Supplementary tables

	Sowing rates (kg ha^{-1}) used to establishing seed mixtures		
	Grass only	***Grass & legume***	***Grass, legume & forbs***
Sown grasses			
Alopecurus pratensis L.	5.00	3.75	3.00
Dactylis glomerata L.	6.50	4.88	3.90
Festuca pratensis Huds.	5.00	3.75	3.00
Lolium perenne L.	13.00	9.75	7.80
Phleum pratense L.	0.50	0.38	0.30
Sown Legumes			
Lotus corniculatus L.		1.00	1.00
Melilotus officinalis (L.) Pall.		2.00	2.00
Onobrychis viciifolia Scop.		4.50	4.50
Trifolium dubium Sibth.		1.00	1.00
Trifolium hybridum L.		1.00	1.00
Trifolium pratense L.		1.60	1.60
Trifolium repens L.		0.40	0.40
Sown Forbs			
Achillea millefolium L.			0.40
Centaurea nigra L.			0.30
Cichorium intybus L.			1.00
Leucanthemum vulgare Lam.			0.20
Rumex acetosa L.			0.10
Sanguisorba minor Scop.			2.00

Table S1. Species composition of seed treatments

Ecosystem Service Category	**Specific Ecosystem Service of Interest**	**Ecosystem Service Class and Indicator Measured**
Regulating Services The benefits obtained from the regulation of natural processes, including air quality regulation, climate regulation, water regulation, erosion regulation, water purification, disease and pest control, pollination, natural hazard regulation.	**Pollination** – Ecosystem changes that affect the distribution, abundance and effectiveness of pollinators.	• Pollinator abundance (bees, butterflies, and hoverflies).

	Pest Control – Ecosystem changes that affect the prevalence of crop and livestock pests.	• Predatory beetle abundance (Carabidae and Staphylinidae).
Cultural Services The non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic enjoyment, including cultural diversity, spiritual and religious values, knowledge systems, educational values, inspiration, aesthetic values, social relations, sense of place, cultural heritage values, recreation, and ecotourism.	**Cultural services linked to farmland birds**	• Beetle biomass – food availability for birds.

Supporting services The services that are necessary for the production of all other ecosystem services, including soil formation, photosynthesis, primary production, nutrient cycling, and water cycling.	**Nutrient cycling -** Approximately 20 nutrients essential for life, including nitrogen and phosphorus, cycle through ecosystems and are maintained at different concentrations in different parts of ecosystems. **Soil formation/quality-** Many provisioning services depend on soil fertility, the rate of soil formation influences human wellbeing in many ways.	• Soil compaction: bulk density. • Soil carbon content. • Soil nitrogen content.
Provisioning Services Products obtained from ecosystems including fresh water, food, fibre (e.g. timber, cotton), fuel, genetic resources, biochemicals, ornamental resources (e.g. shells, flowers, and animal skins), natural medicines, and pharmaceuticals.	**Agricultural productivity:** Amount and quality of stored livestock forage products.	• Dry matter yield of stored livestock forage products that would ultimately produce either silage or hay • Herbage nitrogen content as an indicator of forage product quality.

Table S2. Categories, Classes, and Indicators of Ecosystem Services Measured. All category definitions taken from Millennium Ecosystem Assessment Synthesis Report (2005).

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Response	R^2 Global	Fixed Effects within ΔAIC<2 models	Models ΔAIC<2	Intercept	Model Outputs	Sward plant functional diversity (SEED)	Management (M)	Management Intensity (MI)	Cultivation (C)	Year (Y)
Agronomic Production; Forage Yield and Quality										
Dry Matter Yield	0.68	C + SEED + MI + Y (wi= 0.48)	3	6.94	**Importance Score (summed w_i)**	1.00	--	0.77	0.71	1.00
					Weighted parameter estimates (μ)	G= 3.33 GL= 6.94 GLF= 7.83	--	Int.= 7.36 Ext.= 6.94	Deep =6.94 Min.till.= 7.3	Yr1= 6.94 Yr2= 3.09 Yr3= 6.71 Yr4= 2.73
Herbage Nitrogen Content	0.6	SEED + Y (wi= 0.42)	3	1.97	**Importance Score (summed w_i)**	1.00	--	0.16	0.42	1.00
					Weighted parameter estimates (μ)	G= 1.64 GL= 1.97 GLF= 1.98	--	Int.= 1.97 Ext.= 1.97	Deep= 1.97 Min.till.= 2.0	Yr1= 1.97 Yr2= 1.98 Yr3= 1.44 Yr4= 1.10
Pollination & Pest Control										
Pollinator Species Richness	0.69	SEED + M +MI + Y (wi= 0.45)	4	1.95	**Importance Score (summed w_i)**	1.00	0.66	1.00	0.31	1.00
					Weighted parameter estimates (μ)	G= 1.49 GL= 7.03 GLF= 8.08	Cut= 7.03 Graze= 6.36	Int.= 0.87 Ext.= 6.11	Deep= 7.03 Min.till.= 7.0	Yr1= 7.03 Yr2= 4.26 Yr3= 6.11 Yr4= 4.90
Pollinator Abundance	0.90	SEED + M + MI + C + Y (wi= 0.79)	2	3.92	**Importance Score (summed w_i)**	1.00	1.00	1.00	0.79	1.00

