

Table S1. Statistical table of types and numbers of epigeic arthropods.

Epigeic arthropods type				Code	Group	Number	Dominance
Insecta	Orthoptera	Gryllidae	Teleogryllus emma	G1	Herbivore	1494	+++
Insecta	Orthoptera	Gryllidae	Loxoblemmus doenitzi	G2	Herbivore	3497	+++
Arachnida	Araneae	Opiliones	Phalangodidae	G3	Natural enemy	239	++
Arachnida	Araneae	Agelenidae	Funnel weaver	G4	Natural enemy	132	++
Insecta	Hymenoptera	Formicidae	Camponotus japonicus	G5	Neutral	321	++
Insecta	Hymenoptera	Formicidae	Formica japonica	G6	Neutral	162	++
Insecta	Coleoptera	Carabidae	Dolichopus halensis	G7	Natural enemy	240	++
Insecta	Coleoptera	Carabidae	Amara macronota	G8	Natural enemy	48	+
Insecta	Coleoptera	Carabidae	Harpalus sinicus	G9	Natural enemy	32	+
Insecta	Coleoptera	Carabidae	Amara brevicollis	G10	Natural enemy	1216	+++
Insecta	Coleoptera	Carabidae	Chlaenius micans	G11	Natural enemy	187	++
Insecta	Coleoptera	Carabidae	Isiocarabus fiduciarius Thorns	G12	Natural enemy	4	+
Insecta	Coleoptera	Carabidae	Pheropsophus occipitalis	G13	Natural enemy	24	+
Insecta	Coleoptera	Carabidae	Harpalus griseus	G14	Natural enemy	3	+

Diplopoda	Polydesmida	Brolemann	Prospirobolus joannsi	G15	Herbivore	73	+
Diplopoda	Polydesmida	Paradoxosomatidae	Orthomorpha coarctata	G16	Herbivore	8	+
Insecta	Coleoptera	Hydrophilidae	Hydrophilus acuminatus Motschulsky	G17	Natural enemy	1	+
Insecta	Coleoptera	Carabidae	Chlaenius prostenus	G18	Natural enemy	1	+
Chilopoda	Scolopendridae	Scolopendridae	Scolopendridae	G19	Natural enemy	12	+
Insecta	Coleoptera	Carabidae	Harpalus calceatus	G20	Natural enemy	53	+
Insecta	Coleoptera	Carabidae	Harpalus pallidipennis	G21	Natural enemy	22	+
Arachnida	Theridiidae	Theridiidae	Theridiidae	G22	Herbivore	10	+
Insecta	Coleoptera	Tenebrionidae	Gonocephalum reticulatum Motschulsky	G23	Herbivore	44	+
Insecta	Orthoptera	Acrididae	Atractomorpha sinensis Bolvar	G24	Herbivore	6	+
Crustacea	Isopoda	Oniscidae	Porcellio	G25	Herbivore	9	+
Insecta	Coleoptera	Staphylinidae	Pinophilus punctatissimus	G26	Natural enemy	6	+
Insecta	Rhynchota	Aradidae	flat bug	G27	Herbivore	1	+
Insecta	Orthoptera	Catantopidae	Shirakiacris shirakii	G28	Herbivore	5	+
Insecta	Coleoptera	Chrysomelidae	Monolepta hieroglyphica	G29	Herbivore	30	+

Insecta	Coleoptera	Carabidae	Harpalus rubefactus	G30	Natural enemy	149	++
Insecta	Orthoptera	Acrididae	Haplotropis brunneriana	G31	Herbivore	4	+
Insecta	Orthoptera	Grylloidea	Gryllotalpas pps	G32	Herbivore	1	+
Insecta	Rhynchota	Plataspidae	Coptosoma bifaria	G33	Herbivore	1	+
Insecta	Coleoptera	Nicrophorus	Nicrophorus nepalensis	G34	Neutral	1	+
			Hope				
Insecta	Coleoptera	Carabidae	Scarites terricola	G35	Natural enemy	1	+
			Bonelli				
Insecta	Coleoptera	Carabidae	Calosoma maximoviczi	G36	Natural enemy	2	+
Insecta	Coleoptera	Staphylinidae	Staphylinida e	G37	Natural enemy	1	+
Insecta	Orthoptera	Acrididae	Traulia orientalis	G38	Herbivore	1	+
			Ramme				
Insecta	Coleoptera	Scarabaeidae	Onthophagu s	G39	Natural enemy	2	+
Insecta	Coleoptera	Aphodiidae	Aphodius sp	G40	Herbivore	1	+
Insecta	Orthoptera	Acrididae	Chrysacris liaoningensis	G41	Herbivore	1	+
			Zheng				
Insecta	Coleoptera	Scarabaeidae	shining leafchafer	G42	Herbivore	3	+
Insecta	Coleoptera	Staphylinidae	Paederus tamulus	G43	Natural enemy	14	+
			Erichson				
Insecta	Coleoptera	Carabidae	Harpalus roninus	G44	Natural enemy	1	+
Insecta	Homoptera	Cicadellidae	Singapora shinshana	G45	Herbivore	1	+

Insecta	Orthoptera	Epacromius	Epacromius coerulipes	G46	Herbivore	2	+
Insecta	Rhynchota	Nabis	Nabis stenoferus Hsiao	G47	Natural enemy	1	+
Insecta	Coleoptera	Scarab	Pentodon patruelis Frivaldszky	G48	Herbivore	1	+
Insecta	Rhynchota	Nepidae	Nepa chinensis Hoff	G49	Herbivore	1	+
Insecta	Coleoptera	Carabidae	Chlaenius juncus	G50	Natural enemy	1	+
Insecta	Coleoptera	Scarabaeidae	Geotrupidae	G51	Natural enemy	2	+
Insecta	Coleoptera	Carabidae	Panagaeus Latreille	G52	Natural enemy	2	+

Note: '+' represents the proportion of individuals in total catch. '+++' means more than 10 %. '++' means 1 % ~ 10 %. '+' means less than 1 %.

