

Irish Equine Centre Agri-bioeconomy highlights and targets:

- Enhanced fertiliser efficiency and reduced fertiliser use
- Enhancing agroecology at farm level
- Improved animal health and well-being through a holistic approach
- Reduction in the overuse of pharmaceutical medication and chemical products
- Reduction in veterinary intervention
- Large increase in forage and feed quality
- Large improvement in drinking water quality for human and animal
- Up to 20% more grass growth
- Up to 50% reduction in fertiliser use
- Increase in appropriate organic manure use
- 25% reduction in greenhouse gas emissions is calculated from reduced fertiliser use and increased composting efficiency

Our robust testing ensures we proactively address welfare issues as we work with owners, trainers, breeders and veterinarians to prevent associated injury and disease wherever possible. The surveillance and data collection we conduct provides early warning flags which we communicate widely when appropriate or use to work with veterinarians, owners, trainers and studs on a case-by-case basis. Testing allows us to provide advice and data to assist with targeted use of drugs thereby supporting DAFM's One Health Strategy to minimize the use of antimicrobial and helminthic substances.

Our Environment and Nutrition team work closely with all horse sectors and relevant authorities to use science to deliver a comprehensive service that provides preventive measures to reduce the risk of transmission of infectious diseases, increases in responsible land management and feeding / forage solutions underpinned by the mantra that prevention is better than cure.

Our biosecurity, biodiversity, feed, water, grass and soil packages help equine farmers, breeders and owners decrease waste (we have seen up to a reduction of 50% use of fertilisers) and greenhouse gases (up to 25% reduction) whilst increasing equine wellbeing. It's just efficient farming (with increased grass rates of up to 20%). Advice and support given ranges from improving housing and handling facilities, farming practices, discussions around land management coupled with testing forage, feed and water with the aim of maintaining optimal weight, bone, skin and footcare for everyday life, breeding and performance success.

Signed:



Date:

00/00/2024

Alan Creighton, BSc.

Head of Environment and Nutrition

The above results relate only to the items tested. This report shall not be reproduced, except in full, without the prior written approval of the laboratory.



IRISH EQUINE CENTRE

Johnstown, Naas, Co. Kildare

Tel: 045-866266

e-mail: nutrition@irishequinecentre.ie

Our services tie directly into pillars one to four of the Department's Animal Welfare Strategy and assist in ensuring the equine industry in Ireland has the information to act responsibly to ensure the welfare of horses under their control, while maximizing their potential development.

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Example report:

Lab Number:
Sample I.D.:
Sample Date:
Receipt & Analysis Date:
Report Date:

IEC Stud Farm Hygiene Test Report

Lab Number	Sample Details	Sample Type	Test	Test Results
23SF0001		Surface Swab	Clostridia Screen	Negative
			R. equi Screen	Negative
			Fungal Culture	Light growth of <i>Rhizopus</i> [^] Moderate growth of <i>penicillium</i> [^]
23SF0002		Surface Swab	Clostridia Screen	Negative
			R. equi Screen	Negative
			Fungal Culture	Moderate growth of <i>Rhizopus</i> [^] Moderate growth of <i>penicillium</i> [^]
23SF0003		Surface Swab	Clostridia Screen	Positive
			Rotavirus/ R. equi Screen	Negative
			Fungal Culture	*Moderate growth of <i>Aspergillus Fumigatus</i>*
23SF0004		Soil/Woodchip	Clostridia Screen	Negative
			R. equi PCR	Negative
23SF0005		Water	TVC @ 22°C cfu/ml (cfu)	4cfu

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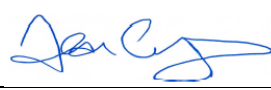
Tel: 045-866266

e-mail: nutrition@irishequinecentre.ie

			Coliform Screen/100mls (cfu)	Negative
			Faecal E. coli Screen/100mls (cfu)	Negative

Laboratory Number	Sample Details	Sample Type	Test	Test Results
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23SF0006	Hay	Forage	Fungal Culture	*Light growth of <i>Aspergillus Niger</i> * Moderate growth of <i>Rhizopus</i> [^] Light growth of <i>penicillium</i> [^]	
			Zearalenone Screen	<7.5 ug/kg	
			Nutritional analysis	Results on a DM basis	
				Dry Matter	84.56
				Moisture	15.44
				Protein	10.34
				NDF	45.93
				ADF	45.45
				Ash	7.02
Estimated DE	7.86				

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23SF0006	Hay	Forage	Mineral Analysis	Results on a DM basis	
				Phosphorous (%)	0.571
				Magnesium (%)	0.185
				Calcium (%)	0.665
				Sodium (%)	0.195
				Potassium (%)	3.53
				Chlorine (%)	1.56
				Manganese (mg/kg)	159
				Copper (mg/kg)	4.68
				Zinc (mg/kg)	13.8
				Selenium (mg/kg)	<0.2
				Cobalt (mg/kg)	<0.2
				Iodine (mg/kg)	<0.2
				Iron (mg/kg)	95.5
				Aluminium (mg/kg)	<50
Molybdenum (mg/kg)	1.2				
Sulphur (%)	0.178				
Lead (mg/kg)	<0.5				

