



# BPA Conservation Breeding Plan 2022 Gloucestershire Old Spots Survey Results

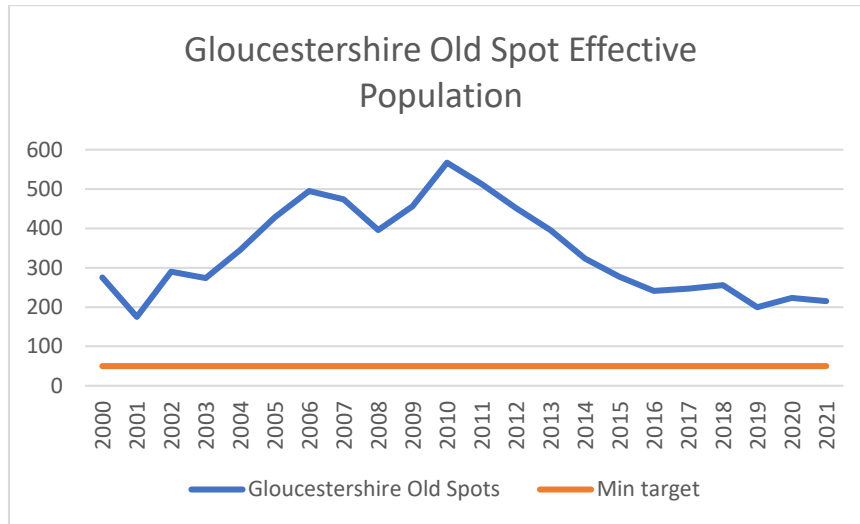


Our original conservation target was to ensure that we had at least 5 sows or boars in each line and that each line was represented in at least 5 herds. The Gloucestershire Old Spots breed has always been able to meet this target.

