

Table S1 Demand data based on 12 plots

Family	Crop No.	Crop	Demand
Chenopodiaceae	1	Sugar beet	3
grass (Cereal)	2	Winter wheat	0
	3	Barley (spring)	1
	4	Maize (silage)	1
	5	Wheat (spring)	1
Nightshade	6	Seed Potato	1
	7	Potatoes (ware)	1
Amaryllidaceae	8	Seed onion	0
	9	Onions	1
Brassica	10	Winter rapeseed	0
Apiaceae	11	Winter carrot	1

Table S2 Distance Matrix

Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility	Farm	Distance to Facility
F001	56	F101	45	F201	97	F301	67	F401	55	F501	107	F601	82	F701	77	F801	106	F901	89
F002	90	F102	99	F202	68	F302	109	F402	90	F502	106	F602	59	F702	93	F802	69	F902	74
F003	79	F103	65	F203	75	F303	87	F403	79	F503	72	F603	81	F703	55	F803	66	F903	93
F004	86	F104	61	F204	67	F304	54	F404	98	F504	80	F604	81	F704	71	F804	78	F904	75
F005	81	F105	72	F205	80	F305	87	F405	44	F505	59	F605	60	F705	80	F805	67	F905	61
F006	74	F106	77	F206	61	F306	56	F406	90	F506	52	F606	87	F706	64	F806	70	F906	78
F007	78	F107	83	F207	51	F307	81	F407	67	F507	83	F607	87	F707	87	F807	53	F907	82
F008	74	F108	65	F208	67	F308	63	F408	65	F508	63	F608	110	F708	102	F808	102	F908	70
F009	100	F109	64	F209	85	F309	66	F409	102	F509	107	F609	81	F709	71	F809	100	F909	82
F010	68	F110	77	F210	60	F310	95	F410	93	F510	80	F610	93	F710	84	F810	109	F910	96
F011	79	F111	68	F211	100	F311	95	F411	89	F511	100	F611	52	F711	56	F811	68	F911	76
F012	75	F112	68	F212	86	F312	100	F412	76	F512	87	F612	64	F712	96	F812	49	F912	50
F013	87	F113	100	F213	82	F313	90	F413	75	F513	76	F613	89	F713	32	F813	62	F913	92
F014	134	F114	76	F214	55	F314	97	F414	83	F514	107	F614	85	F714	67	F814	54	F914	57
F015	92	F115	94	F215	69	F315	80	F415	89	F515	83	F615	84	F715	102	F815	59	F915	59