					Weighted parameter estimates (μ)	G= 3.52 GL= 50.4 GLF= 92.75	Cut= 50.4 Graze= 32.46	Int.= 31.5 Ext.= 50.4	Deep= 50.4 Min.till.= 47.0	Yr1= 50.4 Yr2= 13.6 Yr3= 39.25 Yr4= 27.93
Predator Species Richness	0.57	SEED + MI + Y (*wi*= 0.45)	3	2.34	**Importance Score (summed w_i)**	1.00	0.39	1.00	0.16	1.00
					Weighted parameter estimates (μ)	G= 4.90 GL= 10.38 GLF= 10.8	Cut= 10.38 Graze= 10.18	Int.= 7.39 Ext.= 10.38	Deep= 10.38 Min.till.= 10.38	Yr1= 10.38 Yr2= 5.26 Yr3= 7.54 Yr4= 4.48
Predator Abundance	0.78	SEED + MI + Y (*wi*= 0.49)	3	3.48	**Importance Score (summed w_i)**	1.00	0.25	1.00	0.25	1.00
					Weighted parameter estimates (μ)	G= 9.97 GL= 32.46 GLF= 32.14	Cut= 32.46 Graze= 30.57	Int.= 19.3 Ext.= 32.5	Deep= 32.46 Min.till.= 32.79	Yr1= 32.46 Yr2= 10.38 Yr3= 18.17 Yr4= 11.7
Soil Processes										

Bulk Density	0.04	Null (*wi*= 0.32)	11	0.93	**Importance Score (summed w_i)**	0.24	0.23	--	0.24	0.20
					Weighted parameter estimates (μ)	G= 0.95 GL= 0.93 GLF= 0.93	Cut= 0.93 Graze= 0.93	--	Deep= 0.93 Min.till.= 0.925	Yr1= 0.93 Yr2= 0.93 Yr3= -- Yr4= 0.94
Soil Carbon	0.15	C (*wi*= 0.37)	6	2.7	**Importance Score (summed w_i)**	0.24	0.19	--	1.00	0.34
					Weighted parameter estimates (μ)	G= 2.65 GL= 2.7 GLF= 2.68	Cut= 2.7 Graze= 2.7	--	Deep= 2.7 Min.till.= 2.88	Yr1= 2.7 Yr2= 2.66 Yr3= -- Yr4= 2.68
Soil Nitrogen	0.2	SEED + C (w_i= 0.32)	6	0.26	**Importance Score (summed w_i)**	0.69	0.17	--	1.00	0.39

					Weighted parameter estimates (μ)	G= 0.25 GL= 0.26 GLF= 0.26	Cut= 0.26 Graze= 0.26	--	Deep= 0.26 Min.till.= 0.27	Yr1= 0.26 Yr2= 0.26 Yr3= -- Yr4= 0.26
Cultural Services (Food Resources for Farmland Birds (BIRDFOOD)										
Total Invertebrate Biomass	0.51	SEED + M + MI + C + Y (*wi*= 0.99)	1	133.47	**Importance Score (summed w_i)**	1.00	1.00	1.00	0.9	1.00
					Weighted parameter estimates (μ)	G= 67.77 GL= 133.47 GLF= 144.28	Cut= 133.47 Graze= 112.18	Int.= 107.28 Ext.= 133.47	Deep= 133.47 Min.till.= 149.7	Yr1= 133.47 Yr2= 88.69 Yr3= 96.97 Yr4= 65.46

Table S3. Summary of model outputs. R^2_{Global} = marginal R^2 value for the global model which provides an indication of the variance explained by the fixed effects; w_i = Variable importance score for the best fit model; *ΔAIC<2* = Sub-set of models with 2 AIC points of the best fit model. Following Burnham & Anderson (1998) this represents that sub-set of models that do not differ in their explanatory power; For "Pollination & Pest Control", and "Cultural Services", each response variable is tested against all 32 possible combinations of the fixed effects including a saturated and null model. For "Soil Processes" and "Agronomic Production", each response variable is tested against all 16 possible combinations of the fixed effects including a saturated and null model. Importance Score = represents a relative measure of the importance of an individual fixed effect within the *ΔAIC<2* subset of models. It is calculated as the sum of the w_i scores for models within the *ΔAIC<2* subset that contain an explanatory factor over the sum of w_i scores from all models within that *ΔAIC<2* subset. Explanatory factors with an importance score of less than 0.5 are considered to be of marginal importance. ; μ = Weighted mean parameter estimate derived using the w_i importance score. The established sward plant functional diversity differs from grassland only (G), grass and legumes (GL) and grasses, legumes and other non-legume flowering forbs (GLF); Ext. = extensive management practices that incorporate a rest period to allow plant growth in the summer; Int. = Intensive management practices with no rest period; Min. till. = minimum tillage cultivation; Deep = conventional deep ploughing cultivation; -- = response variable not measured.