

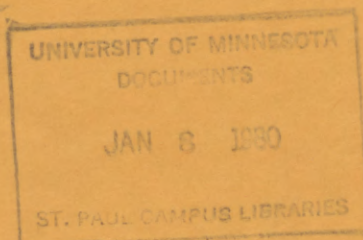
MN 2000
SR-81

SPECIAL REPORT 81

1979-80 Silage Clinics

Profitable Preservation and Feeding of Quality Silage

AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF MINNESOTA



9:30

Registration

10:00

SILAGE PRESERVATION—HOW AND WHY?

N. P. Martin

Silage Additives
Silage Preservatives
Silage Conditioners

11:00

ECONOMICS OF SILAGE STORAGE SYSTEMS

Fred Benson

Silo Investment and Operating Costs
Silo Storage Capacities
Tower, Oxygen-Limiting or Bunker?
Dry Matter Losses

11:30

Lunch

12:30

SILAGE FEEDING CLINICS (Choose One)

Dairy—Jim Linn

Is Sodium Bicard Needed?
Is Baled Hay Needed?
Dry Cow Problems?
NPN in Corn Silage?

Beef—Ray Arthaud

Can I Feed Silage in Winter?
NPN in Corn Silage?
Self Feeding Silage?
Feed Additives—Monesin?

1:30

MANAGING FORAGE CROPS FOR
QUALITY SILAGE

N. P. Martin

Crop Selection (Sunflowers?)
Harvest Considerations
Silage Quality
High Moisture Grain Silage

2:15

PROFITABILITY OF QUALITY SILAGE

Fred Benson

Crop Production Budget
Harvest Cost
Feeding Cost
Profit of Quality Alfalfa
Profit of Quality Grass

3:00

Adjournment

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Preface

The feeding of adequate quantities of high-quality forage is the basis of profitable milk and livestock production. Forage production, harvest, storage, and feeding practices have changed greatly in the past 20 years in Minnesota. The trend has been away from hay as a primary forage to some form of silage. Silage has gained in importance as livestock enterprises have become larger and more forage has been needed on individual farms.

Silage has gained in use because 1) it can increase the yield of nutrients from available land, 2) it can decrease feed costs, 3) it can lower harvest losses and increase forage quality, and 4) it offers greater mechanization of harvesting and feeding with reduced labor requirements. However, high-level management and sizeable financial investments are necessary for efficient production, harvest, storage, and feeding.

Advantages of Silage

The advantages of harvesting crops for silage compared to field cured hay are:

- More nutrients are preserved per acre
- Less hindrance results from unfavorable weather conditions
- Less need for supplemental feed exists
- Silage fits better into mechanized feeding programs
- Field losses are reduced with improved harvest and handling equipment
- Costs and storage losses are reduced with the use of larger silo structures
- Silage can be preserved for long periods with little loss of nutrients

Disadvantages of Silage

The disadvantages of crops harvested for silage compared to crops for grain or field cured hay are:

- Storage losses are high under poor management
- After silage removal begins, a minimum removal rate is required to avoid spoilage
- Storage costs are high relative to feed value. Storage facilities are often specialized and have limited uses
- Machinery and equipment investment costs are high under low annual tonnages
- Total cost of machinery, equipment, storage, and feeding facilities is high. Large monetary investments result in inadequate cash flow during financing
- Off-farm market for silage is limited
- Silage is costly to transport relative to its bulk

The trend to greater use of silage is likely to continue as more dairymen and livestock producers go to year-round feeding of stored forages, and livestock enterprises increase in size. Many considerations regarding crop selection, harvesting and feed equipment, and storage facilities are important in developing efficient and profitable forage systems. This publication will address aspects of these considerations to provide a better understanding of silage preservation, feeding, and storage as each relates to economics.