



Use of registered donkeys on the areas of natural constraint scheme in Ireland

Joseph A Collins,¹ Patrick G Wall,² Vivienne E Duggan³

Data concerning the numbers, locations and types of donkeys being officially registered (passported) in Ireland (32 counties) via horse passport issuing organisations were gathered. The numbers of agricultural area aid scheme (Areas of Natural Constraint (ANC)) applicants registering passported donkeys (as compared with horses) as livestock units (LUs), the numbers of donkeys they registered and the value of payments that thus accrued to the applicants are also reported for each of 26 counties for the years 2012 to 2014 inclusive. Equids have not been eligible for equivalent agricultural schemes in the six counties of Northern Ireland. Horse Sport Ireland registration data shows that two-thirds of almost 8000 donkey passport applicants over a 10-year period came from counties Galway and Mayo and that only one-third of donkeys registered were male. As per ANC figures reported here for 2014, there were over 2500 donkeys registered as LUs on ANC, at a payment value to their keepers (in the 26 counties) of almost €1.6M. Future iterations of the ANC scheme are currently under review with regard to limiting donkey eligibility criteria, for example, to females and neutered males. The future monetary value of (some) donkeys could be adversely affected by restrictions in eligibility and by the uncertainty engendered by the prospect of change with the potential for unintended consequences.

Introduction

In many parts of the developing world, donkeys are kept as working animals and used primarily for transport (of goods and people) and agricultural activities (such as ploughing). There are a number of reports in the literature detailing the socioeconomic aspects of the keeping of donkeys in these parts of the world.^{1–3} Similarly in the past, in Ireland, donkeys proved to have innumerable uses as working equids, being capable of surviving and working on terrain that was unsuitable for horses, which later, many people could not afford in any case.⁴ Today, donkeys are mainly kept either as companion animals or as livestock units (LUs) registered on agricultural area aid schemes to aid in the collection of farm subsidies.⁵ One such agricultural area aid scheme in the Republic of Ireland is the Areas of Natural Constraint (ANC) scheme administered by the Department of Agriculture, Food and the Marine

(DAFM).^{6,7} This scheme was originally introduced in Ireland under European Economic Community (EEC) Council Directive 268/75 as the Disadvantaged Areas Scheme (DAS) to ‘ensure the continued conservation of the countryside in mountain areas and in certain other less-favoured areas’. The scheme was continued in Ireland’s Rural Development Plan 2007–2013 as a measure designed to ‘improve the environment and the countryside’ and support farmers in ‘less favoured areas’ who face significant handicaps deriving from factors such as remoteness, difficult topography and poor soil conditions. Equids (horses and donkeys) were deemed eligible for use as LUs on submission of valid equine identification documents (passports) to DAFM.

In September 2011, a DAFM report under the Government’s Comprehensive Expenditure Review initiative proposed that horses (excepting those on ‘equine breeding enterprises’) and donkeys no longer be eligible (for use as LUs) on the basis that these animals’ contribution to the rural economy was minimal.⁸ A key change was made in 2012 to the rules regarding the use of horses, but not donkeys, as LUs whereby applicants had now to show that their farm qualified as an ‘equine breeding enterprise’ with restrictions on the types of horses deemed eligible. In 2014 the DAFM Rural Development Programme 2014–2020 echoed the rationale and objectives of the DAS scheme and renamed it the ANC scheme.^{9,10} The ANC is co-funded by the EU with matching funding of 55 per cent available.

Veterinary Record (2018)

doi: 10.1136/vr.104355

¹Deerpark Veterinary Services, Cork, Ireland

²School of Public Health and Population Medicine, University College Dublin, Dublin, Ireland

³School of Veterinary Medicine, University College Dublin, Dublin, Ireland

E-mail for correspondence: collinsjoe.collins@gmail.com

Provenance and peer review Not commissioned; externally peer reviewed.

Received February 17, 2017

Revised February 2, 2018

Accepted April 4, 2018

Minimum stocking densities, a minimum period for which livestock must be retained and minimum acreage are set out each year. Applicants have to demonstrate that the land is being 'actively farmed' as defined in article 9 of regulation (EU) number 1307/2013.¹¹ Cattle, sheep, deer, horses and donkeys qualify for use in the calculation of minimum stocking densities. All eligible horses and all donkeys qualify as one LU; bovines only reach parity at the age of two years. Donkeys are considered particularly attractive for the management of poor quality grazing land where applicants value a low-input (time and costs) model. ANC rules regarding horses were subsequently significantly amended for 2017 such that only horses with a recorded pedigree were deemed eligible for use as LUs. All donkeys (irrespective of pedigree, sex, age or breeding status) already registered as LUs continue to this day to be eligible for inclusion. However, in 2017 DAFM restricted eligibility of newly registered donkey LUs to animals identified to the letter of the requirements of EU Identification of Equidae Regulations (EC 504/2008) as transposed into Irish legislation¹²⁻¹⁴: these stipulate the maximum age of equids at time of first identification for full compliance. On farm 'cross-compliance' inspections by officials from DAFM are conducted on 5 per cent of ANC-applicant farms on a combination of random and risk bases.

