BEST MANAGEMENT PRACTICES

Clubroot Disease Management

July 2008
The Canadian Association of Petroleum Producers (CAPP) represents 140 companies that explore for, develop and produce natural gas, natural gas liquids, crude oil, oil sands, and elemental sulphur throughout Canada. CAPP member companies produce more than 95 per cent of Canada’s natural gas and crude oil. CAPP also has 135 associate members that provide a wide range of services that support the upstream crude oil and natural gas industry. Together, these members and associate members are an important part of a $100-billion-a-year national industry that affects the livelihoods of more than half a million Canadians.

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CAPP Policy

CAPP and its industry partners operate in a responsible manner where safe work practices and environmental stewardship are a priority. We place a high value on positive working relationships with the communities that we operate in.

CAPP is aware of the concerns about clubroot disease in canola and we support management measures. The oil and gas industry recognizes that it is just one player in the management of this crop disease with primary responsibility resting with landowners.

CAPP and its industry partners are committed to meeting or the regulations (specifically the Alberta Weed Control Act, Alberta Pest Act, Alberta Clubroot Management Plan, and county/municipality requirements as specified by the agricultural fieldmen). We will continue to work proactively with Alberta Agriculture and Rural Development as the primary regulator for managing and regulating the clubroot problem.

If you have any questions regarding this issue, CAPP encourages contacting Alberta Agriculture and Rural Development pest management and oilseeds branches or municipal agricultural fieldmen.

Disclaimer

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1 Introduction

This document was prepared by the Working Group on Clubroot Disease of Canola with the following objectives:

1) Promote the development of effective and achievable management practices to minimize the spread of Clubroot spores from field to field in canola producing areas

2) To assist in educating Alberta’s agriculture industry, the general public, oil, gas and other relevant industries about Clubroot disease.

This best management practice is intended to provide diligent, regulatory compliant and effective management strategies for oil, gas and other related industries.

1.1 Background

Clubroot is a serious soil-borne disease of cruciferous crops (the cabbage family which includes mustards like canola) worldwide and was first identified in Europe in the thirteenth century. This disease is a major problem in cruciferous vegetable crops in some areas of British Columbia, Quebec and Ontario. Prior to 2003 there were two previous reports of clubroot in cole crops in Alberta. Thus, clubroot is not a new disease in Canada or Alberta.

In 2003, clubroot was confirmed in several canola fields near Edmonton. These were the first reports of clubroot in canola in western Canada. As of 2007 clubroot in canola has been confirmed in 11 municipalities in Alberta. The most heavily impacted areas are found in Edmonton and the surrounding counties of Sturgeon, Parkland, Leduc and Strathcona. Testing has occurred in municipalities in relative close proximity to Edmonton with the exception of one municipality in southern Alberta.

Clubroot was added as a declared pest to Alberta's Agricultural Pests Act (APA) in April 2007. The APA is the legislative authority for enforcement of control measures for declared pests in Alberta. The Minister of Alberta Agriculture and Rural Development is responsible for this Act. Enforcement of pest control measures is the responsibility of the municipal authority, and Agricultural Fieldmen are responsible for enforcing pest control measures in their municipalities. Pest inspectors have the power to enter land at a reasonable hour, without permission, to inspect for clubroot and collect samples. The owner or occupant of the land has the responsibility to take measures to prevent the establishment and spread of clubroot.
2 Management Objectives

CAPP fully supports the management objectives laid out by the Alberta Clubroot Management Committee (Feb 2008). They have advised oil and gas operators to:

Take measures such as equipment cleaning to prevent the establishment and to minimize the spread of Clubroot spores on the land and property. This is achieved by minimizing or restricting the movement of soil material containing resting Clubroot spores from an infected field.

Assist in educating Alberta’s oil and gas and other related industries about clubroot disease on the land and property. CAPP member companies are actively accomplishing this objective through notices to our members and industry partners, presentations and development of working groups.

All CAPP members and industry partners are strongly encouraged to develop their own strategies to meet these management objectives.

3 Best Management Practice (BMP)- Equipment Cleaning Protocol

This BMP is designed to assist operators in meeting the primary management objective of minimizing or restricting the movement of soil material containing clubroot spores from an infected field. At this point in time the most viable method of achieving this management objective is by cleaning equipment.

3.1 Equipment Cleaning Determination

Operators are encouraged to develop internal written processes that determine whether equipment cleaning to prevent clubroot spread is required in any given situation. For example, areas where land-use is not agricultural or where canola has, is and will not be grown do not pose a risk of spreading or containing clubroot. In these areas cleaning equipment for the purpose of preventing the spread of clubroot disease of canola is not required. Equipment that only comes in contact with gravel or pavement and accesses graveled pad or plant sites do not likely pose a significant risk so again cleaning is not required. It is up to each operator to determine which areas and situations require cleaning and which situations and areas do not.

To meet the Alberta Clubroot Committee management objective, if there is a reasonable risk of transporting soil material that could contain clubroot spores from a given site equipment must be cleaned prior to exiting the location.

3.2 Equipment Cleaning Description

Once the requirement to clean equipment has been confirmed operators will be required to determine what level of equipment cleaning is appropriate for a specific situation.
1) Mechanical Cleaning- Mechanical cleaning is the removal of soil material using tools such as brooms, brushes, air compressors, shovels or by hand.
2) Washing- Washing is considered cleaning with water, steam or equivalent. Surfactants (soap or detergent) may or may not be used when washing with water, steam or equivalent.
3) Disinfecting- Disinfecting requires the use of a substance that inhibits or destroys the reproductive ability (spores) of clubroot disease. Disinfecting is done after mechanical cleaning or washing has been completed. Alberta Agriculture and Rural Development recommends a 1-2% bleach-water mixture however other disinfectants could be used. The disinfectant solution is to be misted on mechanically cleaned or washed equipment maintaining a moist or wet interface with equipment for 15 min.

The type and level of cleaning required will depend on several factors including but not limited to:

- Whether the site has a confirmed case of clubroot disease
- Where the site is located geographically
- The land-use of the site
- Landowner requests and commitments
- Washing infrastructure availability
- Agriculture Fieldman/Municipality specific requirements

Cleaning activities where practical and possible should occur prior to leaving a location.

Water used to wash vehicles must be contained and managed to adhere to provincial and municipal regulations, and landowner requirements

3.3 Documentation

Operators are encouraged to develop a documentation process that will demonstrate they are meeting the primary management objective of preventing the establishment and minimizing the spread of Clubroot Disease.

The type and level of documentation needs to be determined by individual operators depending on the level of due diligence with which companies are comfortable. Due diligence can be considered the level of judgment, care, prudence, and activity that an operator would reasonably be expected to do under particular circumstances.

In general documentation components should include:

- Documented process to determine if the cleaning protocol applies
- Documented process for equipment cleaning

Documented process for tracking equipment cleaning including a system for storing documented equipment cleaning activities
4 References

1 Alberta Clubroot Management Committee, 2008. Alberta Clubroot Management Plan, Alberta Agriculture, Food and Rural Development

http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex11519