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F016	58	F116	79	F216	67	F316	96	F416	94	F516	47	F616	88	F716	88	F816	63	F916	63
F017	56	F117	90	F217	74	F317	66	F417	68	F517	57	F617	102	F717	87	F817	86	F917	69
F018	107	F118	121	F218	92	F318	109	F418	78	F518	66	F618	93	F718	66	F818	90	F918	89
F019	76	F119	107	F219	92	F319	64	F419	113	F519	67	F619	62	F719	49	F819	58	F919	96
F020	71	F120	94	F220	80	F320	88	F420	77	F520	77	F620	82	F720	106	F820	73	F920	91
F021	64	F121	51	F221	52	F321	61	F421	77	F521	85	F621	86	F721	73	F821	83	F921	74
F022	105	F122	90	F222	88	F322	51	F422	119	F522	53	F622	76	F722	72	F822	69	F922	57
F023	104	F123	70	F223	86	F323	79	F423	63	F523	76	F623	81	F723	85	F823	52	F923	106
F024	98	F124	75	F224	79	F324	62	F424	76	F524	55	F624	89	F724	86	F824	100	F924	78
F025	59	F125	124	F225	72	F325	65	F425	101	F525	83	F625	76	F725	80	F825	105	F925	71
F026	73	F126	57	F226	74	F326	98	F426	91	F526	108	F626	55	F726	55	F826	84	F926	104
F027	86	F127	73	F227	74	F327	74	F427	86	F527	87	F627	95	F727	77	F827	78	F927	75
F028	95	F128	82	F228	82	F328	117	F428	90	F528	97	F628	51	F728	65	F828	83	F928	80
F029	81	F129	87	F229	86	F329	103	F429	92	F529	120	F629	86	F729	85	F829	77	F929	55
F030	78	F130	69	F230	72	F330	73	F430	73	F530	98	F630	82	F730	67	F830	57	F930	64
F031	61	F131	78	F231	74	F331	93	F431	76	F531	85	F631	95	F731	86	F831	77	F931	97
F032	83	F132	97	F232	68	F332	81	F432	85	F532	74	F632	99	F732	65	F832	68	F932	45
F033	116	F133	46	F233	58	F333	59	F433	89	F533	98	F633	71	F733	76	F833	67	F933	86
F034	89	F134	53	F234	68	F334	79	F434	86	F534	63	F634	72	F734	67	F834	70	F934	99
F035	92	F135	84	F235	79	F335	94	F435	70	F535	77	F635	63	F735	87	F835	92	F935	63
F036	57	F136	47	F236	96	F336	81	F436	87	F536	83	F636	95	F736	79	F836	83	F936	74
F037	82	F137	84	F237	71	F337	82	F437	73	F537	83	F637	76	F737	46	F837	75	F937	52
F038	96	F138	83	F238	83	F338	89	F438	97	F538	81	F638	90	F738	69	F838	54	F938	77
F039	73	F139	55	F239	86	F339	55	F439	77	F539	99	F639	86	F739	72	F839	73	F939	97
F040	81	F140	52	F240	77	F340	51	F440	90	F540	83	F640	104	F740	73	F840	109	F940	91
F041	71	F141	80	F241	85	F341	80	F441	72	F541	69	F641	88	F741	96	F841	81	F941	38
F042	77	F142	73	F242	67	F342	80	F442	48	F542	82	F642	79	F742	87	F842	61	F942	58
F043	59	F143	88	F243	59	F343	53	F443	79	F543	77	F643	74	F743	82	F843	77	F943	75
F044	89	F144	71	F244	90	F344	66	F444	80	F544	75	F644	91	F744	74	F844	77	F944	77
F045	46	F145	80	F245	69	F345	49	F445	80	F545	58	F645	77	F745	67	F845	85	F945	89
F046	89	F146	62	F246	79	F346	65	F446	60	F546	56	F646	28	F746	79	F846	84	F946	100
F047	77	F147	77	F247	89	F347	62	F447	64	F547	76	F647	75	F747	64	F847	72	F947	65
F048	35	F148	77	F248	74	F348	66	F448	89	F548	105	F648	93	F748	77	F848	64	F948	84
F049	78	F149	90	F249	94	F349	83	F449	93	F549	78	F649	82	F749	82	F849	90	F949	60
F050	81	F150	95	F250	68	F350	43	F450	90	F550	96	F650	76	F750	95	F850	63	F950	76
F051	63	F151	105	F251	79	F351	89	F451	92	F551	109	F651	78	F751	80	F851	59	F951	92
F052	77	F152	72	F252	60	F352	69	F452	97	F552	87	F652	80	F752	96	F852	67	F952	98
F053	69	F153	91	F253	64	F353	78	F453	91	F553	44	F653	70	F753	77	F853	44	F953	77
F054	97	F154	74	F254	74	F354	67	F454	54	F554	97	F654	86	F754	122	F854	99	F954	77
F055	67	F155	57	F255	82	F355	49	F455	55	F555	80	F655	74	F755	68	F855	77	F955	85
F056	66	F156	84	F256	31	F356	40	F456	76	F556	114	F656	90	F756	79	F856	85	F956	87

