Current interest in game production is not a local phenomenon. It is part of an international wave endorsed by the IUCN/UNDP World Conservation Strategy. Internationally, the most promising candidates for commercial production are red deer and wapiti. This paper traces the development of the concept and its potential with special attention to Alberta where enabling legislation is pending.

DEVELOPMENT OF THE CONCEPT

The modern origin of game production can be traced to western biologists working in Eastern and Southern Africa faced with the harsh reality that if wildlife were to survive, it must pay its own way. They were motivated by the perceived need to stem the replacement of wildlife by livestock and the resulting degradation of rangelands. The slogan was "conservation through utilization." Supply of protein was a justification rather than a goal.

Game Cropping

The earliest attempts were made to harvest free-ranging, sometimes migratory populations. Game cropping maintained the greatest degree of naturalness but economics required heroic campaigns launched against dense congregations of game. The scale of the operations was repugnant to the public while the pulsed supply created problems of meat distribution. Such operations had to be conducted by well-trained teams and did little to influence the behavior of landowners.

Game Ranching

Game cropping has been almost entirely replaced by game ranching on fenced properties. Although expensive, fencing is now recognized as a necessity. Fences clarify ownership and prevent crop damage on neighboring properties. By restricting migratory movements, fences serve to stabilize product supply, an essential requirement of market development.

GAME RANCHING IN WESTERN CANADA

When the Alberta Wildlife Production Research Committee was formed in 1974, we wondered whether similar reasoning might apply in Western Canada.
Given the massive onslaught on the boreal forest at the time, it seemed as if much of northern Alberta would be developed for livestock production. We reasoned that the lesser of two evils would be to encourage production of native species. After all, wouldn't this serve the goal of landscape conservation?

Our local model was Elk Island National Park which has provided an impressive annual harvest simply in the process of controlling populations. Numerous studies have since documented this productivity and examined its ecological basis. The productivity of Elk Island exceeds that of the adjacent Blackfoot Grazing Lease which supports seasonal grazing by livestock.

The wisdom of hindsight now points to several problems with Elk Island as a model for the emerging game industry.

1. To be economically viable, game ranches must be large. Few people own large land bases and public lands are already heavily committed. This limits opportunities to Indian and Metis people with a communally-owned land base.

2. Breeding stock is scarce which means a long time to enterprise maturity.

3. Regulations which protect the public wildlife resource (e.g. high fencing standards, tagging requirements) along with market competition which forces compliance with superior standards of meat hygiene, impose high material and managerial costs. This means that natural stocking densities tend to be lower than economic densities.

GAME FARMING

These forces, along with the requirement that game production must be conducted on private land, create a rather different future for game production than we originally conceived. Before, we saw the influence moving from the agricultural fringe outward. Now, we see it moving onto increasingly better agricultural land. This trend is very noticeable in New Zealand where sheep and deer have reversed roles.

Although new legislation will formalize conditions for raising a variety of wild species, only wapiti will join bison on farms in any numbers. Deer are too hard to contain, and moose do not thrive under intensive management. Production costs for moose are over $850/yr. In general, only the Cervinae are resistant to disease, and the only representative we have is the wapiti. This is the only species with a long-term international market potential.

We should anticipate intensive management of wapiti to dominate the game farming scene. The purists cry that these animals will be raised like domestic livestock, and that we will be no further ahead. But there
is less motivation to replace natural vegetation, and game production is sufficiently economic to move onto croplands. There will be a net gain in habitats available for wildlife such as gamebirds, waterfowl, raptors, and even deer which move freely across game fences. Besides, game ranches will provide interesting variety to the agricultural landscape.

Wapiti provide an excellent opportunity for farmers to diversify their operations at a time when the vagaries of the beef price cycle have left many farm families destitute. Wapiti are surprisingly productive, easy to manage and quite profitable. They are suitable for farm families with small holdings so benefits need not only accrue to a small powerful elite.

CONTROLLING ILLEGAL DEALINGS

Although the viability of wapiti farming can no longer be questioned, we must be able to assure the public that the industry can be controlled. The Alberta Fish and Wildlife Division has drawn up a comprehensive set of effective and realistic controls which will be willingly accepted by prospective farmers. These regulations have been carefully studied following consultations with representatives of various nations with game industries. The essential features are:

- Only indigenous species can be raised.
- Only securely fenced private lands will be licenced.
- Animals must be tagged and registered.
- Animals will be slaughtered only with ante-mortem inspection at licenced plants.
- Meat will be cryopacked with a distinctive label. The seal will be broken immediately before use.
- Velvet antlers will be cut with the supervision of a veterinarian who will sign security documents.

These provisions will ensure the orderly development of an industry which will make an important contribution to rural development without threatening the traditional role of wildlife in the public domain.