Concern has specifically been expressed by The Donkey Sanctuary that the unrestricted eligibility of donkeys for ANC and low on-farm inspection rates might have implications for donkey welfare in Ireland.¹⁵ The eligibility of donkeys for ANC confers a value and thus creates a market for donkeys. Low on-farm inspection rates and the absence of welfare criteria in ANC may facilitate poor welfare standards for donkeys on farms. At the time of writing discussions are ongoing regarding the restriction of donkey eligibility, as examples, to female and to only gelded (ie, not entire) male animals. Abrupt change in eligibility criteria may have unintended consequences adversely affecting donkey welfare by creating a sudden oversupply, possibly of specific types of now-devalued animals.

The aim of this study was to document the demographics of registered donkeys in Ireland, including registration with horse passport issuing agencies and on the ANC scheme.

Materials and methods

The list of horse passport issuing organisations (HPIOs) licensed by DAFM to issue passports to Equidae in Ireland was consulted and the two organisations, namely Horse Sport Ireland (HSI) and Leisure Horse Ireland (LHI), licensed to issue passports for donkeys were contacted and requested to supply donkey registration data. The Donkey Breed Society, a UK-licensed HPIO, which supplies passports for rescued donkeys in Ireland, was

also contacted and agreed to supply donkey registration data for Irish donkeys.

Contact was established with the area aid section of DAFM and a study was made of the details of how agricultural aid schemes, most notably the ANC scheme, operated with regard to Equidae including donkeys. Information was gathered concerning the mapping of eligible areas, the numbers of applicants, the county of origin of applicants and the numbers of registered donkeys (and other Equidae) these applicants used as LUs to claim agricultural aid subsidies as part of the ANC scheme for the years 2012, 2013 and 2014. The value of payments made to applicants registering Equidae as LUs during these years was also gathered.

Passporting and ANC application data were tabulated and are presented with reference to the counties of origin of applicants and donkey sex. The information was analysed to identify counties worthy of note and changes over time; comparisons were made between passport and ANC donkey application information and between the use of horses and donkeys as equine LUs on the ANC scheme. As this study concerned the collection and analysis of data only and no interaction with live animals, an ethical review process was considered but deemed unnecessary by the authors in the context of EU 63/2010 concerning the safeguarding of animals used for scientific purposes.

Results

Registration of Irish donkeys

HSI was the primary HPIO for donkeys in Ireland during the period of this study; between the years 2004 and 2013 it issued almost 8000 donkey passports. LHI set up a donkey stud book in 2013 and registered 79 donkeys during its first year. The Donkey Breed Society (a UK HPIO) reported registering 359, 97 and 247 Irish donkeys in the years 2011, 2012 and 2013, respectively, primarily in the name of The Donkey Sanctuary.

Fig 1 shows HSI's total registration data for donkeys between the years 2004 and 2013 inclusively. Details relating to the numbers and percentages of donkeys registered with HSI between the years 2004 and 2013 by county or territory of origin of the applicant and the numbers and percentages of these that were female are shown in Table 1.

- ▶ There were notable increases in the number of passports issued for donkeys in the year 2008 as compared with 2007, and again in the year 2012 as compared with 2011.
- ▶ Almost one-third of donkey passport applicants cited their address as either County Galway (16 per cent) or County Mayo (15.5 per cent); the next highest contributor was County Kerry at 7 per cent.
- ▶ Fewer than 2 per cent of donkey passport applications emanated from the six counties of Northern Ireland combined.
- ▶ HSI reported that 34 per cent of donkeys passported were 'male'; only 6.5 per cent of these as 'geldings'.

