SUSTAINABLE USE OF WILD DEER IN QUEENSLAND – IS IT ACHIEVABLE UNDER CURRENT LEGISLATION?

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ABSTRACT

The sustainability of wild deer through recreational hunting requires sound management and supportive legislation. Economic viability and community acceptance are equally vital to success, especially on private lands. At the 1994 *"Conservation through the Sustainable Use of Wildlife Conference"* I presented a paper titled "*Queensland's Wild Deer and their role in Sustainable Wildlife Management*" (McGhie and Watson 1995). Building upon the previous work conducted by Research Into Deer Genetics and Environment (RIDGE), I incorporated two strategies presented at this conference, including Quality Deer Management (QDM) and Property Based Management Plans (PBMP), in my deer capture, farming and guiding business, Australian Wild Country Adventures (AWCA). Working in close partnership with RIDGE, we demonstrated the potential of these strategies as a viable alternative for wild deer management in Australia. This paper highlights RIDGE's management efforts and offers insights regarding existing challenges and opportunities. While the listing of wild deer as a pest under current Queensland legislation threatens their use as a resource, the sustainable use principles described herein remain a viable management option.

Keywords: economic viability, legislation, Property Based Management Plans, Quality Deer Management, Queensland, red deer, Research Into Deer Genetics and Environment, sustainable use, wild deer

INTRODUCTION

RIDGE Inc.

In 1992, concerned hunters and landowners in Queensland formed the non-profit organisation Research Into Deer Genetics and Environment, largely in response to concerns regarding the possible widespread eradication of wild deer in Queensland. This was due to a belief within government that wild deer served as potential *"vectors of exotic diseases"* and that the *"economic and environmental risks posed by feral deer outweigh any beneficial uses"* (Smith 1993). Their status changed from "introduced fauna" under *the Fauna Conservation Act 1974* to "feral" and eventually to "pest" (Jesser 2005). RIDGE maintained that wild deer are an integral part of Queensland's history and culture (Figure 1) and deserving of management (Comben 1992).

Since their lawful introduction to the State as a gift from Queen Victoria beginning in 1871 (Brisbane Courier 1873) and their place on the Queensland Coat of Arms, wild deer have received little organised management. RIDGE contends that, if properly managed, wild deer can be a "*valuable resource and part of Queensland's history*" (Comben 1992).

Figure 1. Recreational deer hunting has been a part of rural life in southeast Queensland for over 100 years. (J. McGhie collection (circa 1950)).

RIDGE identified the following impediments to the formulation and implementation of a system for managing wild deer:

- All deer were non-native and therefore did not fit comfortably under "Fauna" legislation.
- *Deer Farming Act 1985* was repealed.
- Deer farming industry collapsed.
- Numerous new releases across the State.
- The vast majority were living on private (freehold/leasehold) lands.
- Hunting is only lawful on private freehold property.
- Vast distances separated the four "historic" herds (McGhie 2004).
- Reluctance from authorities to support landholders gaining economically from a "pest".
- No cohesive strategy between hunting groups.
- Widely disparate views on game management.
- Minimal research on existing herds within Queensland.
- The potential that herd densities could increase exponentially.
- A growing sentiment amongst academia, government and some landholders that wild deer were a "pest" and should be managed as such.
- The suggestion of an attempt to achieve total eradication of wild deer (Smith 1993).

Property-based Management Plans and Quality Deer Management

In 1993, the concepts of Property Based Management Plans (PBMPs) and Quality Deer Management (QDM) were introduced into Tasmania by the Tasmanian Deer Advisory Committee (TDAC) (Murphy 1995). PBMPs are property-specific agreements between landholders and hunters that outline strategies for managing deer and other wildlife at acceptable levels while achieving broader conservation objectives. QDM is a deer management approach that involves restraint in harvesting young males combined with active harvest of female (or antlerless) deer to increase buck age structure, balance adult sex ratios, and maintain desired population densities. When PBMPs and QDM are combined, they provide an effective framework for managing wild deer at levels compatible with other land uses and conservation objectives.

RIDGE recognised the need for research on wild deer Queensland before an effective management system could be established. However, to date funding for such research has proven challenging. Contributions from the private sector have largely come from hunting and conservation organisations. Government funding has proven equally elusive, largely due to deer being considered a pest rather than a sustainable resource. Despite insufficient

funding for research, a comprehensive list of educational and research initiatives have been undertaken (www.theridgegroup.net).