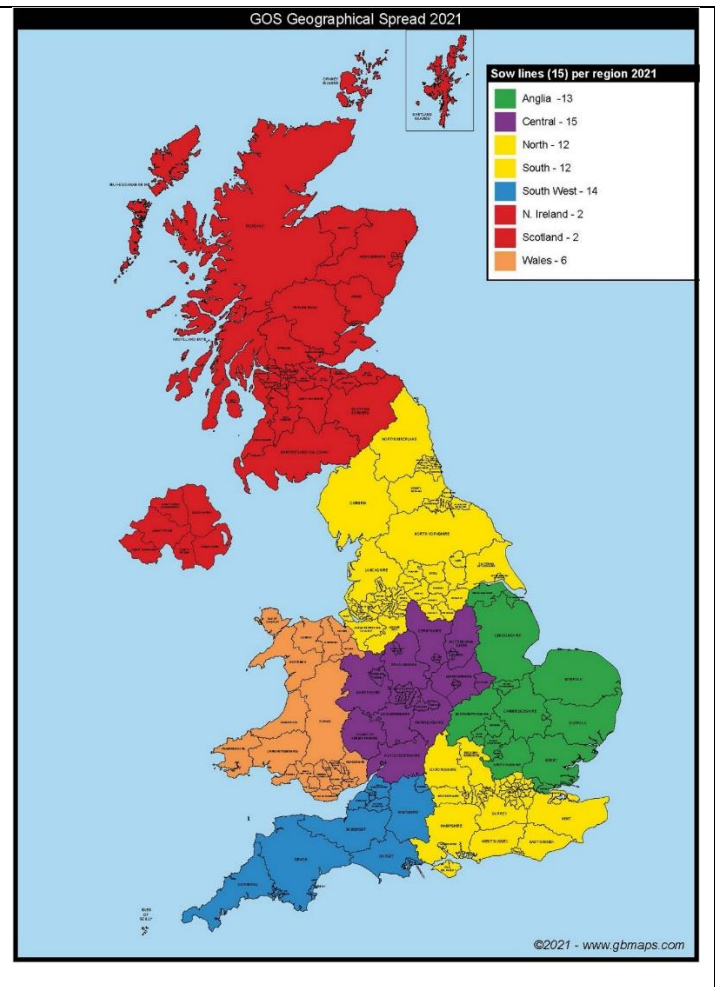
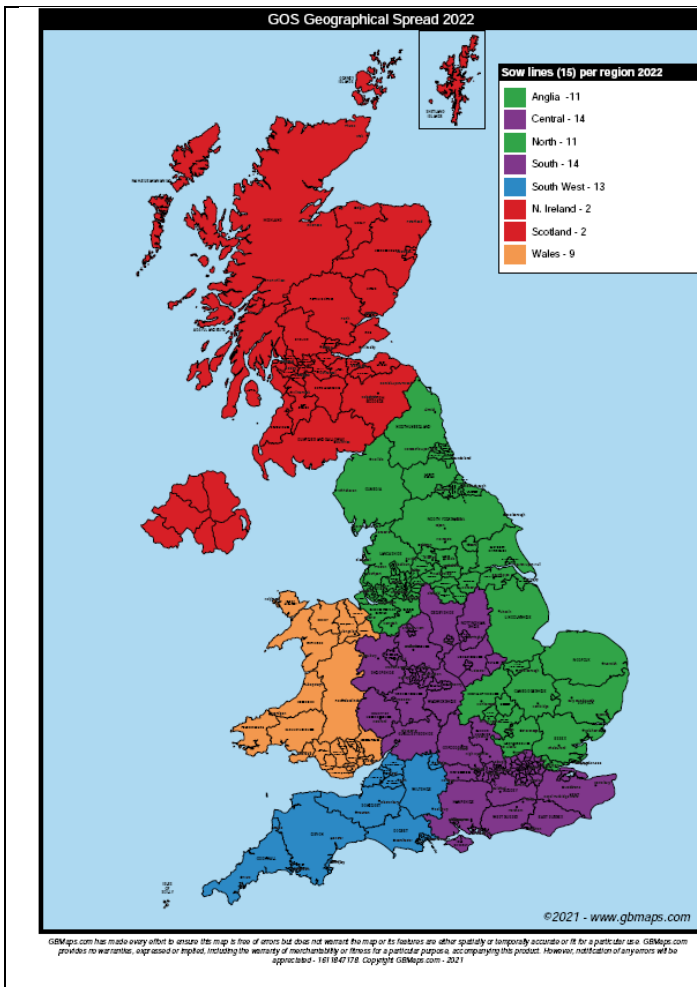
Members keeping this sow line					Sow Line	Total Sows				
2021	2020	2019	2018	2004		2021	2020	2019	2018	2004
10	9	12	16	37	Bluebell	29	35	31	47	61
12	10	11	18	15	Countess	24	21	25	35	26
20	15	10	12	15	Dahlia	53	42	24	24	26
26	24	25	47	23	Dolly	57	51	59	78	43
24	22	21	24	46	Ellen	58	58	45	48	107
14	17	14	15	31	Josephine	42	41	38	41	56
10	9	8	10	24	Muriel	22	20	20	25	42
15	16	21	21	12	Primrose	26	29	43	38	22
38	35	40	51	47	Princess	103	107	102	116	83
10	10	9	13	34	Princess Ann	38	44	42	46	61
25	28	25	25	14	Princess Freda	52	46	39	44	24
12	12	10	17	31	Princess Joan	25	39	25	52	63
17	11	11	17	37	Princess Mary	41	53	33	57	55
10	11	9	11	24	Star	22	34	17	26	45
11	17	14	16	15	Star Antoinette	20	18	25	25	22
					<b>Total</b>	<b>612</b>	<b>638</b>	<b>568</b>	<b>702</b>	<b>736</b>
<b>Percentage of sows with purebred litters</b>						<b>56%</b>	<b>58%</b>	<b>64%</b>	<b>64%</b>	

Members keeping this boar line					Boar Line	Registered Boars				
2021	2020	2019	2018	2004		2021	2020	2019	2018	2004
23	23	23	19	46	Gerald	33	36	35	27	51
31	29	23	35	31	Patrick	43	39	24	38	35
15	19	23	31	39	Rufus	25	22	27	35	40
35	36	35	38	43	Sam	42	41	37	46	47
					<b>Total</b>		<b>138</b>	<b>123</b>	<b>146</b>	<b>173</b>
<b>Members keeping registered pigs</b>						<b>135</b>	<b>133</b>	<b>141</b>	<b>172</b>	<b>231</b>

Effective population ( $N_e$ ) size is a measure of the genetic health of the breed. It is calculated as part of the National Inventory of Farm Animal Genetic Resources maintained by Defra based on the annual bloodline survey figures for the UK that we supply. Our 2021 figures will be added in May this year when the inventory is updated. The effective population size of all our native breeds is used in an index as part of the UK monitoring of biodiversity as part of our commitments under the Convention on Biodiversity to which the UK is a signatory. The effective population size is linked to the actual population but there are ways in which we manage this even when sow numbers are falling and this will be our challenge whenever we are faced with difficult times for pedigree breeders.



This year's graphs use a sliding rainbow scale from red to purple. The colours do not represent particular values as the range of lines and breeders between breeds is very wide. What they do show for each breed is where the breed is strongest in terms of lines and breeders and where it is weakest





# BPA Conservation Breeding Plan 2022 Gloucestershire Old Spots Effective Population and Geographical Distribution



These tables show in more detail the progress being made to establish all the lines in as many regions as possible.

