

Trace elements in season

- a cheat sheet based on season and management practices

Dairy cattle:

Season	Timing	Calves	Yearlings/ heifers	Cows			
Winter	Pre-calving			Serum selenium 5			
				Serum copper 10			
Spring	Post-weaning	Whole blood selenium*	5				
		<u>Serum selenium*</u>	5				
	Pre-mating		Whole blood selenium*	5	Whole blood selenium*	5	
				<u>Serum selenium*</u>	5	<u>Serum selenium*</u>	5
		Liver copper*	≥10	Liver copper*	≥10		
		<u>Serum copper*</u>	10	<u>Serum copper*</u>	10		
Summer	Pregnancy testing	Whole blood selenium*	5	Whole blood selenium*	5		
		<u>Serum selenium*</u>	5	<u>Serum selenium*</u>	5		
Autumn	Post-weaning	Liver copper	≥10	<u>Liver copper*</u>	≥10	Liver copper*	≥10
		Serum copper	10	Serum copper*	10	Serum copper*	10
						Whole blood selenium*	5
						<u>Serum selenium*</u>	5
				<u>Liver selenium*</u>	5		

Beef cattle:

Season	Timing	Calves	Yearlings/ heifers	Cows			
Winter	Pre-calving			Serum selenium 5			
				Serum copper 10			
Spring	Marking	Whole blood selenium*	5				
		<u>Serum selenium*</u>	5				
	Pre-mating			Serum selenium	5		
				Serum copper	10		
Summer	Weaning or pregnancy testing	Whole blood selenium*	5	Whole blood selenium*	5		
		<u>Serum selenium*</u>	5	<u>Serum selenium*</u>	5		
Autumn	Post-weaning	Liver copper	≥10	<u>Liver copper*</u>	≥10	Liver copper*	≥10
		Serum copper	10	Serum copper*	10	Serum copper*	10
				Whole blood selenium*	5	Whole blood selenium*	5
				<u>Serum selenium*</u>	5	<u>Serum selenium*</u>	5
				<u>Liver selenium*</u>	5	<u>Liver selenium*</u>	5

Bold font* - trace element highly significant for this stock class

Normal font - trace element less significant for this stock class

Underlined - preferred sample for this stock class

Sample types required:

Serum - red top tube; Liver - biopsy tube; Whole blood - EDTA

Sheep:

Season	Timing	Pre-weaned lambs	Weaned lambs	Ewes
Winter	Mid-pregnancy			Serum inorganic iodine* 10
	Pre-lambing			Whole blood selenium* 5
				Liver selenium* 5
				Liver copper ≥10
Spring	Lambing	Lamb thyroid:body weight ratio*		
	Pre-weaning	Liver B12*	5	
		Whole blood selenium	5	
Summer	Post-weaning		<u>Liver B12*</u>	5
			Serum B12*	10
			Whole blood selenium*	5
			Liver selenium*	5
Autumn	Pre-tupping			Whole blood selenium* 5
				<u>Liver selenium*</u> 5

Deer:

Season	Timing	Weaners	Yearlings	Adults
Winter	After scanning		Liver copper*	≥10
			Serum copper*	10
			Whole blood selenium	5
Spring	Pre-calving			<u>Liver copper*</u> ≥10
				Serum copper* 10
				<u>Liver selenium*</u> 5
				<u>Whole blood selenium*</u> 5
Summer	At slaughter	<u>Liver copper*</u>	≥10	
		<u>Liver selenium*</u>	5	
Autumn	Post-weaning	<u>Liver copper*</u>	≥10	<u>Liver copper*</u> ≥10
		Serum copper*	10	Serum copper* 10
		<u>Liver selenium*</u>	5	<u>Liver selenium*</u> 5
		Whole blood selenium*	5	<u>Whole blood selenium*</u> 5

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Sample types required:
 Serum - red top tube; Liver - biopsy tube; Whole blood - EDTA