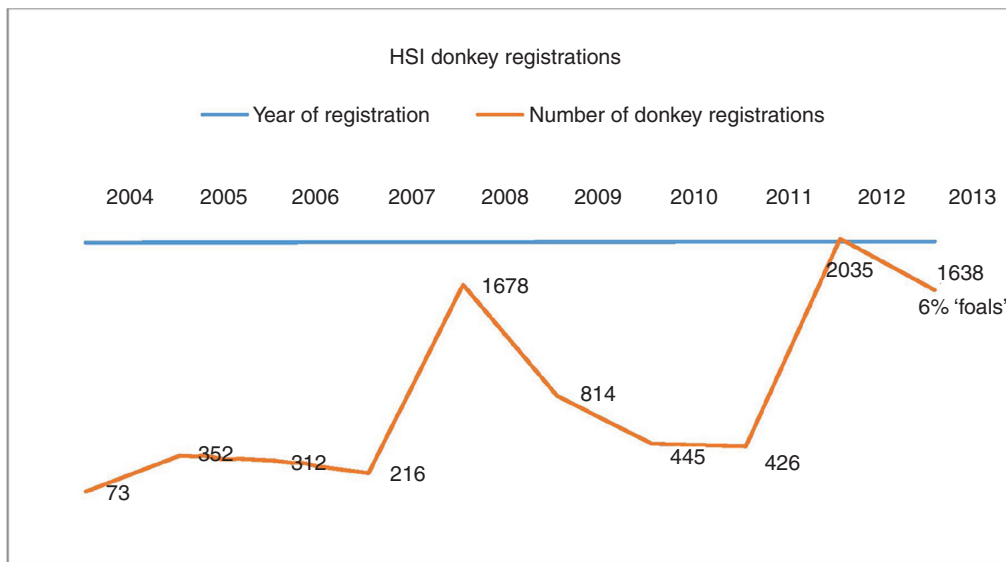


FIG 1: The numbers of donkeys for which Horse Sport Ireland (HSI) issued passports over a 10-year-period, between the years 2004 and 2013 inclusively.

- ▶ Seventy-one per cent of County Galway's contribution to the figures were registered as 'female'.
- ▶ In 2013 6 per cent of donkey passports issued were for 'foals'; 94 per cent of animals were recorded as 'adult'.

TABLE 1: Horse Sport Ireland data for the total numbers of donkeys registered and percentages (% of total numbers of donkeys registered), and the numbers of female donkeys registered and percentages (% of county totals) between the years 2004 and 2013, in each of 26 counties of the Republic of Ireland in alphabetical order, and in Northern Ireland (six counties)

County/territory of applicant	Total number of donkeys registered between 2004 and 2013 (% of total)	Number (and % of county total) of female donkeys registered between 2004 and 2013
Carlow	67 (0.85)	58 (87)
Cavan	266 (3.37)	190 (71)
Clare	540 (6.85)	362 (67)
Cork	501 (6.35)	305 (61)
Donegal	473 (6.00)	332 (70)
Dublin	54 (0.68)	36 (54)
Galway	1264 (16.03)	896 (71)
Kerry	569 (7.22)	331 (58)
Kildare	39 (0.49)	27 (69)
Kilkenny	51 (0.65)	35 (69)
Laois	39 (0.49)	30 (77)
Leitrim	423 (5.37)	283 (67)
Limerick	64 (0.81)	50 (78)
Longford	190 (2.41)	120 (63)
Louth	44 (0.56)	28 (64)
Mayo	1224 (15.54)	788 (64)
Meath	78 (0.99)	29 (37)
Monaghan	96 (1.22)	67 (70)
Offaly	29 (0.37)	23 (79)
Roscommon	421 (5.34)	309 (73)
Sligo	494 (6.27)	318 (64)
Tipperary	166 (2.11)	105 (63)
Waterford	29 (0.37)	11 (38)
Westmeath	126 (1.60)	75 (60)
Wexford	178 (2.26)	116 (65)
Wicklow	126 (1.60)	77 (61)
Northern Ireland	150 (1.90)	105 (70)
Abroad	181 (2.3)	94 (52)

Agricultural area aid schemes

The total area designated as 'disadvantaged' in the Republic of Ireland for the ANC scheme purposes during the period of this study stood at 51,55,438 hectares (some 75 per cent of the total land area of 26 counties): qualifying areas in the year 2014 are shown in the map in Fig 2 as DAS designated areas. Land under roads, paths, buildings, farmyards, woods, scrub, rivers, streams, ponds, lakes, sand, areas of bare rock and boglands 'unfit for grazing' are deemed ineligible for inclusion in the scheme.

