

Confined feeding operations

Examining the role of municipal government in land use planning.

Within a globally competitive marketplace, the confinement of livestock for the purpose of growing, finishing and breeding has become a common agricultural practice. Confined feeding operations contribute to a resilient southern Alberta economy, yet also represent an intensive use of land that warrants responsible management. While the legislative scheme allocates regulatory authority over the development of confined feeding operations to provincial bodies, it also provides for municipal involvement in the planning process for these types of facilities.



What is a confined feeding operation?

A confined feeding operation (CFO) is a fenced or enclosed area or building where large numbers of livestock are confined for the purpose of growing, sustaining, finishing, or breeding. CFOs are business operations of significant scale, defined by thresholds created by the province. The availability of feedstock and irrigation water makes the agriculturally based economy of southern Alberta well suited to accommodate value added industries like confined feeding operations, and the region contains most of the province's cattle industry, alongside a variety of other livestock sectors. This preliminary analysis seeks to examine the CFO-related land use issues and considerations facing municipalities.

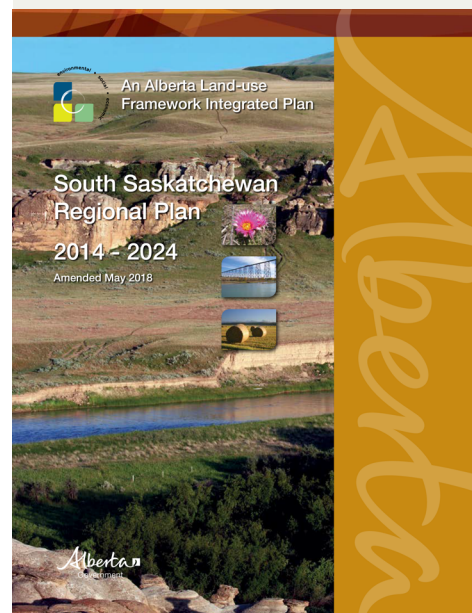
Agriculture is deeply woven into the economy of southern Alberta. From the frontier days of grain production on the expansive plains to the romanticism of the cowboy lifestyle, agriculture persists as a cultural symbol of the province. Feedlots emerged as a product of the economic linkages between cattle raising and grain growing, the need to provide winter-feeding to supplement limited grazing in harsh climates, and a necessity to expedite the finished product in an increasingly competitive marketplace. The modern feedlot as a land use became increasingly common in the post-war era, as did large-scale barn facilities housing expansive dairy, poultry, and swine operations. Irrigation districts in southern Alberta helped supply water for livestock operations as well as to adequately water land for crops, making the region a fertile ground for CFOs. Today, CFOs are economic drivers and employment generators—and it is important for municipalities to understand the planning tools available to them in attempt to mitigate land use conflict.

Policy & regulatory context

Municipalities in Alberta are afforded a limited ability to regulate CFOs. Specifically, Sections 618(2.1) and 619 of the *Municipal Government Act* (MGA) preclude a municipality from putting a CFO through the traditional planning process in Part 17 of the MGA—an ability it retained up until 2002, when Part 2 of the *Agricultural Operation Practices Act* (AOPA) came into force. Prior to 2002 municipalities oversaw CFOs, with the guidance of provincial codes of practice, for what were then known as “intensive livestock operations.” The combination of an industry growth spurt and variable regulatory requirements from municipalities across the province, brought about pressure for the province to standardize a regulatory framework.

AOPA applies to all agricultural operations in Alberta, and is broken

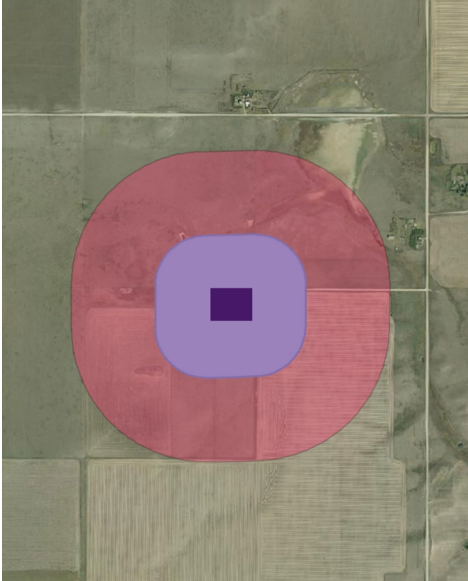
According to the 2016 Census of Agriculture, Alberta produces the largest number of cattle in the country, containing 41.6% of the national herd, in more than 12,000 farms. Today, beef is the largest agri-food export out of the province (\$2.5 billion in 2020), ahead of wheat (\$2.3 billion) and live cattle (\$689 million).



