

SCID

New Zealand Seed Crop Isolation Distance Mapping Scheme



The image shows a login form for the SCID (Seed Crop Isolation Distances) system. The form is set against a red background with a circular inset image of a field. At the top, the text 'SCID' is written in large, textured letters, with 'Seed Crop Isolation Distances' in a smaller, cursive font below it. The form itself is white and contains the following elements:

- Login** (title)
- User Name** (label) and a text input field.
- Password** (label) and a text input field.
- Login** (button) and **Reset** (button).
- Logos for **FAR** (Farming Assurance Register), **MAF Sustainable Farming Fund**, and **AsureQuality** (Independent Quality Assurance).

Regulations

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SECTION 1. OVERVIEW

Cruciferous forage and vegetable seed production has increased significantly over the last 10 years. The market in 2008 was worth over 40 million dollars to the New Zealand economy. Most seed produced is for the export market.

Increasing the production area for this market will depend on the ability to utilise the available land resources. The availability of clean seed production land has come under enormous pressure from alternative uses such as dairying and more recently the worldwide interest in biofuel production.

To ensure a sustainable Cruciferous forage and vegetable seed production base requires:

- Adequate land resources
- Land resources clean from contamination
- The ability to identify potential crop site contamination
- The ability to identify potential cross pollinating crops
- Ability to manage pollination systems to limit accidental cross pollination by insects

Purpose

The purpose of this scheme is to minimise the risks of a crop failure from contamination through cross-pollinating species planted too close to each other and to better utilise the available area for seed crop production.

Compliance to the scheme provides:

- A unique marketing advantage to New Zealand for gaining international seed production contracts.
- A way of minimising genetic contamination through cross pollination
- Full utilisation of available land resources
- a process to resolve crop site conflicts in a respectful and co-operative manner, prior to any crop costs being incurred

Scheme membership is currently voluntary, with no mandatory or legislative requirements for operators to enter crop sites. However, for the scheme to operate effectively, all operators who are producing vegetable or cruciferous seed crops and or biofuel crops that require specific isolation or paddock history requirements are strongly encouraged to use the system.

Principles

There are aspects of the scheme that cannot be regulated but rely on the good faith of users for the scheme to operate effectively. These principles are:

- Users to respect longstanding merchant / grower crop production relationships.
- Users of the scheme should not add significant additional cost to crop contracts.

- Isolation distances are based on well founded research and can be changed if reputable research data and scheme users supports the changes.

Background

The SCID scheme was developed to replace a manual isolation checking process, developed by a group of merchants involved in the production of high value Cruciferous forage and vegetable seed crops. The checking process was developed in 1998 to optimise pollination isolation distances between crops for varietal purity and minimise potential crop loss through cross pollination.

The SCID scheme was developed through a MAF Sustainable Farming Fund project under the direction of, and with co-funding from, the Foundation for Arable Research.

It is a web-based system, which utilises AgriBase software. (AgriBase is a rural mapping programme, which is owned byASUREQuality and is used for rural emergency applications).

Operators log onto the website and input crop sites. The system performs an automated isolation check and returns a conflict notice if or when other cross-pollinating crops have or are entered onto the system and fall within that crops entered isolation distance. An automated Email notification is sent to the merchants of the conflicting crops to alert them of the conflict and allow them to discuss a resolution to the conflict. The system also performs an automated paddock history check.

SECTION 2.

The regulations commit merchants and growers to abide by the requirements laid out in this document. All users of the system must complete a registration form.

Merchants agree to:

- Enter all crops in which they have an interest (as per appendix 4) into the SCID scheme.
- Communicate and ensure amicable resolution to all crop conflicts as per these regulations.

Growers agree to:

- Communicate with neighbours to identify any potential cross pollinating crops (as per appendix 4) within the isolation distances required.

Registration:

All users are required to register (see appendix 1). Users wishing to enter crop sites must register as merchants. Web site registration is optional for Growers. There are two registration options.

1. Merchant:

- Able to enter crop sites on the properties from their grower lists
- Can edit the crop site entries to change species, isolation distances or add information such as commit, sown and flowering dates.
- Receive automated emails of crop conflicts when they occur
- Receive monthly lists of their entry status

The merchant's registration includes the requirement to provide a grower list (see appendix 3). Adding new growers to registered merchants lists must be done through the scheme administrator. This can be by email, phone contact or using the grower list form (see appendix 3) and faxing to the administrator.

