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Genetic diversity and population structure among oat cultivars and landraces

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Online Resource 1: Origin of the Spanish wild genotypes used for genetic diversity analysis.

Genotype	Bank Code	Type	Province	Locality	Sampling Year	Latitude	Longitude	Altitude (m)
Gen1	BGE008113	White	Cádiz	Vejer de la Fra.	1944	361515N	0055812W	219
Gen2	BGE008115	White	Cádiz	Sanlúcar de B.	1944	364638N	0062106W	20
Gen3	BGE008116	White	Cádiz	Bornos	1944	364906N	364906N	160
Gen4	BGE008117	White	Jaén	La Carolina	1944	381638N	0033656W	605
Gen5	BGE008118	White	Jaén	Vilches	1944	381220N	0033022W	543
Gen6	BGE008119	White	Jaén	Cazalilla	1944	375907N	0035251W	300
Gen7	BGE008121	White	Jaén	Higuera de Arj.	1944	375819N	0035939W	41
Gen8	BGE008122	White	Jaén	Santisteban Pto.	1944	381507N	0031214W	680
Gen9	BGE008123	White	Jaén	Rus	1944	380254N	0032738W	591
Gen10	BGE008124	White	Jaén	Úbeda	1944	380046N	0032212W	747
Gen11	BGE008140	Red	Almería	Níjar	1944	365801N	0021218W	356
Gen12	BGE008174	White	Sevilla	Morón de Fra.	1944	370717N	0052652W	306
Gen13	BGE008175	White	Sevilla	Guadalcanal	1944	380537N	0054912W	665
Gen14	BGE008176	White	Sevilla	Montellano	1944	365948N	0053410W	273
Gen15	BGE008177	White	Sevilla	Alcalá Guadaira	1944	372009N	0055058W	48
Gen16	BGE008178	White	Sevilla	Cantillana	1944	373623N	0054930W	45
Gen17	BGE008179	White	Sevilla	Roda Andalucía	1944	371202N	0044642W	406
Gen18	BGE008180	White	Sevilla	Coria del Rio	1944	371706N	0060259W	9
Gen19	BGE008189	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen20	BGE008200	White	Málaga	Colmenar	1944	365416N	0042007W	696
Gen21	BGE008201	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen22	BGE008202	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen23	BGE008279	White	Almería	Almería	1977	-	-	480
Gen24	BGE008382	Red	Jaén	Úbeda	1940	380046N	0032212W	747
Gen25	BGE008397	Red	Huelva	Huelva	1944	371541N	0065657W	30
Gen26	BGE008398	Red	Huelva	La Palma Cdo.	1944	372320N	0063306W	93
Gen27	BGE008399	White	Huelva	Jabugo	1944	375505N	0064339W	657
Gen28	BGE008400	Red	Huelva	Puebla Guzmán	1944	373646N	0071444W	221
Gen29	BGE008401	White	Huelva	Puebla Guzmán	1944	373646N	0071444W	221
Gen30	BGE008402	White	Huelva	Cumbres May.	1944	380354N	0063845W	699
Gen31	BGE008403	White	Huelva	Cumbres May.	1944	380354N	0063845W	699
Gen32	BGE008404	White	Granada	Loja	1944	371003N	0040903W	487
Gen33	BGE008405	White	Granada	Moraleta de Z.	1944	371008N	0035749W	619
Gen34	BGE008406	White	Granada	Tocón	1944	371430N	0032207W	1368
Gen35	BGE008407	White	Granada	Montefrío	1944	371920N	0040033W	834
Gen36	BGE008408	White	Granada	Íllora	1944	371715N	0035250W	744
Gen37	BGE008409	White	Granada	Motril	1944	364449N	0033112W	40
Gen38	BGE008477	Red	Almería	Tíjola	1944	372044N	0022615W	689
Gen39	BGE008478	White	Almería	Huércal-Overa	1944	372326N	0015630W	274