South Saskatchewan Regional Plan Strategy 8.22

Municipalities are expected to minimize conflicts between intensive agricultural operations and incompatible uses by using appropriate planning tools, setback distances, and other mitigating measures.

**Sample MDS for a CFO
consisting of 500 beef feeders**



- *Boundary of CFO site shown in dark purple*
- *237-m Category 1 MDS shown in light purple*
- *633-m Category 4 MDS shown in pink*

up into three parts, the first two (Part 0.1 and Part 1) of which are administered by the Farmers Advocate Office. Part 2 of AOPA—administered by the Natural Resources Conservation Board (NRCB)—deals specifically with the permitting and compliance of CFOs and related manure management and was created to apply uniform siting and operational standards across the province. The *Agricultural Operations, Part 2 Matters Regulation* establishes the threshold for when an AOPA registration or approval is required. For example, operations containing at least 200 beef feeders need a registration, while those with 500 or more beef feeders must obtain an approval. AOPA employs a weighted system, whereby different types of animals are assigned an animal unit rating (roughly equating to their averaged nitrogen production) to provide a method of comparing animals. Minimum distance separation (MDS) is AOPA's nuisance mitigation tool that prescribes setbacks from a dwelling to a confinement area (i.e. barns, corrals etc.) based on a formula addressing type and number of animal units within a four-tier land use category system. Upon review of MDS scenarios, it becomes clear that its purpose is for nuisance mitigation, not nuisance eradication. This approach is consistent with how agriculture is treated by provincial policy makers and regulators, namely through Part 1 of AOPA.

Part 2 of AOPA has only seen minor changes since its inception 20 years ago. Recent changes to the *Agricultural Operations, Part 2 Matters Regulation* in 2020 provide for the ability to change livestock type within the same category (where the original manure production and odour objective is not exceeded) without the need for a permit amendment authorized by the NRCB.

Land use issues & impacts

The sustained confinement of large livestock numbers comes with environmental impacts on soil, water, and air. Two biological systems operate in manure storage: aerobic and anaerobic. Unless air is mechanically incorporated into the storage, anaerobic conditions will exist. This results in the formation of odorous gases—hydrogen sulfide, ammonia, carbon dioxide, methane—some of which can adversely affect humans. Odour and flies are often cited as the primary issue stemming from CFOs but can be challenging to measure and remain somewhat subjective.

Although several alternative uses for animal manures exist, land application as a fertilizer is still the most common and cost-effective disposal method for most farmers. Today, because of larger farms, the need to have access to an adequate land base to apply and incorporate manure in a timely manner can be a challenge.

Roads may be impacted by CFOs due to the volume of truck traffic and large cattle liners. Traffic generated from CFOs varies widely subject to seasonal changes to operations, the location of employment base (on or off site), and the degree to which operations are vertically integrated (i.e. on-site feed production, manure management) affecting the amount and type of traffic generation, and corresponding impacts (dust, road degradation).

Municipal land use planning for CFOs

AOPA affords an opportunity for municipalities to be involved in land use planning for CFOs through Section 20 (for approvals) and Section 22 (for registrations and authorizations). A municipal development plan (MDP) is specified as the mechanism through which a municipality can prescribe “land use provisions.” Although the scope of what can be included in land use provisions is not defined in either AOPA or the MGA, they are not to include “tests or conditions.” Practically, this means that municipalities are not to stipulate things related to the design, construction or operation of a CFO or associated manure storage facilities, or other environmental matters addressed in AOPA’s technical requirements. Land use provisions that require substantial discretionary evaluations of the merits of a CFO development are likely to be disregarded by NRCB approval officers. CFO “exclusion areas” began to appear in MDPs after 2002—a preferred land use planning approach given its simplicity and the corresponding ease of interpretation. Approval officers must deny an application that is inconsistent with land use provisions in an MDP pursuant to Sections 20(1)(a) and 22(1)(a) of AOPA. However, on appeal the NRCB Board is empowered to approve an application notwithstanding inconsistency with land use provisions.