Region	Bluebell	Countess	Dahlia	Dolly	Ellen	Josephine	Muriel	Primrose	Princess	Princess Ann	Princess Freda	Princess Joan	Princess Mary	Star	Star Antoinette	Total	2021 Sow lines / region	2020 Sow lines / region	2019 Sow lines / region
Anglia	6	2	5	9	7	5	0	0	27	0	1	7	6	0	1	76	11	13	13
Central	16	7	11	33	38	18	2	13	30	10	28	11	10	13	0	240	14	15	12
North	3	6	0	11	2	1	4	0	6	28	6	4	0	4	0	75	11	12	12
South	3	1	9	3	3	15	2	11	22	0	3	1	6	2	3	84	14	12	12
South West	1	7	22	0	4	2	10	1	16	0	9	1	19	3	12	107	13	14	13
N. Ireland	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	5	2	2	2
Scotland	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	5	2	2	2
Wales	0	1	4	1	0	1	4	0	2	0	2	1	0	0	4	20	9	6	7
<b>2021 Regions with this line</b>	5	6	6	5	6	6	5	4	6	2	7	6	4	4	4	612			
<b>2020 Regions with this line</b>	4	6	4	6	7	5	5	5	5	3	6	5	5	5	5				
<b>2019 Regions with this line</b>	4	7	4	6	6	5	4	6	5	4	6	4	4	4	4				

Region	Gerald	Patrick	Rufus	Sam	Total Boars	2021 Boar lines / region	2020 Boar lines / region	2019 Boar lines / region	2021 Breeders /Region	2020 Breeders /Region	2019 Breeders /Region
Anglia	3	2	4	7	16	4	4	4	21	21	23
Central	8	13	12	15	48	4	4	4	41	37	37
North	3	6	2	5	16	4	4	3	15	13	14
South	3	7	4	5	19	4	4	4	23	25	26
South West	12	12	3	7	34	4	4	4	19	21	22
N. Ireland	1	1	0	0	2	2	1	3	4	4	5
Scotland	1	0	0	1	2	2	3	3	2	3	4
Wales	2	2	0	2	6	3	4	4	10	8	10
<b>2021 Regions with this line</b>	8	7	5	7	143				135		
<b>2020 Regions with this line</b>	7	7	7	7							
<b>2019 Regions with this line</b>	7	8	8	6							

The Gloucestershire Old Spots is the first breed to have completed the target of 10 boars in the Genebank but luckily the demand for GOS semen means that at least one GOS boar is usually available for AI. We will continue to work with Deerpark to try and ensure that boars going for AI are as unrelated to the general population as possible.

HB No	Name	DOB	Ear No	IB
EXE/30	Greenan Sambo	01/12/2000	EXE/30	0.0589
BSM/484	Kilcot Rufus 4	07/01/2002	BSM/484	0.0507
SSG/80	Whinneyhill Sambo 3	06/02/2003	SSG/80	0.0381
R001685GS	Greenan Rufus 4	20/05/2004	EXE/160	0.0461
R001153GS	Alsa Gerald 451	01/01/2005	KCE/451	0.0176
R003320GS	Windmill Patrick 6	25/01/2007	HCR/1348	0.0254
R004202GS	Deerpark Patrick 2	31/10/2007	ROA/2	0.0244
R009570GS	Donagheragh Sambo 13	15/02/2014	KBB/13	0.0415
R009840GS	Pebblesford Gerald 722	05/07/2014	LHC/722	0.0114
R010731GS	Winterwood Patrick 16	16/01/2017	SJA/1491	0.0142
<b>Inbreeding coefficient of the GOS Genebank</b>				0.0328

Mean Inbreeding for the UK Gloucestershire Old Spots Population:  
2021 0.04629, 2020: 0.0515, 2019: 0.0470

### Gloucestershire Old Spots Objectives for 2021

- Reverse the decline of Countess, Primrose and Star Antoinette lines
  - *The Countess line has more sows and breeders, Star Antoinette has more sows but less breeders but the Primrose line is still in decline.*
- Improve the distribution of the Princess Ann line
  - *Unfortunately the Princess Ann line is only present in 2 regions.*
- Make sure that Rufus boar numbers do not fall further behind
  - *Rufus numbers have increased but the number of herds with a Rufus boar has declined*

### Gloucestershire Old Spots Conservation Targets 2022

- Improve distribution of the Princess Ann line and increase the Muriel and Primrose lines
- Continue to work on the Rufus boar line
- Coordinate distribution of lines with financial support from the BPA and the Gloucestershire Old Spot Breeders Club