Donkeys cannot be separated from horses in ANC-applicant data up to and including the year 2011 as the same eligibility rules applied for all equids and DAFM did not record each as a separate species. Thereafter it is possible to separate donkey and horse registrations. The numbers of equids (horses and/or donkeys) registered as LUs, and the total euro value of payments made to these applicants in the years between 2010 and 2014 inclusively, are shown in Fig 3. Table 2 in addition shows the total numbers of horses and donkeys registered as LUs on ANC and the payments made to these applicants during 2012, 2013 and 2014.

- ▶ Equids registered by applicants to ANC peaked in 2011 at a figure of 18,447.
- ▶ Net payments to the keepers of equids also peaked in 2011 amounting to €6.2 million.
- ▶ In 2012 there were only 6768 equids registered with a corresponding payment value of €2.4 million.
- ▶ The numbers of horses registered as LUs on ANC fell by 42.6 per cent between 2012 and 2014; the numbers of donkeys so registered rose by 14.5 per cent during the same period with a peak of 2593 in 2013.

The figures for the years 2012, 2013 and 2014 for the numbers of ANC applicants registering donkeys, the numbers of donkeys they registered and the euro value of payments made to these applicants on a county-by-county basis (for 26 counties) are shown in Table 3.

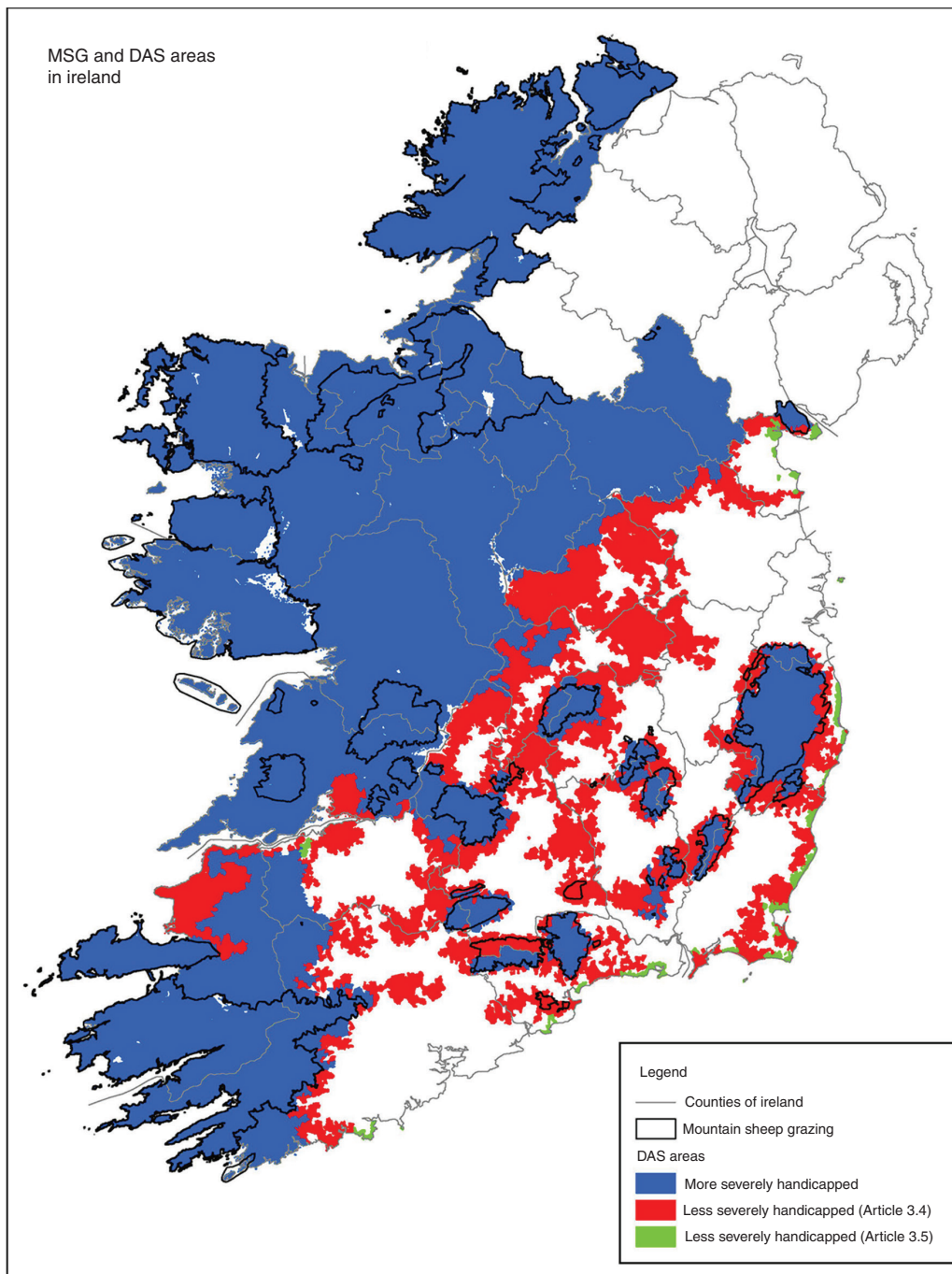


FIG 2: Colour-coded map produced by the Department of Agriculture, Food and the Marine (DAFM) showing the areas of the 26 counties of the Republic of Ireland that qualified for application to the Disadvantaged Areas Scheme (DAS) in the year 2014. Mountain sheep grazing (MSG) areas are also depicted but are not relevant to this paper.

- ▶ Counties Galway and Mayo accounted for approximately one-third of the total number of both applicants and donkeys; county Kerry contributes the next highest percentages.
- ▶ Applicants kept an average of 3.5 donkeys per applicant.