2. Grower:

- Able to view crop sites on their property (requires a high speed internet connection)
- Receive automated emails when a merchant books a crop site on their property (providing Grower has supplied an email address to the administrator)

Operating Times

The website is available for use every day. Exceptions to this will be disruptions to power supply, when there are system maintenance requirements or for enabling enhancements. If the system is to be taken off line, the administrator will endeavour to notify users 24 hours before the shut down will occur and when the system is back on line.

Crop Site Entry

Crops are to be entered onto the website (booked) within 3 working days of merchant and grower discussions to identify a potential crop site. There are two crop entry period classifications; autumn and spring.

Autumn:

- From 1st January through to 30th June

Spring:

- From 1st July through to 31st December

The merchant must enter all crops requiring isolation as per the Schedule onto the scheme. If a crop is not entered into the scheme, and that crop is subsequently found to be in isolation conflict with a crop entered into the scheme, then the non-entered crop must be destroyed.

Crop Site Digitising:

- i. Ensure “zoom” level on GIS map window is close enough to accurately digitise crop site. Avoid overlapping of other sites or boundary line.
- ii. Use as many digitising points as needed when entering sites bordering on rivers/gullies/road boundaries.
- iii. Ensure digitising is completed in either a clockwise or anticlockwise direction.
- iv. Name site with ROP number and paddock letter where possible.
- v. If digitising a part paddock, add a number to the paddock letter e.g. A1234 B1.
- vi. After completing the digitising process, the site is available to book.

Booking Crop Sites

Booking must be completed within 3 days of an agreed crop site being identified with the grower. If the booked site is subsequently not to be used, the booking must be deleted within 3 days of the decision not to proceed.

Crop Site Isolation Conflict Warning:

The booking process for a crop site may generate an isolation conflict warning. An automated email will be sent out to the affected merchant(s) and the grower of the crop, if the inputting merchant completes the booking process,

Merchants - the email will identify the merchant generating the conflict, the species, the unique SCID reference, the isolation distance required and the current crop site status (ie. wether 'booked' or 'sown')

Growers – the email will identify there has been a conflict generated and the merchant generating the conflict.

Contact Responsibility:

The merchant entering the crop site that generates the conflict must contact the other

party(ies) to discuss the conflict within 3 working days of entering the conflicting crop.

NB. The system may generate conflicts with a preceding Spring entered crop site(s) when entering Autumn crop sites. This is to alert merchants of the preceding Spring entered crop to a potential conflict for the next Spring crop site placements. It is the responsibility of the merchant that entered the preceding Spring crop to make contact when this situation occurs.

Conflict Resolution:

The merchant generating the conflicts is responsible for contacting the affect parties to resolve the conflict(s). Dependant on the outcome of the negotiations, one of the following steps will need to be actioned.

- If the crop creating the conflict is to be cancelled, this must be actioned within 3 working days.
- If the crop species creating the conflict is to be changed, this must be actioned within 3 working days.
- If the new species creates an isolation conflict, then the isolation conflict warning process will need to be repeated.

Disputes

If a resolution to an isolation issue cannot be resolved between the merchant field representatives then this must be passed onto the merchant's management. If resolution still cannot be achieved then an independent arbitrator must be sort to resolve the dispute.

The Arbitration Act 1996 can be viewed at: <http://www.aminz.org.nz/MainMenu>

Non Entered Crop Sites

If a crop controlled by a merchant is not entered into the system and that crop is subsequently found to have an isolation conflict with a crop entered onto the scheme, then the non-entered crop will be destroyed and the responsibility to facilitate this will lie with the merchant controlling the non-entered crop.

Crops planted in a location at variance to their scheme identity are to be treated the same as un-entered fields if they cause isolation conflicts.

If non entered crops are discovered after flowering or after harvest and crops are rendered valueless because of cross pollination, the affected parties (growers and contracting agents) should at first mediate directly to resolve the situation. If resolution still cannot be achieved then an independent arbitrator must be sort to resolve the dispute. Parties who agree to go to arbitration are bound by the decision of the Arbitrator .