Gen40	BGE008479	White	Almería	Vélez-Blanco	1944	374132N	0020541W	1060
Gen41	BGE008480	White	Almería	Vélez-Rubio	1944	373857N	0020422W	839
Gen42	BGE008481	White	Almería	Chirivel	1944	373547N	0021555W	1038
Gen43	BGE008679	White	Jaén	Castillo de L.	1944	373149N	0035637W	688
Gen44	BGE009393	White	Huelva	Cartaya	1944	371705N	0070915W	19
Gen45	BGE009394	Red	Huelva	S. Juan del Pto.	1944	371900N	0065023W	14
Gen46	BGE009395	White	Huelva	Paterna del C.	1944	372521N	0062401W	179
Gen47	BGE009631	White	Cádiz	Arcos de la Fra.	1944	364458N	0054818W	218
Gen48	BGE009632	White	Cádiz	Villamartín	1944	365153N	0053822W	196
Gen49	BGE009633	White	Cádiz	Villamartín	1944	365153N	0053822W	196
Gen50	BGE009634	Red	Cádiz	Alcalá del Valle	1944	365423N	0051017W	600
Gen51	BGE009642	White	Jaén	Marmolejo	1944	380246N	0041010W	245
Gen52	BGE009643	White	Jaén	Andújar	1944	380218N	0040310W	211
Gen53	BGE009644	White	Jaén	Castellar	1944	381525N	0030739W	757
Gen54	BGE009645	White	Jaén	Espeluy	1944	380201N	0035139W	280
Gen55	BGE009646	White	Jaén	Campillo de A.	1944	373325N	0033802W	874
Gen56	BGE009647	White	Jaén	Baeza	1944	375929N	0032805W	769
Gen57	BGE009648	White	Jaén	Vva. Reina	1944	380024N	0035508W	222
Gen58	BGE009649	White	Jaén	Porcuna	1944	375215N	0041059W	472
Gen59	BGE009668	White	Córdoba	El viso	1944	382906N	0045715W	577
Gen60	BGE009711	White	Cádiz	Bornos	1944	364906N	0054440W	160
Gen61	BGE009721	White	Jaén	Arjona	1944	375613N	0040311W	440
Gen62	BGE009722	White	Jaén	Martos	1944	374329N	0035758W	753

Gen63	BGE009723	White	Jaén	Torredonjimeno	1944	374608N	0035724W	594
Gen64	BGE009746	White	Jaén	Frailes	1944	372911N	0035011W	973
Gen65	BGE009754	Red	Almería	Pechina	1944	365501N	0022623W	99
Gen66	BGE009748	White	Alicante	Pinoso	1944	382420N	0010227W	574
Gen67	BGE009772	Red	Almería	Láujar de And.	1944	365945N	0025316W	921
Gen68	BGE010416	Red	Sevilla	Carmona	1944	372826N	0053755W	253
Gen69	BGE010418	White	Sevilla	Lora del Rio	1944	373917N	0053144W	38
Gen70	BGE010419	White	Sevilla	Osuna	1944	371420N	0050600W	328
Gen72	BGE010421	Red	Sevilla	Lebrija	1944	365515N	0060446W	37
Gen73	BGE010423	White	Sevilla	Estepa	1944	371723N	0045231W	604
Gen74	BGE010424	White	Sevilla	Cazalla de la S.	1944	375550N	0054527W	593
Gen75	BGE010425	White	Sevilla	El Coronil	1944	370458N	0053800W	137
Gen76	BGE010426	Red	Sevilla	Paradas	1944	371728N	0052941W	123
Gen77	BGE010427	White	Sevilla	Cabezas S.Juan	1944	365855N	0055622W	71
Gen78	BGE010428	White	Sevilla	El Viso del Alc.	1944	372325N	0054302W	157
Gen79	BGE010429	Red	Sevilla	Alcalá del Río	1944	373106N	0055838W	25
Gen80	BGE010430	Red	Sevilla	Gerena	1944	373133N	0060925W	99
Gen81	BGE010431	White	Sevilla	Gerena	1944	373133N	0060925W	99
Gen82	BGE010432	White	Sevilla	Real de la Jara	1944	375707N	0060917W	459
Gen83	BGE010433	White	Sevilla	Ftes. Andalucía	1944	372750N	0052047W	182
Gen84	BGE010434	Red	Sevilla	Peñaflor	1944	374231N	0052045W	53
