



SCOTTISH
QUALITY CROPS



SQC Manual

Approved Digestate Scheme Standards

November 2019 – Version 1.0

www.sqcrops.co.uk

Welcome to the Approved Digestate Scheme Standards by Scottish Quality Crops.

(November 2019)

Scottish Quality Crops work closely with the farmer to firmly place Scotland's crops at the premium end of the UK and European markets. Through farm assurance, Scottish crop growers - in association with their trade partners - are responding positively to increasing consumer awareness about modern food production.

We have decided to now issue our standards as a digital pdf as this allows you to easily and speedily search the document.

Please contact us if you require a print copy or other version.

Contents

About the Scheme

Introduction	4
How to join the SQC Scheme	4

The Standards

1.0 Production site	5
2.0 Quality Management System	6
3.0 Product testing	9
4.0 Traceability	10

Appendix

Appendix 1: Approved feedstock	11
Appendix 2: Approved distillery co-products	11
Appendix 3: Approved brewery co-products	11
Appendix 4: Approved waste products	11
Appendix 5: Pathogen testing results upper limits	11



About the scheme

Introduction to the scheme

Purpose

Scottish Quality Crops (SQC) recognise the requirement within agriculture and the associated industries to embrace high quality digestate being created through on-farm Anaerobic Digester (AD) operations.

Containing only processed “green” farm grown products and brewing/distilling materials, the digestate produced is a useful fertiliser and soil improver and, incorporating it into the soil, is good farming practice.

The aim of the SQC Farm Approved Digestate Standards is to define acceptable inputs to the AD plant, best practice and conditions to allow the application of SQC Approved Digestate onto land destined for cereal production. The goal is to obtain the Distilling and Brewing Industries’ full approval alongside approval from SEPA.

Membership

Applications are open to producers with on-farm anaerobic digester plants. The scheme operates alongside, but independently, of the SQC Farm Assurance Scheme.

A separate application will be required for membership of the SQC Approved Digestate Scheme.

Audit

The audit frequency for the scheme is twice a year.

Benefits

If Farm AD Operators follow the inputs and directives listed below the digestate being supplied ex the Farm plant should meet the criteria allowing it to carry the Scottish Quality Crops “Approved Digestate” Mark.

How to join the SQC scheme



New Members

- Applications to participate in the scheme must be made on an SQC application form and be accompanied by the appropriate payment. Scheme fees, based on whether stand alone or joint membership with SQC Crops Assurance, are indicated on the application form.
- On receipt of an application form with the scheme fee, arrangements will be made for the first assessment of the applicant’s site.



The purpose of the assessment is to ascertain the applicant’s ability to comply with the Scheme Standard. The decision to approve the participant will be undertaken by the Lloyd’s Register Certification Team.

Refunds will not be awarded in the event of failure to comply.

Applicants are reminded that two assessments per scheme year are a requirement of the scheme.

If you have any questions on the content of the manual, or about the scheme in general, please contact:

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The Standards

1.0 Production site

AD.1	<p>The AD plant should be separate from other processes on site.</p> <p>Where the AD plant is an integral part of the farm, there must be clearly defined areas to ensure inputs and the end product is not subject to/or causes crosscontamination.</p> <p>Producer guidance: <i>The AD plant should be identified on a map of the farm with boundaries and critical areas colour coded.</i></p>
AD.2	<p>Relevant authorisation to operate must be in place.</p> <p>Producer guidance: <i>SEPA Paragraph 51 Exemption can be downloaded from: www.sepa.org.uk/media/105313/wmx-tg51.pdf Where required, confirmation of planning permission must be available at the audit.</i></p>
AD.3	<p>Where farmyard manure/slurry/general animal bedding is to be utilised in the AD operation the total infeed volume must not exceed 100 tonnes per day.</p>
AD.4	<p>Where only purpose-grown energy crop is utilised in the AD process, there is no restriction on infeed volumes.</p>
AD.5	<p>Where authorised waste feedstocks are being utilised, the plant cannot have capacity greater than 100 tonnes per day.</p>
AD.6	<p>All incidences where conditions of authorisation issued by the Regulator have been breached must be recorded.</p> <p>Producer guidance: <i>Complaints, including those from SEPA, or non-conformances recorded at previous audits, must be recorded and available at the audit.</i></p>
AD.7	<p>All incidents must be recorded and investigated to establish root cause and remedial actions. All necessary action in response to any complaints expressed by customers and regulatory authorities about quality or usability of the digestate, must be implemented.</p> <p>Producer guidance: <i>A record of complaints, together with details of investigation into root cause and any remedial action undertaken must be available for review at the audit.</i></p>