Sown Crop Sites

The status of a booked crop site must be changed to sown within 5 working days of the grower completing sowing. If a sown crop is subsequently destroyed and a new crop is to be entered, then the administrator must be informed within 5 days of the destruction of the crop. A crop with a 'Sown' status can not be deleted by the user due to paddock history issues. The system administrator can only edit the system to allow a new crop to be entered on that site in the same season.

Isolation Distances

There are minimum set distances for each species. Where a species is included in the NZ Seed Certification programme, the minimum distance is the maximum for the highest certified class of seed.

All other species have been set at the distances set out in the table in appendix 4. Users cannot reduce the minimum distance, but are able to increase the isolation distance required. Evidence of this requirement must be supplied if requested by the system administrator e.g. science or contracts with buyers.

If a greater isolation distance than the pre-set distance is required, it is the responsibility of that operator to find an appropriate area that causes the least disruption to 'standard isolation distance crops'.

Isolation Distance Changes

Current distances are those agreed when the original mapping system was established. These continue to be the agreed distances. Changes to these must be based on scientific evidence of cross-pollination potential and agreed to by the majority of regular users. This can be processed at the annual meeting or through the administrator. Please use the Species Isolation request form (appendix 2).

Species

The current available genus that can be entered onto the system are: Brassica campestris, chinensis, juncea, napus, nigra, rapa, oleracea, Beta vulgaris Carrots, Celery, Chrysanthemum, Lettuce, Onion Parsley, Parsnip, Raphanus sativus, Sinapis alba, , , and Spinach

The table in appendix 4 lists the species available when making a booking. Please contact the administrator if a species is not available.

New Species

New species to be included into the current scheme must be submitted to the administrator using the Species Isolation request form (appendix 2).

Section 3. Ownership and Liability

Ownership

This scheme has been vested to the Seed Quality Management Authority (SQMA). The SQMA is made up of representatives from a number of organisations within the New Zealand seed industry. These include Breeders, Merchants, Seed Processors, Federated Farmers, Growers, Crop and Food, AgResearch (Grasslanz's) and MAF BNZ.

AsureQuality Limited is contracted as administrators of the NZ Seed Certification Scheme and the SCID scheme.

Operator Costs:

The table below lists the user costs for the administration and hosting of the system. There is no charge to operators entering 5 or less sites; this is to encourage low volume operators to use the system.

No of Entries Sown	Per Entry Cost
0 - 5	0.00
6 – 100	10.00
101- 300	8.00
→301	6.00

Accounts will be sent out in December of each year.

Other costs

AsureQuality are the owners of AgriBase. Any upgrades or updates to AgriBase are the responsibility of AsueQuality and will not result in costs to SCID users.

Annual Meeting

The system administrator will arrange an annual meeting for all users of the system, to allow open and frank discussion. The meeting will be held mid year and the administrator will advise users of date, time and location.

System Enhancements

System enhancements or additional features will need to be discussed by all users. This maybe done at the annual meeting or any other time by arrangement through the system administrator.

Financing of any enhancements / upgrades will need to be agreed to by users. Funding options could be user funding, creating a fee structure that will allow for the establishment of an enhancement fund or through industry grants.

System Administrator

The current system administer is the AsureQuality Limited Seed Certification Bureau. . AsureQuality is a State Owned Enterprise (SOE) and operates as an independent certification and biosecurity organisation.

Contact Details

Seed Certification Bureau
AsureQuality Limited
PO Box 6
Lincoln University 7647

Fax: 03 325 7088

Email: seedcert@asurequality.com

For grower list additions, mapping and general enquiries please contact:
Carole Lasseter – ph 03 358 1723. Email – lasseterc@asurequality.com

For enquiries about the development, operation or disputes please contact:
Evan Johnston – 03 358 1745. Email – johnstone@asurequality.com

Liability Statement:

The SQMA, any committee or body governing the SCID scheme and the SCID scheme administrator are not liable for any loss of profits or any special, indirect, incidental or consequential damage or loss of any kind suffered by the user arising directly or indirectly from the use of the SCID scheme.

Section 4.