Gen85	BGE010498	White	Málaga	Coín	1944	363940N	0044530W	209
Gen86	BGE010499	White	Málaga	Antequera	1944	370056N	0043324W	577
Gen87	BGE010500	White	Málaga	Ronda	1944	364419N	0050951W	739
Gen88	BGE010501	White	Málaga	Archidona	1944	370554N	0042320W	716
Gen89	BGE010502	White	Málaga	Archidona	1944	370554N	0042320W	716
Gen90	BGE010503	White	Málaga	Antequera	1944	365602N	0043139W	589
Gen91	BGE010504	White	Málaga	Sierra Yegüas	1944	370731N	370731N	453
Gen92	BGE010505	White	Málaga	Fte. de Piedra	1944	370812N	0044350W	443
Gen93	BGE015353	White	Granada	Alhama de Grd.	1987	365608N	0040111W	1078
Gen94	BGE015354	White	Granada	Bubión	1987	365700N	0032122W	1295
Gen95	BGE015355	Red	Granada	Albondón	1987	364943N	0031235W	895
Gen96	BGE015356	Red	Granada	Cadiar	1987	365646N	0031046W	916
Gen97	BGE015357	White	Granada	Cadiar	1987	365646N	0031046W	916
Gen98	BGE015358	White	Granada	Ugijar	1987	365751N	0030310W	559
Gen99	BGE015359	Red	Cádiz	Algar	1987	363926N	0053921W	180
Gen100	BGE015360	Red	Cádiz	Olvera	1987	365611N	0051601W	623
Gen101	BGE018448	White	Cádiz	Jerez de la Fra.	1944	364212N	0060739W	98
Gen102	BGE018452	White	Málaga	Riogordo	1944	365501N	0041732W	406
Gen103	BGE018453	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen104	BGE018454	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen105	BGE018455	White	Málaga	Campillos	1944	370255N	0045139W	461
Gen106	BGE018482	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen107	BGE018483	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen108	BGE018484	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen109	BGE018485	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen110	BGE018486	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen111	BGE018487	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen112	BGE018488	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen113	BGE018489	White	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen114	BGE018490	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen115	BGE018491	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen116	BGE018492	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen117	BGE018495	White	Córdoba	Santaella	1945	373408N	0045043W	245
Gen118	BGE018498	White	Córdoba	Fernán-Núñez	1945	374011N	0044305W	339
Gen119	BGE018499	White	Córdoba	La Rambla	1945	373635N	0044422W	327
Gen120	BGE018501	White	Córdoba	La Rambla	1945	373635N	0044422W	327
Gen121	BGE018567	White	Granada	Albuñan	1987	371343N	0030753W	1114
Gen122	BGE018568	White	Granada	Guadix	1987	371950N	0030849W	950
Gen123	BGE018569	White	Granada	Alcornocillo	1987	365608N	0040111W	1078
Gen124	BGE018570	White	Granada	Juviles	1987	365658N	0031326W	1255
Gen125	BGE018576	Red	Málaga	Alfarnate	1944	365947N	0041530W	888
Gen126	BGE018577	Red	Córdoba	Córdoba	1945	375251N	0044644W	106
Gen127	BGE018579	Red	Córdoba	Santaella	1945	373408N	0045043W	245