The Standards

2.0 Quality Management System

AD.8	<p>A documented Quality Management System (QMS), specific to the defined AD process must be in place and updated to reflect changes.</p> <p>Producer guidance: <i>The QMS must detail defined inputs - i.e. feedstock records, suppliers, agreed tonnages and quality.</i></p>
AD.9	<p>Standard operating procedures (SOPs) that cover all production steps from arrival of input materials through to storage and despatch of the digestate, must be created and implemented.</p> <p>Producer guidance: <i>SOPs must be known to key users and clearly reflect the processes.</i></p>
AD.10	<p>There must be a SOP relating to action to be taken in relation to non-conforming batches of digestate that have not undergone the full AD process.</p> <p>The process must detail action to be taken in the following circumstances:</p> <ol style="list-style-type: none">1. Undergo corrective action then be evaluated for conformance to the producer's operation process;2. Undergo reprocessing with or without addition of further input material as appropriate, then be evaluated for conformance against the producer's operating process;3. Be despatched from the site for non SQC accreditation use. <p>Producer guidance: <i>The SOP must include details of what action can be taken in relation to non-conforming batches. A record of non-conforming batches must be available for review during the audit.</i></p>
AD.11	<p>There must be a nominated person responsible for ensuring the Quality Management System accurately reflects the process, and its implementation.</p>
AD.12	<p>An internal audit of the Quality Management Systems must be conducted at least annually and an additional internal audit/root cause investigation undertaken where a non-conforming batch is identified.</p> <p>Producer guidance: <i>Details of the outcome of internal audits must be available for review during the certification audit.</i></p>
AD.13	<p>There must be a documented HACCP system which is implemented, and that relates to the production of digestate to ensure that it is fit for its intended purposes.</p>

The Standards

2.0 Quality Management System

AD.14	<p>An annual review of the HACCP must be undertaken and remedial action taken to address issues found.</p> <p>Producer guidance: <i>The annual review of the HACCP may form part of the internal audit process. Details of the outcome of the annual review must be available for review during the certification audit.</i></p>
AD.15	<p>The Quality Management System documents must state the routine frequency and procedure for checks of the monitoring system; those carried out by the producer and any carried out by an organisation independent of the producer.</p> <p>Producer guidance: <i>The monitoring and records of calibration of equipment must be available for review during the certification audit.</i></p>
AD.16	<p>Records that demonstrate effective control of production, storage and despatch of digestate must be maintained.</p> <p>Producer guidance: <i>For the purpose of verification of process, records including mass balance must be maintained and made available during the certification audit.</i></p>
AD.17	<p>Input materials must be sourced from farm assured premises and/or distillery co-product source.</p> <p>Producer guidance: <i>Approval from SQC and SEPA for use of inputs not on the approved listing must be sought before they are used.</i></p>
AD.18	<p>A list of approved suppliers and type of input supplied must be maintained and kept up to date. The list must be available for review at the scheme audit.</p>
AD.19	<p>Records of inputs shall be maintained determining provenance and assurance status of suppliers.</p> <p>Producer guidance: <i>The records must be available for review at the certification audit.</i></p>

The Standards

2.0 Quality Management System

AD.20	<p>With the exception of manures and slurries, no animal by-products must be handled on the AD operating site.</p> <p>Suppliers of manures must declare their biosecurity status to ensure all inputs are free from disease.</p> <p>Producer guidance: <i>Verification of approved inputs.</i> <i>SEPA's current position is that digested manures and slurries can be spread without controls but if any wastes are added, including discarded veg and excess silage (where not purposely grown) then this requires registration under the appropriate exemption activity.</i></p>
AD.21	<p>A contingency plan must be in place to deal with non-conforming batches of end products.</p> <p>Producer guidance: <i>Any non-conforming batches must not be included in the SQC AD Scheme. Records must be kept of disposal.</i></p>
AD.22	<p>Each person whose activities affect digestate quality must be trained, instructed and supervised.</p> <p>Producer guidance: <i>Training records, applicable to the role undertaken, must be maintained and available for review at the certification audit.</i></p>

The Standards

3.0 Product testing

AD.23	<p>The final digestate product must be independently tested at least every four months.</p> <p>Producer guidance: <i>The Scheme expects all producers to have the nutrient value tested (N:P:K) along with Salmonella and E.coli</i></p>
AD.24	<p>For each sample tested, the following information must be included and a record kept by the producer:</p> <ol style="list-style-type: none">1. Sampling date;2. Batch code from which the sample was taken;3. Name of the person who carried out the sampling;4. If the sample taker is not employed by the producer, on whose behalf the sample taker is acting and his/her contact details. <p>Producer guidance: <i>This is to verify the traceability, safety and quality of the product. Documented laboratory test results are acceptable.</i></p>
AD.25	<p>Each sample tested in order to demonstrate compliance with the Scheme must be sent to a UKAS accredited laboratory within one working day after the sample was taken.</p>
AD.26	<p>The sample must be tested by a laboratory that is independent of the producer.</p>
AD.27	<p>Samples of final product (digestate) must achieve the minimum Scheme quality requirement.</p> <p><i>(see Appendix 5 – Pathogen Testing Results Upper Limits)</i></p>
AD.28	<p>Records of all testing carried out to demonstrate compliance with the approved standard must be made available at assessment and retained for a minimum of 24 months.</p>
AD.29	<p>Any batches that fail to go through the full AD process, must be recorded, including evidence that the process identified in the SOP has been fully implemented.</p>
AD.30	<p>Any batches of digestate that have undergone the full process, been sampled and tested but found not to conform to the minimum quality criteria are not assured by the Scheme. The product must be despatched from the site for appropriate disposal in accordance with SOP and full records maintained.</p> <p>Producer guidance: <i>The producer must notify the Scheme Certification Body of any Salmonella and eColi test failures.</i></p>
AD.31	<p>The end product must require no further processing before despatch.</p>