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F057	71	F157	68	F257	90	F357	96	F457	84	F557	80	F657	63	F757	67	F857	71	F957	33
F058	101	F158	81	F258	94	F358	110	F458	96	F558	86	F658	76	F758	76	F858	73	F958	82
F059	66	F159	78	F259	81	F359	68	F459	75	F559	54	F659	70	F759	59	F859	83	F959	31
F060	78	F160	93	F260	79	F360	84	F460	70	F560	80	F660	87	F760	59	F860	113	F960	57
F061	73	F161	89	F261	60	F361	99	F461	74	F561	75	F661	91	F761	71	F861	55	F961	102
F062	103	F162	96	F262	59	F362	73	F462	111	F562	84	F662	62	F762	79	F862	87	F962	80
F063	73	F163	66	F263	72	F363	62	F463	65	F563	78	F663	81	F763	69	F863	90	F963	72
F064	91	F164	70	F264	79	F364	93	F464	72	F564	70	F664	85	F764	83	F864	67	F964	55
F065	79	F165	67	F265	49	F365	37	F465	92	F565	80	F665	82	F765	63	F865	78	F965	78
F066	32	F166	95	F266	89	F366	95	F466	67	F566	82	F666	57	F766	71	F866	89	F966	86
F067	57	F167	60	F267	73	F367	67	F467	77	F567	45	F667	98	F767	100	F867	62	F967	75
F068	42	F168	68	F268	111	F368	78	F468	102	F568	75	F668	81	F768	80	F868	86	F968	66
F069	89	F169	85	F269	70	F369	98	F469	79	F569	78	F669	57	F769	78	F869	71	F969	87
F070	90	F170	75	F270	57	F370	61	F470	72	F570	79	F670	84	F770	101	F870	86	F970	83
F071	87	F171	55	F271	85	F371	84	F471	73	F571	84	F671	70	F771	108	F871	76	F971	84
F072	83	F172	87	F272	60	F372	98	F472	106	F572	92	F672	79	F772	53	F872	77	F972	52
F073	69	F173	68	F273	73	F373	92	F473	92	F573	85	F673	87	F773	52	F873	55	F973	48
F074	62	F174	89	F274	99	F374	82	F474	93	F574	80	F674	80	F774	73	F874	102	F974	66
F075	64	F175	79	F275	73	F375	56	F475	74	F575	72	F675	59	F775	86	F875	84	F975	77
F076	89	F176	72	F276	83	F376	82	F476	54	F576	69	F676	69	F776	81	F876	54	F976	87
F077	101	F177	78	F277	78	F377	59	F477	91	F577	63	F677	65	F777	71	F877	75	F977	82
F078	75	F178	88	F278	81	F378	64	F478	70	F578	68	F678	82	F778	78	F878	104	F978	50
F079	84	F179	66	F279	88	F379	61	F479	75	F579	90	F679	72	F779	37	F879	80	F979	101
F080	73	F180	80	F280	77	F380	57	F480	102	F580	61	F680	98	F780	74	F880	96	F980	95
F081	87	F181	89	F281	80	F381	82	F481	83	F581	66	F681	79	F781	81	F881	61	F981	64
F082	89	F182	88	F282	84	F382	84	F482	98	F582	52	F682	73	F782	99	F882	70	F982	67
F083	73	F183	76	F283	74	F383	80	F483	86	F583	66	F683	89	F783	66	F883	68	F983	61
F084	85	F184	65	F284	86	F384	62	F484	88	F584	71	F684	100	F784	82	F884	100	F984	93
F085	75	F185	75	F285	98	F385	58	F485	81	F585	63	F685	90	F785	62	F885	107	F985	83
F086	65	F186	71	F286	61	F386	64	F486	99	F586	57	F686	94	F786	74	F886	122	F986	80
F087	91	F187	93	F287	70	F387	83	F487	74	F587	80	F687	77	F787	107	F887	86	F987	120
F088	80	F188	71	F288	78	F388	121	F488	59	F588	95	F688	76	F788	63	F888	71	F988	88
F089	103	F189	69	F289	74	F389	65	F489	67	F589	32	F689	81	F789	106	F889	75	F989	49
F090	82	F190	91	F290	96	F390	89	F490	76	F590	57	F690	58	F790	65	F890	78	F990	76
F091	64	F191	107	F291	62	F391	76	F491	80	F591	62	F691	88	F791	78	F891	62	F991	81
F092	83	F192	83	F292	61	F392	110	F492	91	F592	69	F692	78	F792	87	F892	65	F992	68
F093	76	F193	62	F293	82	F393	74	F493	56	F593	86	F693	70	F793	49	F893	59	F993	103
F094	68	F194	71	F294	70	F394	56	F494	91	F594	96	F694	96	F794	67	F894	84	F994	52
F095	83	F195	44	F295	100	F395	105	F495	71	F595	82	F695	77	F795	86	F895	94	F995	69
F096	76	F196	75	F296	62	F396	77	F496	120	F596	85	F696	113	F796	91	F896	81	F996	86
F097	83	F197	53	F297	98	F397	92	F497	74	F597	81	F697	90	F797	66	F897	81	F997	85

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F098	68	F198	78	F298	66	F398	83	F498	86	F598	63	F698	79	F798	76	F898	73	F998	64
F099	76	F199	66	F299	98	F399	91	F499	51	F599	82	F699	74	F799	56	F899	89	F999	41
F100	94	F200	95	F300	52	F400	72	F500	85	F600	91	F700	105	F800	57	F900	86	F1000	85