Extra Samples

Lab Number	Sample Details	Sample Type	Test	Test Results
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24EN000577		Soil/woodchip	Rota	Negative
24EN000579		Soil/woodchip	Rota	Negative
24EN000579		Soil/woodchip	R.Equi	Negative
			Clostridia	Positive
24EN000580		Soil/woodchip	R.Equi	Negative
			Clostridia	Negative
24EN000581		Soil/woodchip	R.Equi	Positive
			Clostridia	Negative
24EN000582		Soil/woodchip	R.Equi	Negative
			Clostridia	Negative
24EN000583		Feed	Fungal	*High growth of <i>Aspergillus Flavus*</i> *Moderate growth of <i>Aspergillus fumigatus*</i>
			Zearalenone	<7.5 ug/kg
			Ochratoxin A	27.06 ug/kg
24EN000584		Surface Swab	R.Equi	Negative

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24EN000585		Swab	Fungal Culture	*Moderate growth of <i>Aspergillus fumigatus</i>* *Light growth of <i>Aspergillus Flavus</i>*
24EN000586		Swab	Fungal Culture	*High growth of <i>Aspergillus Flavus</i>* *Moderate growth of <i>Aspergillus fumigatus</i>*
24EN000587		Swab	Fungal Culture	Moderate growth of <i>Rhizopus</i> [^] Moderate growth of <i>penicillium</i> [^]
			Clostridia	Negative
			R.Equi	Negative

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Note: [^]These are not considered pathogenic fungi

TNTC = Too Numerous To Count

Comment: Please contact the laboratory if you wish to discuss the results. A report with observations and recommendations will follow shortly.

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Stud Farm Assessment:

Lab Number:

Owner:

Date Sampled:

Stud Farm Land Assessment

Soil Analysis

Sample Details		Sample Results				
Optimum Range		6.3 - 6.9	6.8- 7.0	5.1-8.0	101-150	-
Lab No.	Sample Description	Soil pH	Buffer pH	Phosphorous as P (mg/L)	Potassium as K (mg/L)	Lime Requirement (t/ha)
24SF00051		6.10	6.80	2.2	95.6	2.5
24SF00052		5.80	6.70	5.2	110.0	2.5
24SF00053		5.80	6.60	3.2	63.5	2.5

24EN002717		5.70	6.70	3.4	129.2	0.00
24EN002718		6.30	7.00	3.2	97.0	1.25
24EN002719		6.50	7.00	3.9	92.2	0.00

Colour Code Meanings

Soil Index	Description	Response to fertiliser	P (mg/L)	Phosphorus required for grassland (kg/ha)	K (mg/L)	Potassium Required for grassland (kg/ha)
1	Very Low	Definite	0-3.0	27 - 39	0-50	90
2	Low	Likely	3.1-5.0	17 - 29	51-100	60
3	Medium	Unlikely	5.1-8.0	7 - 19	101-150	30
4	Sufficient/Excess	None	>8.0	0	>150	0

Lime Requirement	Tonnes of lime per hectare
	No lime
	1.25 t/ha
	2.50 t/ha
	3.75 t/ha

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Grass – Nutritional Analysis

Sample Details		Sample Results									
Lab No.	Sample Description	Dry Matter (%)	Moisture (%)	Crude Protein (%)	NDF (%)	ADF (%)	Ash (%)	Est. DE (MJ/kg)	DM D	Nitrogen (%)	pH
24SF00054		14.69	85.31	14.48	35.95	18.00	6.86	12.91	74.68	2.32	4.61

Grass – Mineral Analysis

Sample Details		Sample Results											
Lab No.	Sample Description	Phosphorous (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Potassium (%)	Manganese (mg/kg)	Copper (mg/kg)	Zinc (mg/kg)	Selenium (mg/kg)	Cobalt (mg/kg)	Iodine (mg/kg)	Iron (mg/kg)
Optimum Range		0.25-0.50	0.25-0.70	0.35-0.65	0.15-0.35	0.49-4.0	25-250	8-16	40-100	0.1-2.0	0.1-1.0	0.1-2.0	100-500
24SF00054		0.32	0.14	0.85	0.25	0.32	190.00	10	28	<0.2	1.1	<0.2	230

Colour Code Meanings

	These values are considered very low		These values are considered high
	These values are considered low		These values are considered very high

Water Analysis

Sample Details		Sample Results											
Lab No.	Sample Description	TVC @22°C cfu/ml	Coliform screen/100mls	Faecal/100mls	pH	Hardness (CaCO ₃ mg/l)	Alkalinity (CaCO ₃ mg/l)	Ammonia (mg/l)	Chloride (mg/l)	Fluoride (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Sulphate (mg/l)
Recommended Values		No Abnormal Changes	0	0	6.5-9.5	-	-	-	250	<0.8	50	0.5	250
24SF00055		16	10	4	8.17	115.4	369.95	1.26	14	0.25	0.02	0	4.46

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< LOD: Result Below Limit of Detection

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