The Standards

4.0 Traceability

AD.32	Contract of supply: The producer must provide the customer with SQC Approved Digestate supply documentation. Copies of the Contracts must be retained.
AD.33	Traceability: The producer must carry out operations such that input materials are identifiable and traceable, from arrival on site for processing to despatch from the site, whether Scheme conforming or not.
AD.34	Only approved feedstock as identified in Appendix 1 may be used in the production of SQC Approved Digestate.
AD.35	Processed product, i.e third-party packhouse out-grades or whey must not be used in the production of SQC Approved Digestate.
AD.36	Only approved distillery co-products as identified in Appendix 2 may be used in the production of SQC Approved Digestate.
AD.37	Only approved brewery co-products as identified in Appendix 3 may be used in the production of SQC Approved Digestate.
AD.38	Only approved waste products as identified in Appendix 4 may be used in the production of SQC Approved Digestate.

Appendix

Appendix 1: Approved feedstock

Cereals	<ul style="list-style-type: none"> • Wheat • Barley • Oats 	<ul style="list-style-type: none"> • Triticale • Rye • Oilseed Rape
Cereal By-products:	<ul style="list-style-type: none"> • Straw 	<ul style="list-style-type: none"> • Chaff
Root Crops:	<ul style="list-style-type: none"> • Beet (Fodder and Sugar) • Carrots • Parsnips 	<ul style="list-style-type: none"> • Potatoes • Swedes • Onions
Green Vegetables:	<ul style="list-style-type: none"> • All farm supplied green vegetable material (excluding material which originates from third party packhouses). 	

Appendix 2: Approved distillery co-products

<ul style="list-style-type: none"> • Pot ale syrup • Draff (Distillers' grains) 	<ul style="list-style-type: none"> • Distillery process washings • Spent yeast
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Appendix 3: Approved brewery co-products

<ul style="list-style-type: none"> • Brewers' grains • Spent Yeast 	<ul style="list-style-type: none"> • Brewery process washings • Hop waste
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Appendix 4: Approved waste products

(Classified as waste products by the Waste Framework Directive)

<ul style="list-style-type: none"> • Farmyard manure (cattle, pigs or horses) deemed a waste when used in a biogas plant. • Farm livestock slurry (cattle/pig) deemed a waste when used in a biogas plant. • Spoilt vegetables (excluding material which originates from third party packhouses) providing the causes of spoiling is known and not deemed a risk.
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Appendix 5: PATHOGENS based on Publicly Available Specification upper limits.

Parameter	Method of test	Upper Limit
Non-ABP Digestate E.coli	SCA MSS Part 3A or BS ISO 16649-2	1000 CFU / g fresh matter
Non-ABP digestate: Salmonella spp	Method as specified by appropriate ABP regulation, according to nation in which digested material is produced, or SCA MSS Part 4A	Absent in 25 g fresh matter



SCOTTISH QUALITY CROPS

Acoura Certification Ltd, trading as Lloyds Register, is the Independent Certification Body appointed by SQC to provide the inspection and certification services for the scheme. All scheme participants must comply with all the requirements detailed in the LR Certification Regulations. The current LR Certification Regulations are available on the website, www.acoura.com or alternatively they can be obtained from the LR office.

Scottish Quality Crops Ltd. (SQC) is a company limited by guarantee and the members of the company are:

National Farmers Union of Scotland; Agricultural Industries Confederation (AIC); Scottish Flour Millers Association; Scottish Agricultural Organisation Society; Maltsters Association of Great Britain; The Scotch Whisky Association; The Malt Distillers Association of Scotland and SRUC.

SQC is controlled by a Board of Directors responsible for the direction, overall management and administration of the company. The Board of Directors details are available on the SQC website www.sqcrops.co.uk

The Scottish Consumer Council has an open invitation for a representative to attend SQC meetings.

SQC is a dynamic scheme, the standards of which will alter in response to consumer, trade and legislative concerns and requirements. The manual standards are reviewed annually and growers will be kept fully informed of any changes in the standards and conditions that may affect them.