CFO exclusion areas around urban centres are also common in intermunicipal development plans (IDPs). In southern Alberta, exclusion distances range anywhere from 0.5 to 4.0 miles from urban centres and are often oriented to account for the primary southwest winds in the region or future growth directions of the urban municipality. The planning objective in this context is clear: to reduce the likelihood and/or severity of land use conflict stemming from the nuisance generated by a CFO. Exclusion areas are also sometimes found adjacent to environmentally sensitive features like watercourses and other water bodies. However, CFO exclusion in these areas must demonstrate that they have been conceived not solely for the purpose of environmental protection. The recent NRCB Board Decision 2021-05/LA21011 respecting an expansion of facilities at the Hutterian Brethren Church of Little Bow (Little Bow Colony) in Vulcan County set aside the CFO exclusion area along the river on the basis that it was for the purpose of environmental protection beyond what was stipulated by AOPA’s technical requirements. Perhaps overlooked by this process is the fact that areas in proximity to water bodies are recognized by municipalities

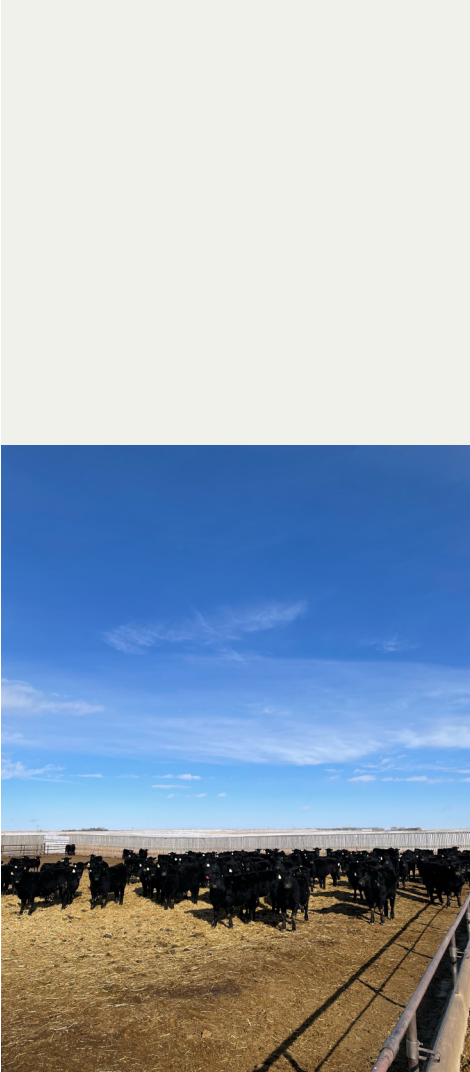
IDPs provide urban municipalities a voice in the land use planning process through agreement with their rural neighbours. It is critical that CFO land use provisions in an IDP are specifically referenced in a MDP in order to be considered under AOPA.



Vulcan County & Village of Carmangay
INTERMUNICIPAL DEVELOPMENT PLAN

Bylaw No. 2021-004 & Bylaw No. 800

CFO applications are circulated by the NRCB to affected parties from 0.5 to 4 miles from a prospective CFO (depending on how many animal units are proposed).



as desirable for a variety of land uses, including country residential. In recent years, the NRCB has requested supporting policy statements related to exclusion areas or other land use provisions—a provision that will allow municipalities to articulate the planning context, and hopefully preclude misinterpretation by the NRCB.