- ▶ The latest figures (2014) showed that there were 2544 donkeys, in the care of 737 applicants, registered with a total payment value of €1.6 million to donkey keepers in the 26 counties.
- ▶ Donkey inclusion as LUs on the ANC scheme is also highest in western coastal counties with counties Mayo, Galway and Kerry occupying positions 1, 2 and 3 on the lists of applicant numbers, donkey numbers and euro value payments.

A comparison of data provided from the main HPIO (HSI), DAS (ANC) disadvantaged area mapping and ANC-applicant details shows that:

- ▶ Seventy-three per cent of applications to HSI for donkey passports during the period from 2004 to 2013 were from western Atlantic coastal counties.
- ▶ These counties (with the exception of county Limerick) are designated as 'more severely handicapped' under ANC scheme rules.

Discussion

The numbers of donkey passports issued in Ireland have varied widely from year to year since 2004. In 2008, there was a dramatic increase from 216 to 1678 donkeys registered. This was the year that new EU legislation was published relating to the identification of Equidae, including donkeys, in Ireland. The promotion, greater awareness and enforcement of equine identification rules may have led to increased regulatory compliance for a short period. The number of donkey passports

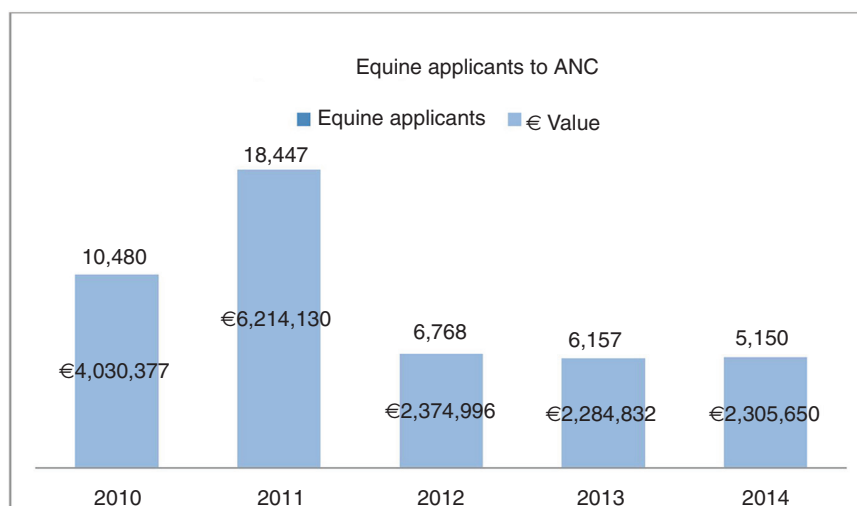


FIG 3: The numbers of equids (horses, ponies or donkeys) registered by Areas of Natural Constraint (ANC) scheme applicants as livestock units (LUs) and the euro value of payments that accrued to applicants (with equids) between the years 2010 and 2014 in the Republic of Ireland.

issued halved in each of the subsequent two years until another dramatic increase can be seen from 426 donkeys registered in 2011, to 2035 registered in 2012. This was the year that changes in ANC eligibility criteria were introduced that restricted the use of horses, but not donkeys, as LUs. This restriction may have provided a driver for the passporting and subsequent registration of increased numbers of donkeys on this agricultural aid scheme as substitutes for other equids (horses) no longer deemed eligible.