AWCA/RIDGE Management strategies

Founded in 1985, Australian Wild Country Adventures Pty Ltd (AWCA) is a commercial deer hunting and deer farming operation based in Queensland. Previous experience with hunting clients identified several impediments to the long-term success of a traditional trophy hunting approach. First, clients were reluctant to harvest females and low-quality mature males, focusing instead on top-quality trophies. This high-grading approach decreased herd quality and increased deer densities. The result was an erosion of hunter interest and reduced economic return to the landholder.

Recognising the need for sustainable deer management strategies on these concessions, a self-guided balloted hunting system (RIDGE Ballot) was introduced in 1996. The system allows hunters to participate in a hunting ballot for red deer in March and April each year, concentrating harvest on mature trophy and management (cull) males. Hunters participating in the ballot pay an access fee and a trophy fee per animal under a tiered system based on age and antler quality. Average annual returns are provided in Table 1. Landholders are encouraged to direct ballot income to property management.

Table 1. Annual income from AWCA/Ridge red deer ballot 2008-2014.

Year	Ballot count	Sum Ballot Fee ($)	Guiding Count	Sum Guiding Fee ($)	Trophy Count	Sum Trophy Fee ($)	Annual Total ($)
2008	62	29,340	2	440	23	10,340	40,120
2009	54	30,043	6	1,320	30	15,210	46,573
2010	45	24,543	5	3,300	26	12,390	40,233
2011	18	38,980	3	990	48	22,330	62,300
2012	77	38,179	5	2,310	42	18,890	59,379
2013	60	30,049	7	3,960	19	8,030	42,039
2014	62	33,735	3	1,760	36	17,945	53,440
Totals	378	224,869	31	14,080	224	105,135	344,084
Avg[1]	54	32,124	4.4	2,011	32	15,019	49,154

1 Annual Income = $1.40/acre/year based on a 35,000-acre concession.

Glenfiddich PBMP – a successful Case history

Effective management of wild deer requires active removal of both male and female deer, preferably with the income derived from such efforts being used to support ongoing management efforts. In 2007, AWCA in conjunction with several willing landholders, implemented a PBMP system known as “Glenfiddich” which utilises recreational hunters to control wild deer as well as wild pigs, wild dogs and rabbits across these holdings (McGhie and Fitzsimons 2016).

The Glenfiddich PBMP was predicated on several key tenets. First, hunters were required to adhere to high ethical standards and utilise all edible meat from harvested animals. In addition, hunters were required to meet established insurance requirements and WHS obligations. Further, the balloted hunting programme had to be compatible with other landholder objectives and land uses, and be repeatable in other areas. The success and sustainability of the Glenfiddich PBMP can be attributed to numerous factors. Perhaps most notable, it leveraged the passion among participants for deer hunting and the environment to control deer populations while providing significant returns for participating landholders (Table 2).

Based on the success of the Glenfiddich PBMP, a similar approach is currently being utilised on more than 400,000 ha of private property throughout the historic deer range in Queensland, as well as many newly introduced herds outside of these zones. It is estimated that existing management efforts impact 16,000 – 20,000 deer in these areas. In addition to improved deer management, hunters have become more knowledgeable and engaged, thereby reducing impacts of feral wildlife species and negative human activities such as trespassing, poaching, damage and theft.

Table 2. Value to landholder from concession and benefits of a Property Based Management Plan.

Landholder income stream	Value per annum	Notes on return to landholder (deer vs cattle)
Gross return to landholder (harvest rights)	$59,400	
Feral animal control value (equivalent control costs and stock preservation i.e. loss reduction)	$48,000	Annual costs for feral animal control/eradication are recouped in this management model that would otherwise be a direct cost to landholder. Loss reduction values of young calves by wild dogs have been included. Environmental gains are not realised as a monetary benefit to the landholder in this model.
Total	$107,400	$71.60 per breeder deer per annum equivalent $488.83 per cattle breeder area equivalent per annum.

Note: Property Based Management Model is based on AWCA lease concession totalling 35,000 acre/14,165 hectare. Breeder cow/deer equivalent is based on 1:7 ratio. One breeder cow area equates to 15 acre/6 hectare.

Using wild deer to enhance habitat for native species

McGhie and Watson (1995) proposed using wild deer as a management tool to enhance and retain habitat that benefits native wildlife species. This approach was successful on an upper Brisbane River cattle property for 20 years, prior to the property being offered for sale in 2015 (McGhie and Fitzsimons 2016). During this time, the landholder was an active supporter of the PBMP and against poisoning of timber regrowth, preferring instead to allow natural habitat regeneration for the benefit of native wildlife. The property sold in May 2016 at a 40 percent premium above local land values given the presence of a well-managed deer herd, a diversity of native wildlife, high-quality native vegetation and the ability to graze cattle within the existing PBMP.