Additional Information

Bee Hives

Recommended stocking rates from "Pollination Directory for World Crops are:

- Berry fruits 7-10 hives/ha
- Buckwheat 2.5-8 hives/ha
- Carrot 8 bees per sq metre (on flowers)
- Clovers 2-8 hives/ha
- Brassicas 2.5-5 hives/ha
- Onion 12-36 hives/ha
- Strawberries 1-10 hives/ha

Pollination is very depended on good weather so the bees can get out & visit the flowers. High soil temperatures are also important because the plants will yield nectar, which make them attractive to bees. Watering the crop can have an affect on the pollination because it lowers the soil temperature and can stop the bees from getting out of their hives (because they think it is raining).

With hive placement, try to have bees placed in the crop plus in sunny sheltered spots. If the hives are sited in warm spots, the bees will start to forage earlier and do a better job of pollination. Probably best if hives are placed in groups of four.

To try to maximise pollination, higher stocking rates of hives is advisable as this gives some insurance against bad weather etc.

Section 5.

Appendices

1. Scid Registration Form
2. Species / Isolation Request Form
3. Grower List
4. Species and Isolation Distance Table

SCID REGISTRATION FORMType: Merchant Grower Grower and web access

Merchant/Grower Name: _____

Address: _____

Ph: _____

Cell: _____

Fax: _____

Contact Person: _____

Contact Email: _____

Proposed Logon: _____

Proposed Password: _____

If merchant, please include your grower list with registration (if applicable).

Signature: _____ Date: _____

NOTE:

1. *Signing of this registration form gives your agreement to abide by the requirements of the SCID regulations.*
2. *I agree to allow my Merchant contact details and address to be sent to other registered Merchants to allow for contact to discuss isolation conflict issues.*
3. *I agree to notify the System Administrator when there is a change of the merchant contact person.*

Appendix 4: Species and Isolation Distance Table.

Species	Standard Isolation Requirement (metres)		
	Open Pollinated	Hybrid	Method of Pollination
Campestris/Rapa/Napus			
Chinese Cabbage	1000	2000	Insect Pollinated
Pak Choi	1000	2000	Insect Pollinated
Choi Sum	1000	2000	Insect Pollinated
Canola Rape	1000	2000	Insect Pollinated
Oil Seed Rape	1000	2000	Insect Pollinated
Turnip Rape	1000	2000	Insect Pollinated
Chinese Mustard	1000	2000	Insect Pollinated
Spinach Mustard	1000	2000	Insect Pollinated
Japanese Greens	1000	2000	Insect Pollinated
Komatsuna	1000	2000	Insect Pollinated
Mizuna	1000	2000	Insect Pollinated
Turnip	1000	2000	Insect Pollinated
Swede	1000	2000	Insect Pollinated
Oleracea			
Cabbage	1000	2000	Insect Pollinated
Cauliflower	1000	2000	Insect Pollinated
Broccoli	1000	2000	Insect Pollinated
Brussel Sprout	1000	2000	Insect Pollinated
Chinese Kale	1000	2000	Insect Pollinated
Forage Kale	1000	2000	Insect Pollinated
Kohl Rabi	1000	2000	Insect Pollinated
Raphanus sativus			
Fodder Radish	500	1000	Insect Pollinated
Asian Radish	1000	2500	Insect Pollinated
Round Red Radish	2000	3000	Insect Pollinated
French Breakfast	2000	3000	Insect Pollinated
Juncea			
Brown Mustard	1000	2000	Insect Pollinated
Nigra			
Black Mustard	1000	2000	Insect Pollinated
Sinapis alba			
White Mustard	1000	2000	Insect Pollinated
Beta vulgaris			
Red Beet	4000	7000	Wind Pollinated
Silver Beet	4000	7000	Wind Pollinated
Sugar Beet	4000	7000	Wind Pollinated
Swiss Chard	4000	7000	Wind Pollinated
Daucus carota			
Carrot	1000	2000	Insect Pollinated
Spinach oleraceae			
Spinach	3000	4000	Wind Pollinated
Other Families			
Celery	1000	2000	Insect Pollinated
Parsley	1000	2000	Insect Pollinated
Chrysanthemum	1000	2000	Insect Pollinated
Bunching Onion	1000	2000	Insect Pollinated
Chicory	1000	2000	Insect Pollinated
Onion	1000	2000	Insect Pollinated
Chives	1000	2000	Insect Pollinated
Leek	1000	2000	Insect Pollinated

Please note that Standard Isolation Crop Distances can be reduced between similar types and varieties of vegetable seed production.