In 2013 HSI issued passports for 1638 donkeys: only 6 per cent of those donkeys (98) were foals; the same organisation registered 5160 horse foals in the same year.¹⁶ By law (EC 204/2008), equine foals (including donkeys) are required to be registered by December of the year of birth or at latest 12 months of age for full compliance.^{17 18} Collins *et al* previously reported on the passporting/registration of equids in Ireland, problems regarding non-compliance and links with welfare concerns for unregistered Equidae for whom a responsible person cannot be traced.

Unless they are to be used as stud animals male equids (that are being retained) are generally neutered for ease of management; females have inherent breeding value. HSI reported that only one-third (out of a presumptive 50 per cent of production) of donkeys registered with them over a 10-year period were male of which only 6.5 per cent were registered as 'geldings'. This discrepancy may be due to castration being an inherent veterinary cost. There is also a cost

associated with the legal disposal of unwanted donkeys. Therein may lie drivers towards the abandonment of non-traceable (non-microchipped, non-passported) entire male donkeys.

The numbers of donkeys passported/registered with HSI varies widely from county to county with the highest numbers registered in counties along the west coast of Ireland from Donegal to Kerry (Table 1). These counties are among those considered under the ANC scheme as the most severely constrained with regard to agricultural activity (Fig 2). The authors suggest that the primary utility of donkeys in these Atlantic seaboard counties is likely to be their use as LUs on ANC (which requires proof of passporting) rather than as companions or pet animals (which legally but in practical terms doesn't require proof of passporting due to lack of enforcement).

The ANC scheme serves a valuable function in delivering funds to less well developed and 'naturally constrained' agricultural areas of the country and the eligibility of donkeys has provided applicants with a low-cost option (compared with traditional livestock) of qualifying LUs on marginal lands. According to figures published for 2014, there were over 2500 donkeys recorded as LUs on the ANC scheme at a payment value to their keepers (in the 26 counties of the Republic of Ireland) of almost €1.6 million. These donkeys accounted for just below half of the 5150 equids recorded on the scheme for that year at a total payment value to their keepers of €2.3 million (Fig 3).

TABLE 2: Euro value of Areas of Natural Constraint (ANC) equine-applicant payments and the numbers of equids registered as livestock units (LUs) on ANC during the years 2010 to 2014

ANC year	Horse/donkey-applicant payments		Total equine-applicant payments	Horse/donkey LU numbers		Total equine LU numbers
2010			€4,030,377			10,480
2011			€6,214,130			18,447
	Horses	Donkeys		Horses	Donkeys	
2012	€627,178	€1,747,818	€2,374,996	4546	2222	6768
2013	€540,527	€1,744,305	€2,284,832	3564	2593	6157
2014	€711,172	€1,594,478	€2,305,650	2606	2544	5150

TABLE 3: The numbers of applicants to Areas of Natural Constraint (ANC) with donkeys, the number of donkeys they registered and what payments were made to these applicants for each of the 26 counties, in alphabetical order, of the Republic of Ireland in the years 2012, 2013 and 2014. The totals for each of these years for 26 counties is also shown

County	2012 Applicants	2012 Donkeys	2012 Amount paid	2013 Applicants	2013 Donkeys	2013 Amount paid	2014 Applicants	2014 Donkeys	2014 Amount paid
Carlow	1	1	€1333.60	1	1	€1336.06	1	1	€1304.80
Cavan	16	64	€34,371.87	15	57	€35,790.28	13	53	€33,377.49
Clare	37	147	€110,713.57	41	172	€106,794.78	43	150	€97,903.69
Cork	64	222	€184,579.50	72	255	€178,568.05	77	278	€161,734.54
Donegal	45	156	€124,037.69	64	204	€134,233.58	63	202	€124,163.78
Galway	106	369	€344,718.56	131	475	€360,022.38	119	423	€321,795.04
Kerry	81	296	€250,227.31	99	378	€257,948.10	113	395	€245,808.25
Kildare	1	2	€787.32	1	2	€787.32	1	2	€787.32
Kilkenny	0	0	€2835.46	0	0	€2506.38	1	5	€2382.97
Leitrim	47	164	€95,814.95	48	141	€86,472.20	47	144	€77,662.54
Limerick	4	12	€23,180.08	8	22	€21,728.35	10	37	€23,395.00
Longford	5	20	€17,135.23	9	38	€17,267.75	11	32	€16,263.16
Louth	3	9	€4798.98	3	11	€4661.78	2	9	€4578.95
Mayo	103	349	€313,205.39	125	404	€311,006.81	123	410	€277,476.95
Monaghan	11	34	€15,455.35	8	28	€12,480.62	7	23	€13,704.51
Offaly	4	11	€3892.26	4	11	€4232.85	2	6	€4221.49
Roscommon	32	126	€78,618.57	42	147	€75,447.35	41	150	€71,767.24
Sligo	38	139	€85,192.46	38	145	€81,558.14	39	135	€66,734.55
Tipperary	10	39	€24,448.99	12	47	€21,147.70	10	42	€21,125.78
Waterford	2	8	€3661.88	1	4	€3440.15	2	5	€3490.13
Westmeath	7	20	€13,695.24	5	14	€10,673.32	5	14	€9796.33
Wexford	5	15	€8654.84	5	19	€10,678.45	5	19	€10,558.70
Wicklow	7	19	€6458.73	5	18	€5522.26	2	9	€4444.98
Total	629	2222	€1,747,818	737	2593	€1,744,305	737	2544	€1,594,478

