negligible	Negligible	2	3
Total number of species							57	59
Total number of individuals							4382	5797

Table S2. Regression analysis between various weather parameters and incidence of pod borers of pigeon pea

Name of the pest	Year	Regression equation	R ² value
<i>Helicoverpa armigera</i>	2016-17	$Y = -4.694 + 0.165 \text{Max T} - 0.119 \text{Min T} + 0.061 \text{Max RH} - 0.030 \text{Min RH} - 0.006 \text{RF}$	0.580
	2017-18	$Y = -0.691 + 0.123 \text{Max T} - 0.048 \text{Min T} + 0.029 \text{Max RH} - 0.056 \text{Min RH} + 0.273 \text{RF}$	0.542
<i>Maruca testulalis</i>	2016-17	$Y = -53.504 - 0.402 \text{Max T} + 0.036 \text{Min T} + 0.620 \text{Max RH} + 0.195 \text{Min RH} - 0.385 \text{RF}$	0.745
	2017-18	$Y = -27.54 - 1.338 \text{Max T} + 0.500 \text{Min T} + 0.757 \text{Max RH} - 0.036 \text{Min RH} - 15.63 \text{RF}$	0.826
<i>Melanagromyza obtusa</i>	2016-17	$Y = 171.30 + 9.47 \text{Max T} - 0.752 \text{Min T} + 0.230 \text{Max RH} - 4.58 \text{Min RH} - 0.449 \text{RF}$	0.798
	2017-18	$Y = -726.87 + 25.55 \text{Max T} - 8.844 \text{Min T} + 7.461 \text{Max RH} - 7.072 \text{Min RH} - 158.146 \text{RF}$	0.758
<i>Exelastis atomosa</i>	2016-17	$Y = 13.064 + 0.139 \text{Max T} - 0.311 \text{Min T} + 0.060 \text{Max RH} - 0.189 \text{Min RH} + 0.014 \text{RF}$	0.376
	2017-18	$Y = -251.706 + 8.112 \text{Max T} - 2.798 \text{Min T} + 2.749 \text{Max RH} - 2.388 \text{Min RH} - 47.6 \text{RF}$	0.740
<i>Apion clavipes</i>	2016-17	$Y = 142.43 - 0.750 \text{Max T} - 2.621 \text{Min T} - 0.455 \text{Max RH} - 0.581 \text{Min RH} - 0.567 \text{RF}$	0.646
	2017-18	$Y = -335.29 + 10.77 \text{Max T} - 3.714 \text{Min T} + 3.654 \text{Max RH} - 3.164 \text{Min RH} + 63.36 \text{RF}$	0.741

NOTE: Max T-Maximum temperature, Min T- Minimum temperature, Max RH-Maximum Relative humidity, Min RH-Minimum relative humidity, RF-Rainfall