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Plant Health
Agency

An ionophore toxicity in turkeys with complex results from feed analysis

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Introduction

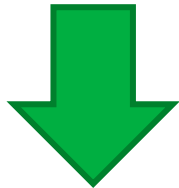
Ionophore toxicity has been a reoccurring problem in growing turkeys for 2 years.

A feed issue may be considered an unlikely aetiology for clinical findings.

Clinical history

BARN A

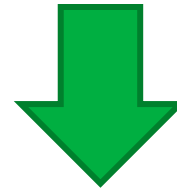
2,500 turkeys
11-week-old



Feed change
2-3 day onset
Quiet / off legs

BARN B

2,500 turkeys
15-week-old



No change



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BARN A

Affected: 300 birds

Yesterday: 15 dead

Today: 25 dead



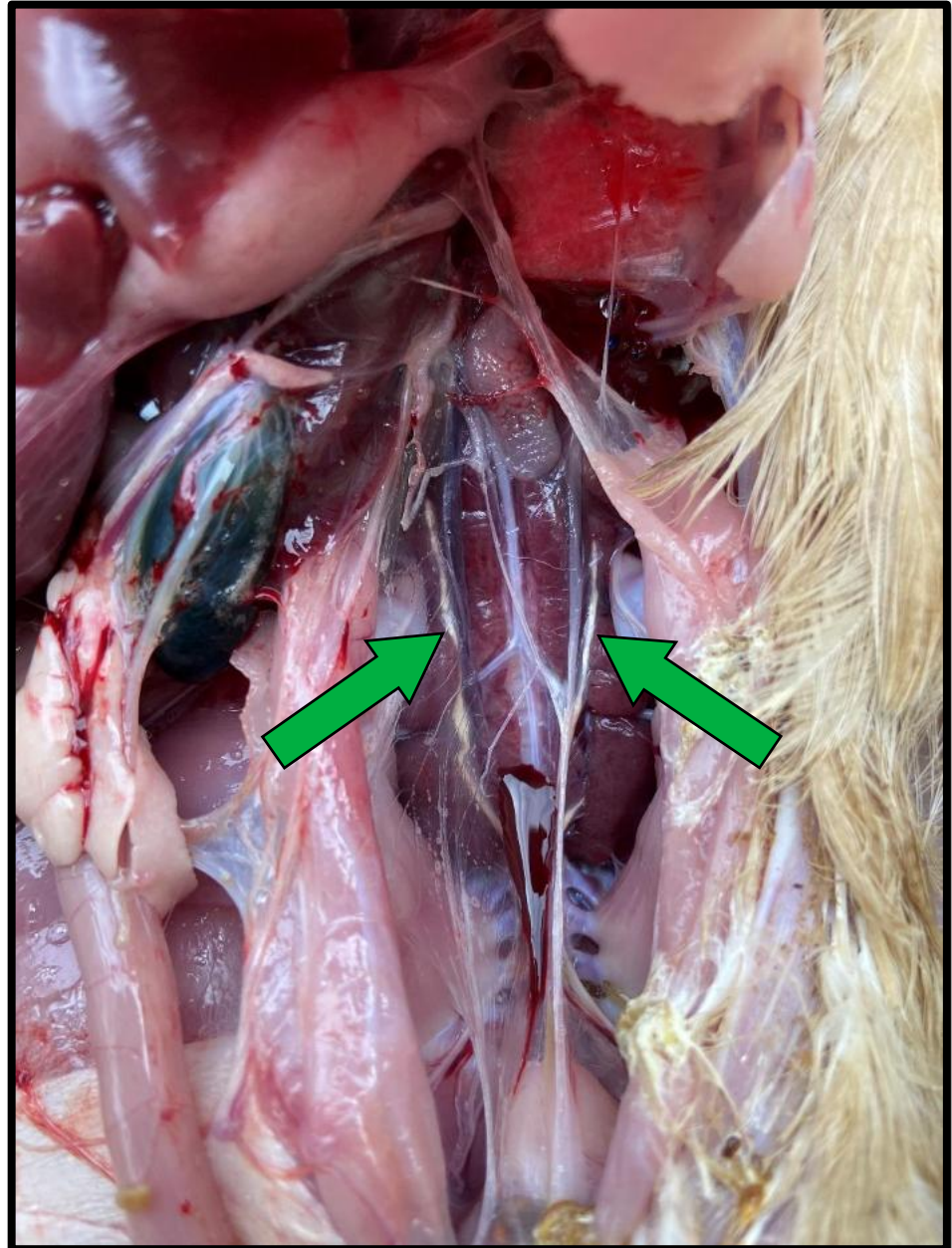


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BARN A

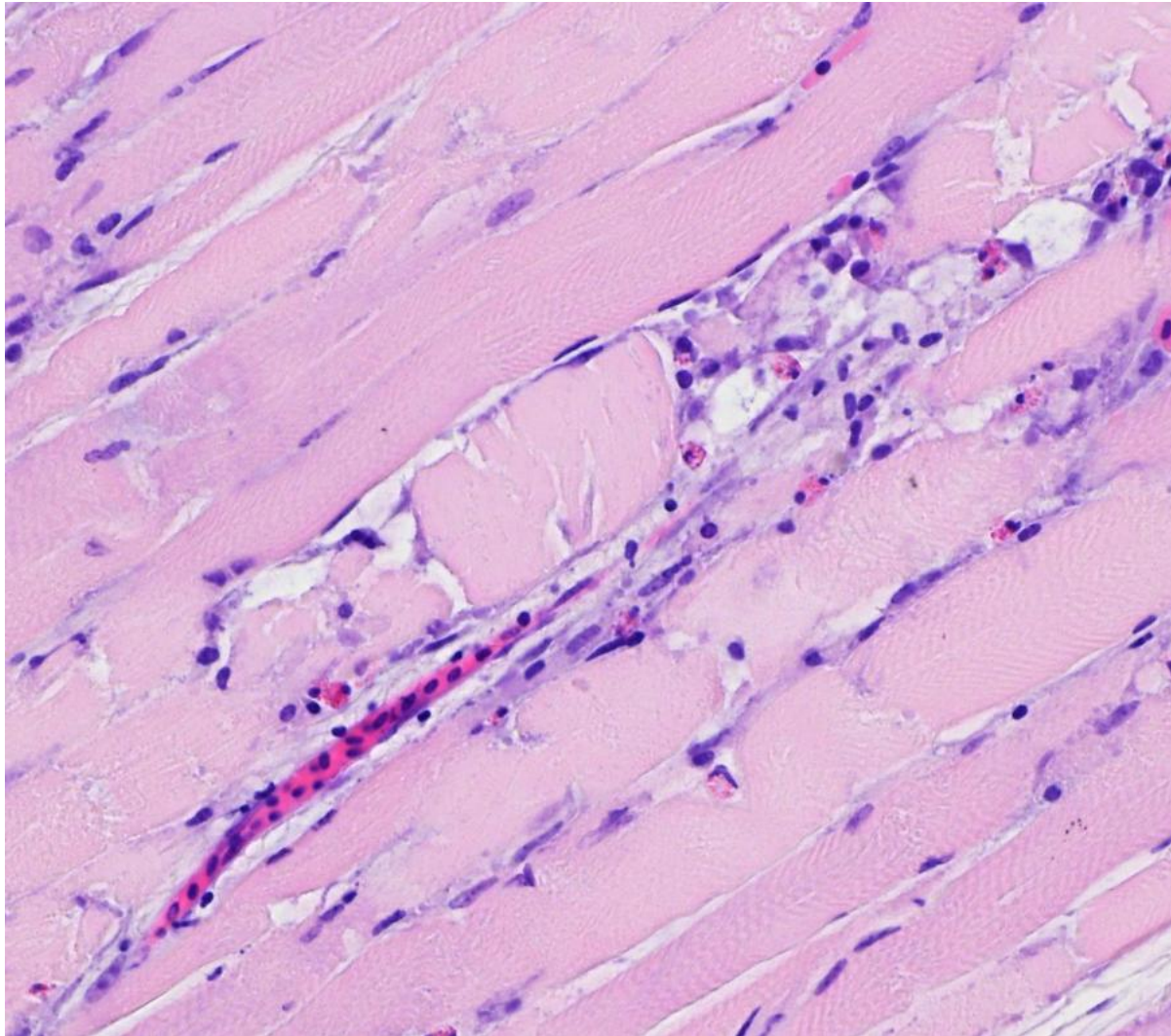
Dehydrated

Poor feed uptake



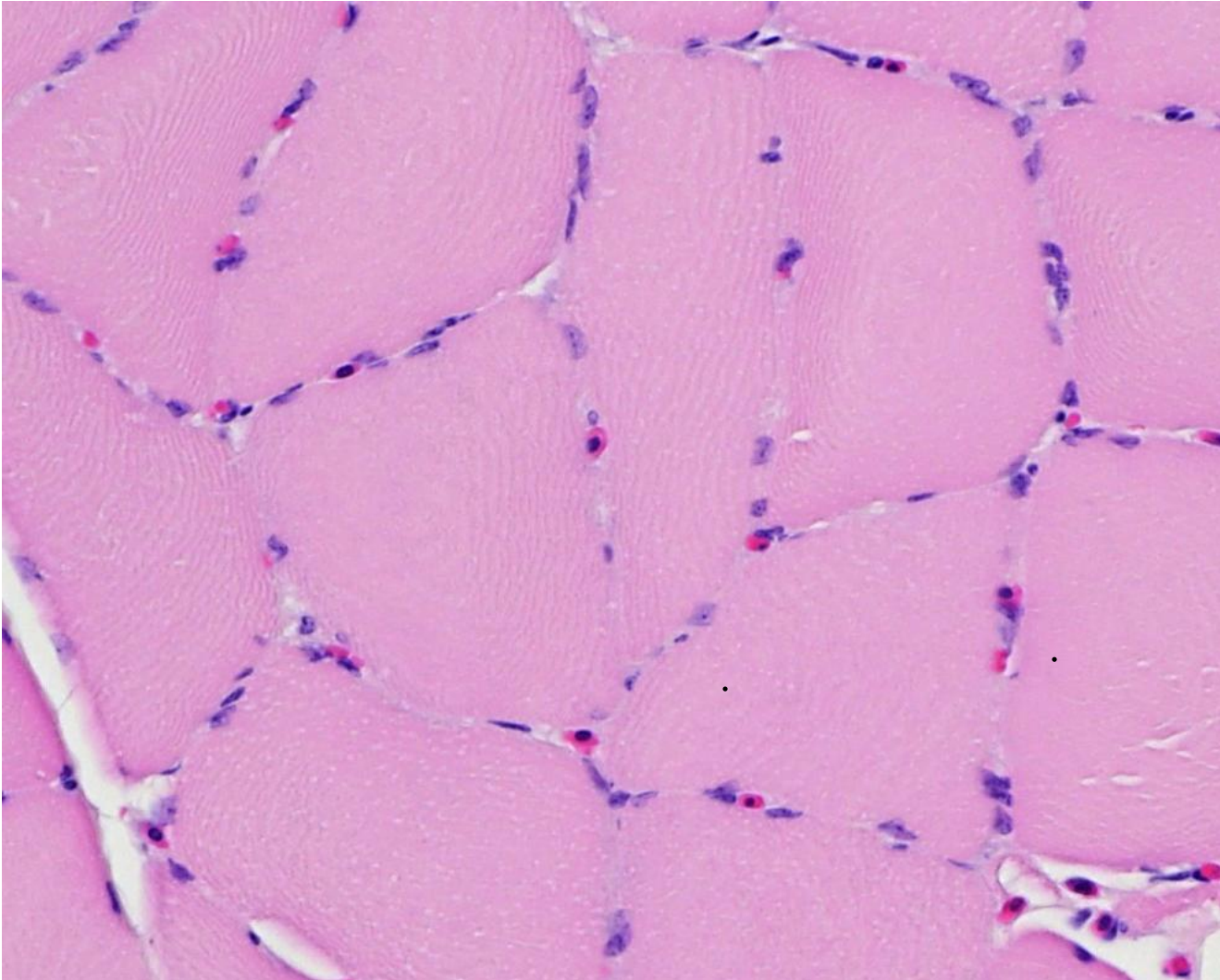


Barn A myopathy



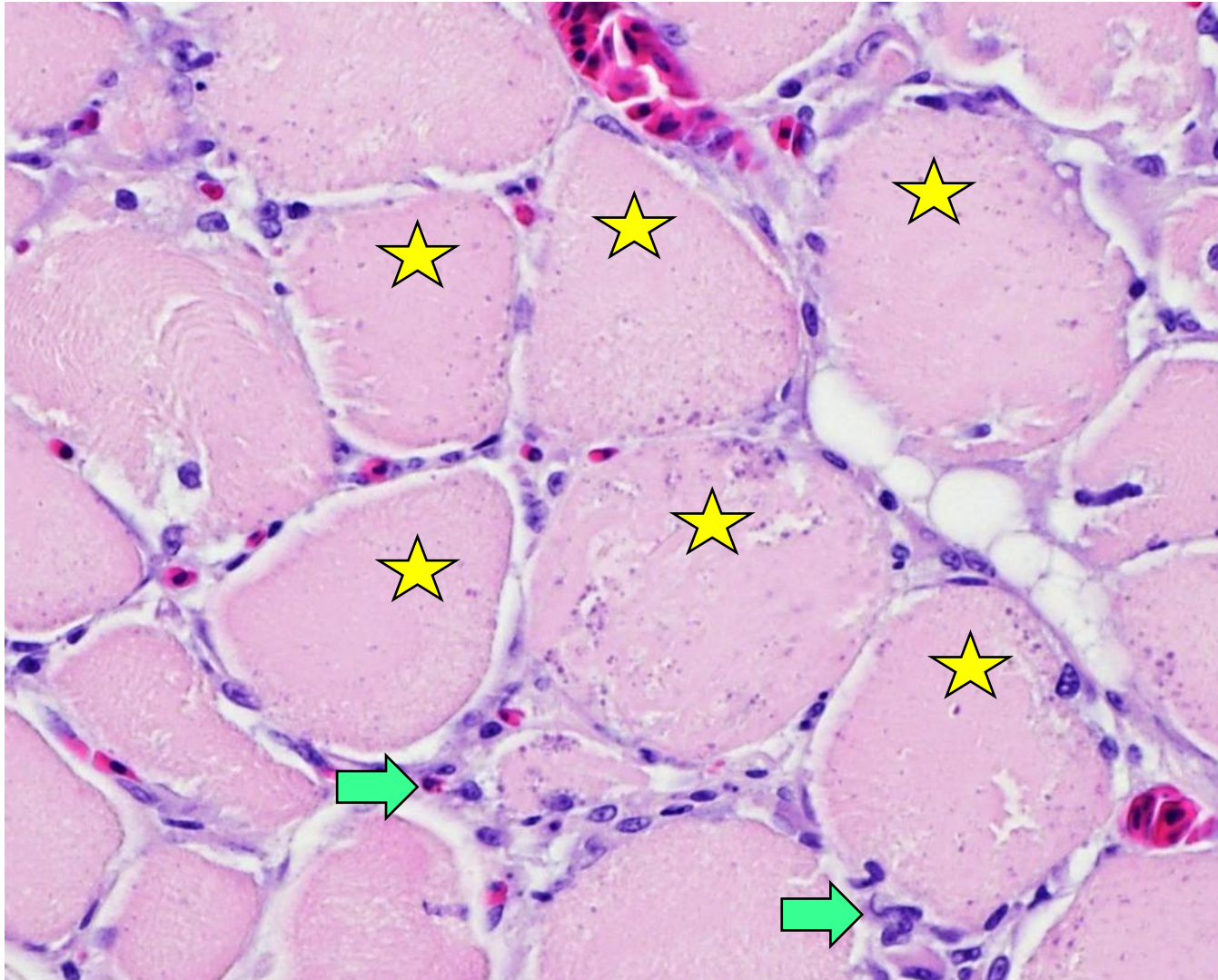