The proportion of donkeys to horses in the general equine population in Ireland is far less, although unclear as registration data doesn't provide the full picture. In 2013 HSI issued passports for 98 donkey foals and 5160 horse foals.¹⁶

The highest number of ANC donkey-keeping applicants, and payments made to these applicants, related to the counties along the west coast of Ireland. The unrestricted eligibility of donkeys as LUs may confer a value in particular on breeding females and thus drive donkey production. Donkey eligibility for ANC has not been universally well regarded: figures for donkey abandonments and relinquishments are highest for counties with significant ANC activity, notably counties Galway and Mayo.¹⁹ There have been calls for eligibility restrictions to be introduced to discourage indiscriminate breeding and the subsequent abandonment of little-valued, non-traceable, unneutered male donkeys.¹⁵

Following the launch of a report at the UCD School of Veterinary Medicine in the presence of the minister for agriculture by the authors in November 2015,⁵ The Donkey Sanctuary (Ireland) initiated a Donkey Welfare Improvement Scheme²⁰ offering services (veterinary, farriery and dental) to the owners/keepers of private donkeys (with a particular focus on ANC applicants) in tune with any proposed changes in donkey eligibility criteria for future iterations of ANC. The authors have recognised the need for an on-farm donkey welfare assessment tool so that trends in welfare standards

of privately owned donkeys can be analysed. Such assessment (as part of unofficial Donkey Sanctuary inspections) combined with a proposed increase in DAFM's own official donkey-ANC inspection rate (through an adjustment of the DAFM random/risk basis of on-farm inspection) have the potential to improve on-farm donkey welfare standards where such is needed.

At the time of writing in 2017, DAFM has tightened up donkey eligibility, restricting eligibility to donkeys passported before 12 months of age (in full compliance with EC 504/2008). The authors consider that this restriction might have the unintended consequence of driving the production of new foals that can be legally registered. If the authorities introduce further abrupt eligibility criteria for donkeys, such as making unneutered males ineligible, there may be further unintended consequences with regard to abandonment of donkeys that become ineligible. The authors consider that such change should be announced in a coordinated and consultative fashion well in advance of implementation so as to encourage more castration and not abandonment. At least two equine welfare organisations in Ireland (namely Hungry Horse Outside and Sathya Sai Donkey Sanctuary) already run well-established subsidised castration schemes for privately owned equids and The Donkey Sanctuary embarked on similar donkey-targeted work in 2017.

If flagged well in advance of change, coordinated moves between government and non-government organisations (NGOs) might act to de-incentivise

indiscriminate donkey breeding and bring about further positive change. The authors believe that the future value (and potentially welfare) of donkeys will be significantly affected by mooted actual changes to donkey eligibility if/when these occur and by the uncertainty engendered by the prospect of change. The authors urge caution, careful consideration and forward advertising so that changes in donkey eligibility criteria do not lead to negative unintended consequences.

Conclusion

Unrestricted donkey eligibility for area aid schemes may inadvertently be driving a market for donkeys; however ANC eligibility is likely to promote donkey passporting/registration – of valuable, that is, eligible animals as can be seen in the 2012 versus 2011 passporting figures. The low rate of on-farm inspection of ANC applicants may contribute to poor welfare standards; further official and unofficial inspections along with on-farm welfare assessments are indicated with a view to improving donkey welfare standards. The authors suggest that eligibility change should be framed with a view to further incentivising donkey passporting/registration, promoting castration, and to keeping identified donkeys in available donkey places in farming communities rather than devalued and liable to abandonment. Such change must be well coordinated, supported by NGOs and widely publicised well in advance of rule change to obviate unintended consequences.