Alternative approaches are beginning to emerge in contrast to the simple exclusionary zone approach. Ponoka County’s desire to preclude “very large” CFOs materialized in its MDP by prohibiting operations that exceed 10x the size of the threshold in Column 3 of Schedule 2 in the *Agricultural Operations, Part 2 Matters Regulation*. The two-tiered exclusion zone in the recently adopted Vulcan County/Village of Carmangay IDP is an alternative based on the respective registration and approval thresholds in the *Part 2 Matters Regulation*. Emerging alternatives for the planning of CFOs are in response to a need for a more logical approach. Treating relatively smaller CFOs the same as large operations is not seen as the fair, common sense outcome expected from land use planning at the local level. Similarly, existing operations with desire to expand and/or modernize may warrant different treatment than a proposed new operation.

It is worth noting that some municipalities regulate smaller livestock operations (often referred to as intensive livestock operations), while others allow these developments to proceed unregulated, typically falling under a general agricultural exemption from the requirement to obtain a development permit. Municipalities can deal with operations that fall below the animal threshold requirements (where an NRCB registration or approval would be required) in the way they see fit. For example, the MD of Willow Creek land use bylaw requires a development permit for intensive livestock operations exceeding more than half of the AOPA registration requirement (i.e. more than 100 beef feeders require a development permit).

A reciprocal MDS provision is a municipally administered requirement whereby residences are restricted from locating within the MDS to a CFO—a provision commonly found in rural land use bylaws in the region. Rural municipalities recognize the land use friction that can come about as non-agricultural land uses enter a rural environment, and typically employ tight subdivision controls so as to provide a playing field whereby agriculture comes first—the thinking being that agricultural related odour, dust and noises are inherent to a typical rural setting and must be reasonably accepted to allow for land use harmony.

Municipal considerations

CFOs fall under an assessment regime in Alberta that assesses farm operations based on a regulated agricultural use value. This is established annually in the Minister’s Guidelines for Farm Assessment

under the *Matters Relating to Assessment and Taxation Regulation*. CFOs are not distinguished from extensive agriculture (crop or grazing), and therefore are assessed the same as marginal farmland. This can affect municipalities in the case where impacts to infrastructure such as roads costs the municipality more than the tax revenue produced.

For Lethbridge County, which contains the largest proportion of cattle CFOs in the country, the need to fund a growing infrastructure deficit required an alternative solution. In 2016, a Business Tax Bylaw (adopted under Section 371 of the MGA) was brought about to generate revenue from CFOs and other businesses. The Bylaw levies a per head tax based on permitted animal units, with the revenue going to the ongoing infrastructure maintenance and upgrades to roads and bridges. Despite a legal challenge to the Bylaw it was upheld and is in effect.

While a tax may be helpful to ease financial challenges, there is also a broader need for a proactive approach to land use planning. Traditional type CFO exclusion policy can work in proximity to urban centres but is limited in its ability to foresee cumulative impacts that come from the congregation of multiple large CFOs outside of these prescribed areas. The result is that municipalities may find themselves without a fitting regulatory mechanism to manage CFO impacts at a more regional level. The ability to require a development agreement, for example—a mechanism familiar to municipalities pursuant to section 650 and 655 of the MGA—would assist in planning for road impacts but is something the provincial legislation does not contemplate.

As the trend toward bigger farms continues, the distinction between traditional agriculture and industrial farming grows thinner. However, in discussions with operators in the region, a family business structure persists in the CFO industry. This allows operators to stay in touch with local concerns, unlike more corporate sectors like the meat packing industry. This local connection should be utilized by municipalities as they go about land use planning for CFOs with the benefit of a meaningful public engagement process.

Concluding remarks

It is recognized that well managed CFOs can be an economical use of land and resources. CFOs also provide strong economic impact on support sectors including grain, transport, processing, design and construction, and veterinary support, which is particularly important for rural businesses and rural employment. Environmental considerations related to water—the number one issue facing southern Alberta—are again within the purview of the province. Therefore, as municipalities go about their limited role in land use planning for CFOs, it is important that the regulatory landscape be well understood, and that the land use planning provisions afforded by the provincial government be utilized in a full and meaningful manner.

For more information on this topic contact admin@orrsc.com or visit our website at orrsc.com.

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