

AUTOMATION IN COW MILKING

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Outline of presentation

- I. History of milking machine
 - A. Development of milking machine
 - B. Development of milking systems
 1. stalls
 2. pipe-lines
 - C. Milking rates

- II. Cost of milking
 - A. Labor 80-82%
 - B. Building 20-18%
 - C. Cost of milking in Michigan
 1. side-open parlor \$132/year
 2. herringbone parlor \$82/year

- III. Increase milking efficiency by automation and new equipment
 - A. Cow traffic
 1. better design of parlor
 2. use of crowd gates
 - B. Milking machine equipment
 1. use of low lines
 2. cow washers
 3. warm water stimulation
 4. covering feed bowl as cows enter and exit parlor
 5. automatic opening and closing entrance and exit gates
 - C. Automatic machine detachment
 1. sensing device for milk flow
 2. monitoring milk flow
 3. removal of claw
 4. companies presently working on automatic detachment
 - a. Surge - Ill.
 - b. DeLaval - New York
 - c. Sta-Rite - Wisconsin
 - d. Ross-Holms - Calif.
 - e. Ray Umbaugh - Colo.
 - f. Technical Industry - Florida
 - D. New parlor configuration
 1. MPP Michigan Polygon Parlor
 2. Circle parlor
 3. conveyor type parlor