Hunt Easy system

Given the success of the AWCA/RIDGE red deer ballot and the Glenfiddich PBMP, RIDGE has been developing a system for managing wild deer (and other species) which could be replicated across Australia. Modelled after the “Move Easy” (Anon. 2006) concept, this system is known as “Hunt Easy” (RIDGE 2016, Figure 2). The Hunt Easy system will track all movement of animal matter taken by recreational hunters from one property to another using the existing Property Identification Code (PIC) system. This tracking system is advantageous for biosecurity in the advent of a disease outbreak and improves the ability of law enforcement agencies to react to illegal activity by clearly identifying access permission. It would also provide landowners with a self-funding and simple record keeping program for all hunting activities on their properties.

In essence, Hunt Easy would respect the right of any landholder to kill any or all wild deer on their holdings or participate in a sustainable wild deer management programme.

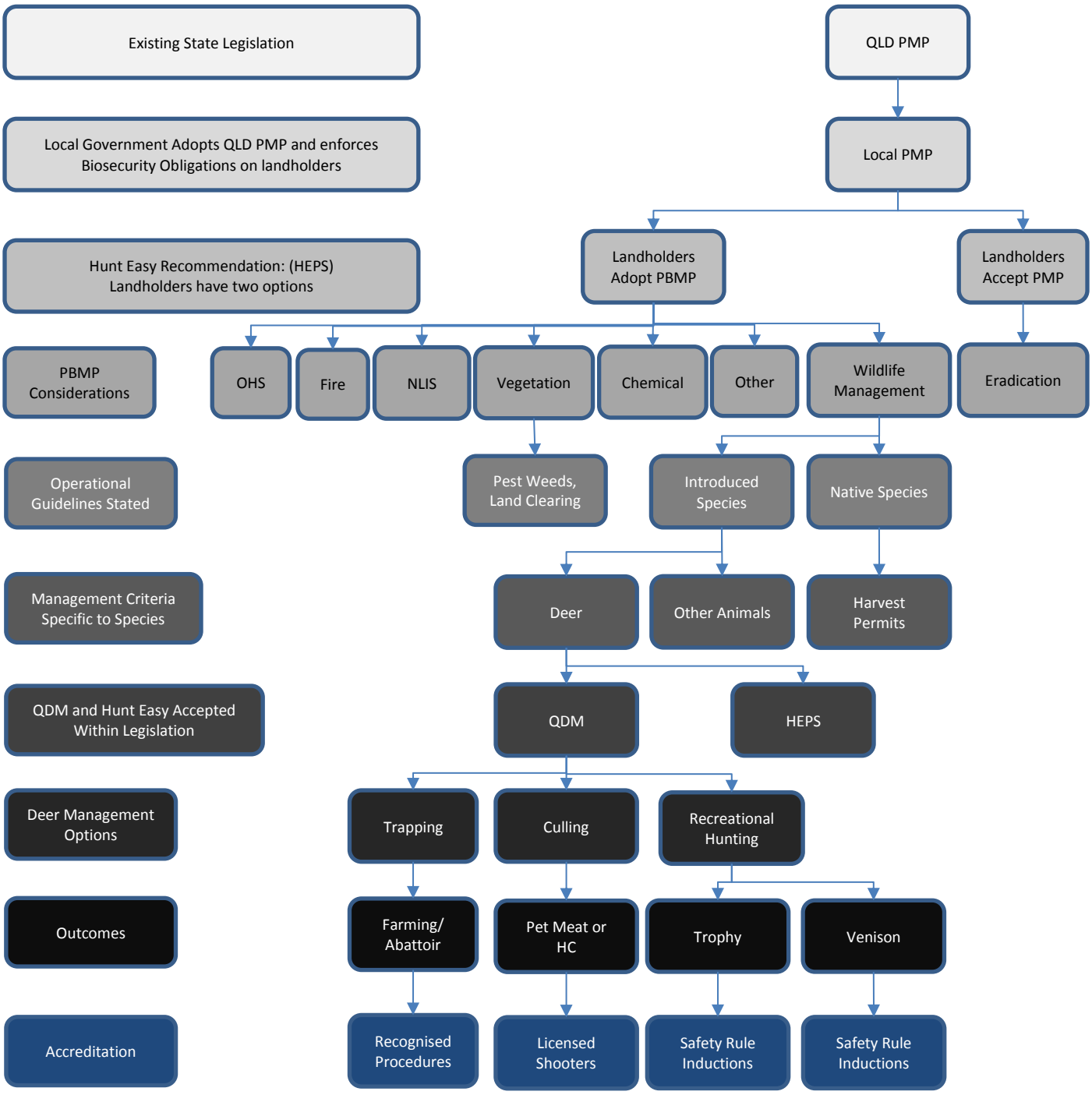

Figure 2. "Hunt Easy" summary model

Impediments to the economic viability of sustainable hunting

AWCA relies on sustainable hunting as its primary income source. With no other working models of commercially-viable, free-range deer management operations in Queensland, this became a suitable "test case" for RIDGE. If economic viability could not be achieved, it would challenge the sustainability of a hunting model for wild deer under practical, "real-life" conditions.

A significant impediment to the viability of AWCA's operation is existing legislation, especially sections of the current *Biosecurity Act 2014* and their relationship with associated *Acts* such as the *Food Production (Safety) Act 2000.* Under current legislation, a landholder adjacent to a property with an established PBMP who embarks on a new agricultural pursuit (e.g. cropping) can utilise existing legislation to force neighbouring landholders to reduce or remove deer attracted across their boundary. Fencing or attractant crops can be used, but this additional cost impacts operational viability.

A local pest officer can determine there are "too many" deer on a property and serve the landholder with a Section 78 compliance notice to remove all or a portion of the wild deer without being required to consider the merits or viability of the PBMP. The ability of a landholder/agent to maintain a deer population sufficient for economic sustainability is questionable without being seen as a "risk creator" (Biosecurity Act 2014). With no mention of "sustainable use' within the *Biosecurity Act 2014*, it remains unclear if there is a mechanism to incorporate the principles of sustainable use. Without this ability, spasmodic control measures could negatively affect herd quality, animal behaviour, hunter participation and revenue generation, by dropping these crucial herd levels below a "point of no return".