Adductor muscle



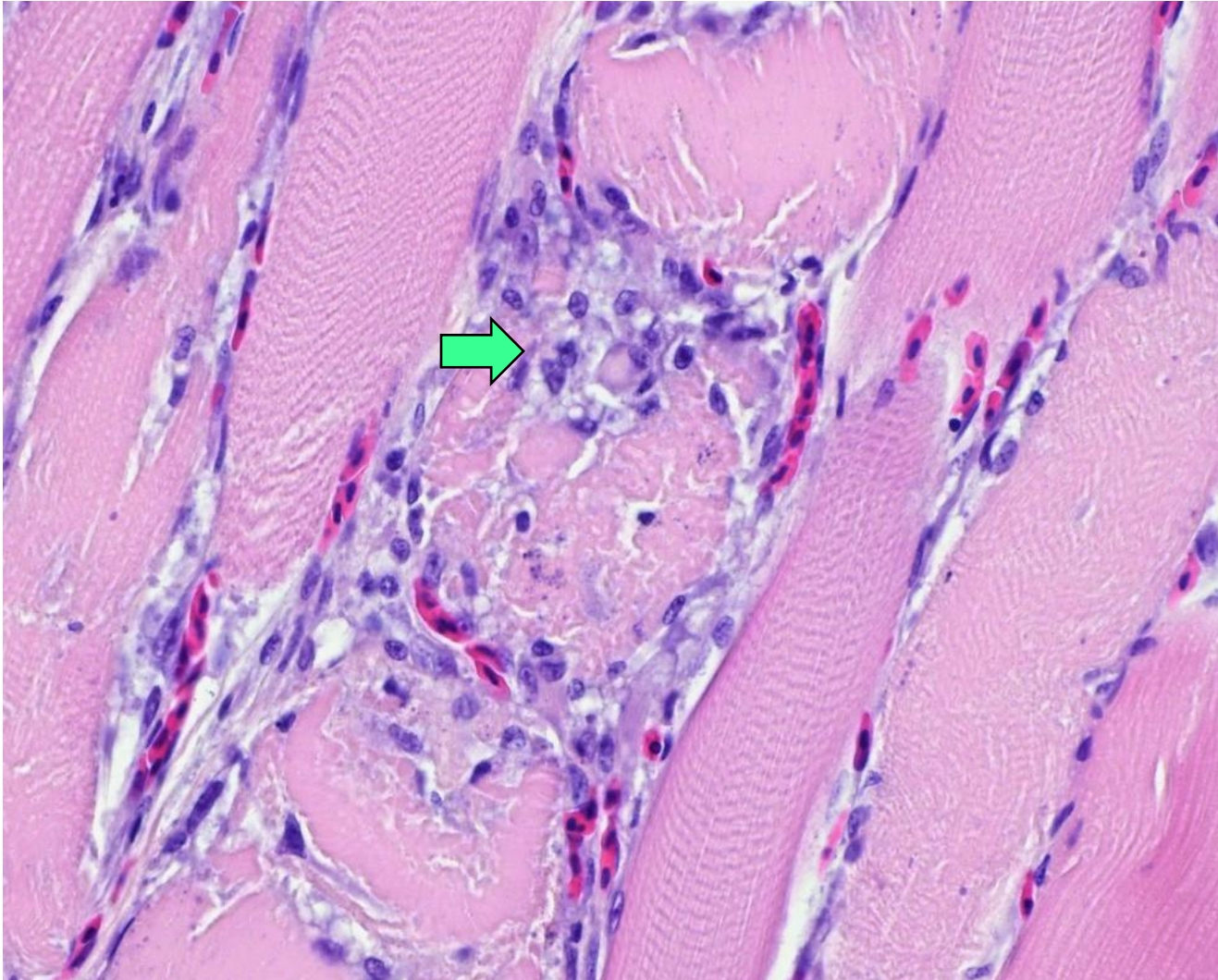


Ionophore myopathy





Ionophore myopathy

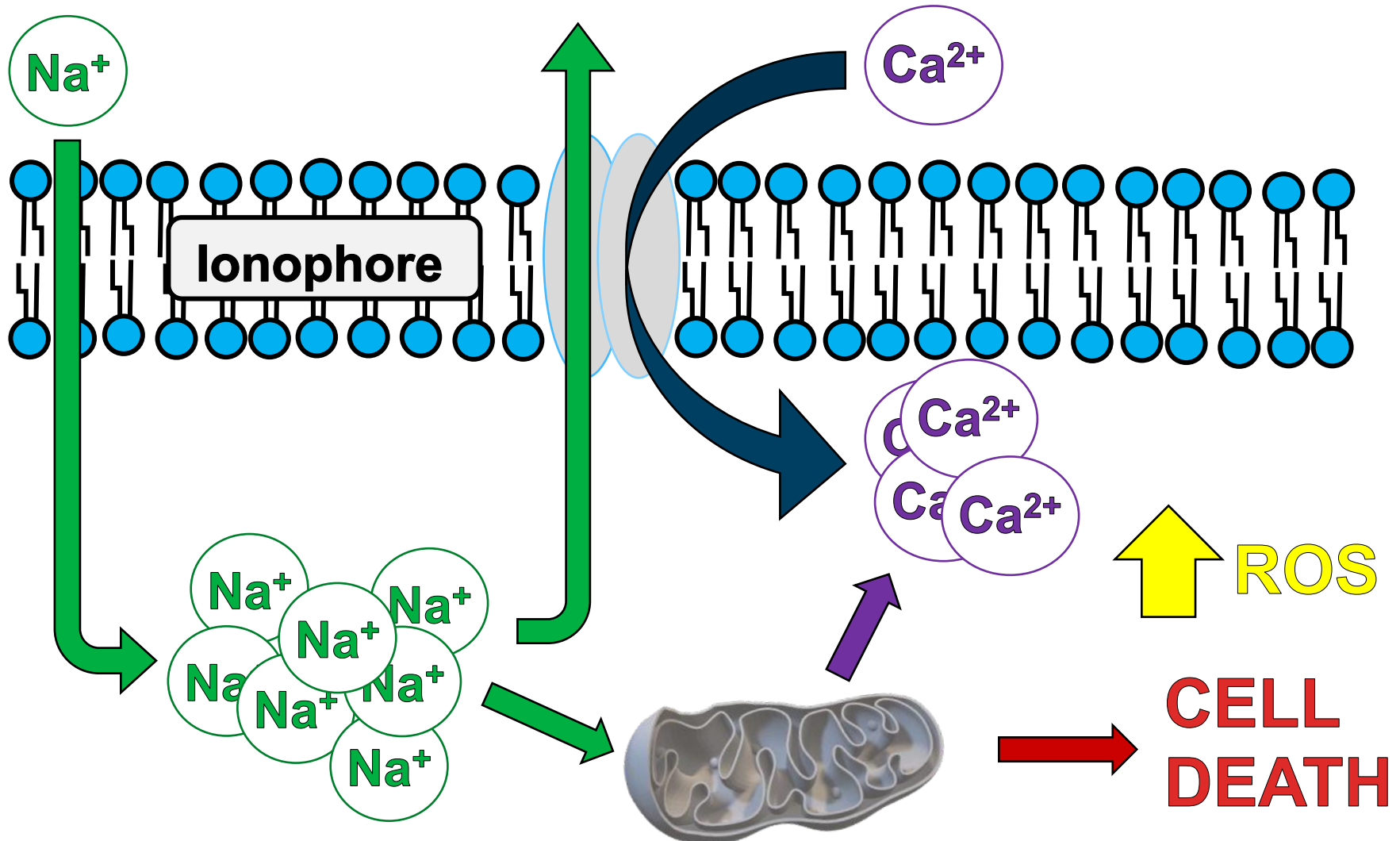


Ionophore analysis

TEST	RESULT (mg/kg)
Lasalocid	< 0.3
Monensin	1.6
Narasin	< 0.1
<u>Salinomycin residue</u>	<u>78.8</u>
Nicarbazin	< 0.3



Ionophore toxicity





Vitamin E / selenium

Protects against oxidative damage to cell membranes

Deficiencies can potentially result in similar muscle lesions

Ionophore toxicity can increase utilisation and functional requirement



Micronutrient analysis

TEST	RESULT	Units
<u>Selenium</u>	<u>0.4</u>	<u>mg/kg</u>
<u>Vitamin E</u>	<u>81</u>	<u>IU/kg</u>
Calcium	1.1	%
Copper	25	mg/kg
Iron	149	mg/kg
Magnesium	0.2	%
Manganese	144	mg/kg
Phosphorus	0.6	%
Potassium	0.9	%
Sodium	0.2	%
Zinc	118	%



Conclusions

Histopathology is a quick and affordable tool for detecting lesions and directing feed testing

Other potentiating factors should be considered



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Thank-you