Funding This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

© British Veterinary Association (unless otherwise stated in the text of the article) 2018. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

References

- 1 SMITH DG, PEARSON RA. A review of the factors affecting the survival of donkeys in semi-arid regions of sub-Saharan Africa. *Trop Anim Health Prod* 2005;37(Suppl 1):1–19.
- 2 HASSAN MR, STEENSTRA FA, UDO HMJ. Benefits of donkeys in rural and urban areas in northwest Nigeria. *African J Agricul Res* 2013;8:6202–12.
- 3 HIKO A, GEBREMARIAM K, MUKTAR, Y AND. Socioeconomic roles and welfare aspects of donkey (*Equus asinus*) in selected sites of Tigray Regional State, Ethiopia. *American-Eurasian J Agric & Environ Sci* 2016;16:1629–34.
- 4 SWINFEN A. *The Irish Donkey*. Uses in Ireland. Dublin: Lilliput Press, 2004.
- 5 COLLINS J, DUGGAN V, FINNEY S, *et al*. Donkey welfare in Ireland 2015: concerns and solutions. 2015. <http://www.thedonkeysanctuary.ie/sites/ireland/files/article/272-1449671864.pdf>
- 6 DAFM. Helpsheet /terms & conditions for the 2012 EU disadvantaged areas scheme. 2012. <http://www.agriculture.gov.ie/media/migration/farmingschemesandpayments/singlepaymentsschem e/2012/2012DASTCA4150512.pdf>
- 7 DAFM. Helpsheet /terms & conditions for the 2013 EU single payment scheme (SPS) and other 2013 area - based schemes. 2013. <http://www.agriculture.gov.ie/media/migration/farmingschemesandpayments/singlepaymentsscheme/2013/2013SPSTandC180413.pdf>
- 8 DAFM. Value for money review of the disadvantaged areas scheme. 2012b. <http://www.agriculture.gov.ie/media/migration/publications/2014/VFMReviewDisadvantagedAreaSchemeFinalpdf140314.pdf>
- 9 DAFM. Ireland's Rural Development Programme 2014-2020 Draft of July 2014. 2014. <http://www.agriculture.gov.ie/media/migration/ruralenvironment/ruraldevelopment/ruraldevelopmentprogramme2014-2020/InformPublicStrat040116.pdf>
- 10 DAFM. Draft Rural Development Programme Ireland 2014 - 2020 Summary of Draft Measures. 2014b. <https://www.agriculture.gov.ie/media/migration/ruralenvironment/ruraldevelopment/ruraldevelopmentprogramme2014-2020/OriginalVersionAdopt edMay2015100217.pdf>
- 11 DAFM. Helpsheet/terms & conditions: Areas of Natural Constraint (ANC) scheme 2016. 2016. <http://www.agriculture.gov.ie/media/migration/farmingschemesandpayments/basicpaymentscheme/2016forms/ANCTC2016160316.docx>
- 12 EU Commission. EC 262/2015 as regards methods for the identification of equidae. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2015:059:FULL&from=EN>
- 13 EU Commission. Animal Health: EU to tighten rules on horse passports. 2014. http://europa.eu/rapid/press-release_IP-14-1000_en.htm
- 14 EU. European Communities (equine stud-book and competition) Regulations 2004, SI 399 of 2004. <http://www.irishstatutebook.ie/eli/2004/si/399/made/en/print>
- 15 The Donkey Sanctuary. Understanding Ireland's donkeys: UK Spring Newsletter, 2016. <https://www.thedonkeysanctuary.org.uk/sites/sanctuary/files/document/579-1458637444-newsletters.pdf>
- 16 HSI. The Irish horse register: foals registered in 2013. 2013. <http://www.horsesportireland.ie/wp-content/uploads/2014/01/FoalBK13.pdf>
- 17 COLLINS J, HANLON A, MORE S, *et al*. The structure and regulation of the Irish equine industries: Links to considerations of equine welfare. *Ir Vet J* 2008;61:746–56.
- 18 COLLINS J, HANLON AM, MORE SJ. Challenges and Solutions to support good equine welfare practice in Ireland. 2010 www.ucd.ie/animalwelfare/research/
- 19 The Donkey Sanctuary. The Donkey Sanctuary calls for carefully considered changes to agricultural subsidies. 2015. <http://www.thedonkeysanctuary.ie/article/the-donkey-sanctuary-calls-for-carefully-considered-changes-to-agricultural-subsidies>
- 20 DWIS. Donkey Welfare Improvement Scheme. The Donkey Sanctuary Ireland. 2017. <http://www.thedonkeysanctuary.ie/welfare-improvement-scheme>