The ability for a hunter to give or gift wild-shot venison to a friend or family member without contravening the definition of "supply" or "sell" is a critical point (*Food Production (Safety) Act 2000).* A senior officer from Safe Foods Queensland stated. "… similar to handing eggs across the fence to your neighbour … everyone does it and we will not prosecute unless something happens, but then we will come down on you like a tonne of bricks."

Another critical point is the inability for a landholder/agent/guide to charge hunters a pre-harvest trophy fee for introduced ("pest") species under the *Biosecurity Act 2014.* Equally problematic, the post-harvest carcass falls under the *Food Production (Safety) Act 2000* with its disposition potentially contravening the definition of "supply" or "sell." In letter from Biosecurity Queensland, 16 June 2016, they provide an interpretation: "… that while a landholder cannot sell a feral deer, a landholder may charge a hunter to access their land for the purposes of hunting." The letter also states "…*there is no impediment to a hunter selling hides or antlers*" (Vitelli 2016).

There are numerous benefits associated with the ability of a landholder or their agent to charge a trophy or harvest fee. Importantly, they can control the number of hunters accessing the property as well as the sex, age and number of deer taken. They also can require hunters to participate in other activities which benefit the property including feral animal control and habitat and/or property improvement projects. A well-structured trophy/harvest fee system can realise significant additional gains in hunter safety, compliance, and harvest selectivity both within guided and non-guided activities.

CONCLUSIONS

Deer management in Queensland is at a crossroads with only two potential paths forward: 1) continue attempting to control poor quality remnant herds as "pests" with associated negative sentiment and enforcement; or 2) manage wild deer in a sustainable manner to provide conservation benefits to native habitat/species and economic returns to landholders. A viable method has been developed based on a legal interpretation of the *Biosecurity Act 2014*, whereby a landholder can legally sell the "harvest rights" for feral animals on their land to individuals or a group. This entity can then offer/sell access to recreational hunters who

may harvest wild deer for antlers and skins, with these “products” belonging to the entity. The entity can sell these products and the recreational hunters can retain the venison for personal use.

Such an approach would require a significant paradigm shift and, especially, supportive legislation. Such legislation should recognise the historic and culture significance of wild deer and recommend PBMPs as “best practice.” Any ambiguity of biosecurity legislation and enforcement will undermine confidence in the viability of this approach and restrict the ability to realise the full potential of wild deer as a social and economic resource in Queensland.

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