

NUTRIENT MANAGEMENT Planning Guide



Forward

Nutrient Management Planning Guide for Alberta

This manual was prepared for Alberta crop and livestock producers and industry service providers to create a greater understanding of nutrient management planning processes, considerations, practices and action. It was designed to help managers of manure and fertilizer maximize their economic benefit and minimize their economic cost when managing nutrient applications.

It was developed through cooperation of government, industry and interested stakeholders. Information presented in this manual is based on the most current information sources and available research data as well as extensive field experience.

The manual contains calculations and data to assist producers in calculating crop nutrient needs and planning and managing nutrient applications through both manure and fertilizer sources. It also provides a range of management options to address nutrient application and associated losses so as to allow producers to choose options suitable for their situation.

Disclaimer

This manual was prepared for Alberta's agricultural industry to support nutrient management planning decisions and management. It was created using the best available information at the time of writing from published references as well as through consultation with industry, government and other stakeholders.

While the authors have made every effort to ensure the manual is accurate and complete, it should not be considered the final word on areas of law and practices it covers. Individuals should seek the advice of appropriate professionals and experts as the facts of each situation may differ from those set out in the manual.

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About this Manual

The Nutrient Management Planning Guide for Alberta is a resource for developing field-scale nutrient management plans. The primary objective of this guide is to facilitate nutrient management planning in Alberta. Information within the guide draws from theory, critical procedures and Alberta-specific considerations. The guide is laid out in eight modules, which are further divided into chapters that address specific topics.

Features of this Manual

Learning objectives

At the beginning of each chapter specific learning objectives are identified. These objectives outline what an individual will be able to accomplish upon working through the chapter.

Important terms

Most chapters begin with a list of important terms and definitions. These are words or terms that appear in the chapter for which a definition was thought to be beneficial. Terms are defined at the beginning of the chapter in which the word was first used.



more info

These boxes direct the reader to additional publications or sources of information that provide a more detailed discussion of topics covered more generally in this manual. These are presented as sidebars with related information in the text.



tip

Important processes, directions or considerations are highlighted in 'Tip' boxes.



Sidebars highlight facts and key information or concepts related to information in the text.



summary

Each chapter concludes with a summary in point form, which relates back to the learning objectives at the beginning of that chapter.

Commonly Used Acronyms in this Document

AAFC	Agriculture and Agri-food Canada	NMP	Nutrient Management Plan
AF	Alberta Agriculture and Food	NRCB	Natural Resources Conservation Board
AFFRM	Alberta Farm Fertilizer Information and Recommendation Manager	NSERL.	National Soil Erosion Laboratory
AGRASID	Agricultural Region of Alberta Soil Inventory Database	MMP.	Manure Management Planner
AOPA	<i>Agricultural Operation Practices Act</i>	PAMI.	Prairie Agricultural Machinery Institute
APEGGA	Association of Professional Engineers, Geologists and Geophysicists of Alberta	PFRA	Prairie Farm Rehabilitation Administration
ASIV.	Alberta Soil Information Viewer	RUSLE.	Revised Universal Soil Loss Equation
CCA	Certified Crop Advisors	SAR	Sodium Adsorption Ratio
CCE	Calcium Carbonate Equivalent	SBU	Seed Bed Utilization
CEC	Cation Exchange Capacity	SI.	Salt Index
CFO	Confined Feeding Operation	USDA-ARS	Agricultural Research Service of the US Department of Agriculture
EC	Electrical Conductivity	USLE.	Universal Soil Loss Equation
ENR	Estimated Nitrogen Release	VFB	Vegetative Field Borders
GPS	Global Positioning System	VFS	Vegetative Filter Strips
IR	Investment Ratio	WEPP	Water Erosion Prediction Project