Gen128	BGE018580	Red	Córdoba	Santaella	1945	373408N	0045043W	245
Gen129	BGE018581	Red	Córdoba	Santaella	1945	373408N	0045043W	245

Gen130	BGE018582	Red	Córdoba	Santaella	1945	373408N	0045043W	245
Gen131	BGE018583	Red	Córdoba	Fernán-Núñez	1945	374011N	0044305W	339
Gen132	BGE018584	Red	Córdoba	La Rambla	1945	373635N	0044422W	327
Gen133	BGE018585	Red	Córdoba	La Rambla	1945	373635N	0044422W	327
Gen134	BGE018588	Red	Granada	Albuñán	1987	371343N	0030753W	1114
Gen135	BGE018591	Red	Sevilla	Écija	1944	373231N	0050427W	109
Gen136	BGE018593	White	Sevilla	El Saucejo	1944	370420N	0050546W	531
Gen137	BGE020322	White	Málaga	Colmenar	1944	365416N	0042007W	696
Gen138	BGE026963	White	Almería	Láujar de And.	1997	365945N	0025316W	921
Gen139	BGE026964	White	Almería	Moratón	1997	371100N	0021753W	854
Gen140	BGE026965	White	Almería	El Hijate	1997	372346N	0023534W	980
Gen141	BGE030934	White	Granada	Jerez del M.	1996	371108N	0030920W	1229

Online Resource 2: Origin of the commercial cultivars used for genetic diversity analysis.

Cultivar	Type	Origin	Inscription year	Pedigree
AC1	White	Spain	1993	Unknown argentine variety
Acebeda	White	INIA, Spain	1988	Firecraker/unknown
Adamo	White	Semundo Ltd, Netherlands	1988	Baldo x Brutus
Aintree	White	Serasem, France	1991	Fringante/Marros
Alcudia	White	Serasem, France	2005	unknown
Anchuela	White	INIA, Spain	1990	Liberty/unknown
Araceli	White	INIA, Spain	1988	Firecraker/unknown
Brawi	White	Lochow-Petkus, Norway	1995	unknown
Caleche	White	Serasem, France	1998	Aintree/Fringante
Canelle	White	France	2001	unknown
Cassandra	Red	Cereal Inst, Greece	<1986	unknown
Chambord	White	Serasem, France	2004	Flocon/Echnida
Chapline	White	Serasem, France	2004	unknown
Charming	White	Serasem, France	2005	unknown
Cobeña	White	INIA, Spain	1985	Bob/unknown
Condor	White	South Holland, Netherlands	<1960	Abeb Minor/Express
Cory	White	Verneuil Semences, France	1989	Titan//Tara/Selma
Edelprinz	White	Saatzucht Edelhof, Austria	2002	Explorer / SE 241-89
Flega	White	Cereal Institute, Greece	1998	unknown
Fringante	White	INRA, France	1980	Sirene/161-5-4
Fuwi	White	Gergen, Germany	1995	Pewi/St120
Hamel	White	Serasem, France	1999	Johanna/Coolabah
Kankan	White	Monsanto, Spain	1997	unknown
Kantora	White	France	1982	unknown
Karmela	White	Spain	1991	unknown
Kazmina	White	White Monsanto, Spain	1998	unknown
Mirabel	White	Serasem, France	1991	Fringante x Morros
Mojacar	White	Selgen Ltd., Czech Republic	1996	7842/Flämingnova
Norlys	White	Serasem, France	1995	Aintree/Fringante
Orblanche	White	INRA, France	2006	Avalanche/Major
Pallini	White	Cereal Institute, Greece	1998	unknown
Patones	White	INIA, Spain	1988	Cobeña/unknown
Prevision	Red	CSIC, Spain	1974	Advanced cv from Amarilla 4
Primula	White	Cecop, Italy	2001	Bulban/Weibull 17578
Rapidena	White	Semillas Batlle, Spain	2004	unknown
Saia-6	White	Brazil	1974	strigosa, purified from Clav4639