Table S2. Statistical table of herb vegetation.

Herb Vegetation			Latin Names	Code
Monocots	Poales Small	Poaceae Barnhart	<i>Digitaria sanguinalis</i> (L.) Scop.	SP1
			<i>Chloris virgata</i> Sw.	SP2
			<i>Setaria viridis</i> (L.) Beauv.	SP3
			<i>Echinochloa crusgalli</i> (L.) Beauv.	SP4
			<i>Eleusine indica</i> (L.) Gaertn.	SP5
	Cyperales	Cyperaceae Juss.	<i>Carex</i> L.	SP6
			<i>Cyperus rotundus</i> L.	SP7
	Powdery endosperm	Commelinaceae Mirb.	<i>Commelina communis</i> L.	SP8
	Campanulales	Asteraceae Bercht. & J. Presl	<i>Kalimeris indica</i> (L.) Sch. Bip.	SP9
			<i>Artemisia mongolica</i> (Fisch. ex Bess.) Nakai	SP10
			<i>Aster tataricus</i> L. f.	SP11
			<i>Artemisia caruifolia</i> Buch.-Ham. ex Roxb.	SP12
			<i>Artemisia capillaris</i> Thunb.	SP13
			<i>Helianthus tuberosus</i> L.	SP14

		Cirsium japonicum Fisch. ex DC.	SP15
Polygonales	Polygonaceae Juss.	Polygonum lapathifolium L.	SP16
		Polygonum aviculare L.	SP17
Tubiflorae	Scrophulariaceae	Veronica persica Poir.	SP18
	Lamiaceae	Leonurus japonicus Houttuyn	SP19
Asterales Link	Asteraceae Bercht. & J. Presl	Bidens pilosa L.	SP20
Contortae	Asclepiadaceae	Metaplexis japonica (Thunb.) Makino	SP21
Lamiales	Boraginaceae	Thyrocarpus sampsonii Hance	SP22
Rutales	Polygalaceae	Polygala tenuifolia Willd.	SP23
Caryophyllales	Amaranthaceae	Herba seu Radix Amaranthi	SP24
Urticales	Moraceae Gaudich.	Humulus scandens (Lour.) Merr.	SP25
Malvales Juss. ex Bercht. & J. Presl	Malvaceae Juss.	Abutilon theophrasti Medicus	SP26
Centrospermae	Chenopodiaceae	Kochia scoparia (L.) Schrad.	SP27
	Rubiaceae	Rubia cordifolia L.	SP28
Santalales R. Br. ex Bercht. & J. Presl	Santalaceae R. Br.	Thesium chinense Turcz.	SP29
Sphenopsida	Equisetales	Equisetum arvense L.	SP30
		DC.	

Gnetopsida	Ephedrales	Ephedraceae Dumort.	Ephedra sinica Stapf	SP31
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All plants were identified to the species level, and all species information in the three quadrats was merged. To assess this, the variance inflation factor (VIF) was calculated for each predictor variable. No collinearity was detected ($VIF < 5$).

Text S1. Five types of field margin typical characteristics

1. Grassland (GL)

Grassland is mainly a linear semi-natural habitat with a width of 4-10m between farmland and farmland. Field visually estimated vegetation cover of Grassland from 80% to 92%, the canopy density of the tree layer is 0. The vegetation community was dominated by weeds. The dominant vegetations mainly consisted of *Eleusine indica* (L.) Gaertn., *Digitaria sanguinalis* (L.) Scop., and *Setaria viridis* (L.) Beauv.

2. Woodland (WL)

Woodland is mainly semi-natural field margin with a width of 4-10m usually between roads and farmland or between farmland and farmland. Field visually estimated vegetation cover of Woodland from 70% to 85%, and the canopy density of the tree layer is about 92%. The vegetation community was dominated by natural vegetation and artificially planted poplar forest. The dominant herbaceous vegetations mainly consisted of *Digitaria sanguinalis* (L.) Scop., *Polygonum aviculare* L., and *Bidens pilosa* L.

3. Irrigation canal and ditch (CD)

Irrigation canal and ditch is mainly a linear semi-natural habitat less than 10m in width. Field visually estimated vegetation cover of Irrigation canal and ditch from 50% to 73%, the canopy density of the tree layer is about 65%. The vegetation community was dominated by natural vegetation. The dominant herbaceous vegetations mainly consisted of *Setaria viridis* (L.) Beauv., *Echinochloa crusgalli* (L.) Beauv., *Humulus scandens* (Lour.) Merr.

4. Dirt road (DR)

Dirt road is mainly a linear artificial field margin with a width of 2-4m between farmland and farmland. Field visually estimated vegetation cover of Dirt road from 50% to 60%, and the canopy density of the tree layer is about 53%. The vegetation community was dominated by single vegetation structure. The dominant herbaceous vegetations mainly consisted of *Echinochloa crusgalli* (L.) Beauv., *Carex* L., and *Bidens pilosa* L.

5. Paved road (PR)

Paved road is mainly a linear artificial field margin with a width of 2-4m between farmland and farmland. Field visually estimated vegetation cover of Paved road from 45% to 55%, and the canopy density of the tree layer is about 50%. The vegetation community was dominated by weeds. The dominant herbaceous vegetations mainly consisted of *Digitaria sanguinalis* (L.) Scop., *Aster tataricus* L. f., and *Kalimeris indica* (L.) Sch. Bip.