

LAND O' FROST FORMULATION IMPROVEMENT

I PRO 345



Great Taste, Low Cost

Outline

- Background
- Problems
- Solutions



BACKGROUND

Land O' Frost

- Family owned
- 50 years
- Manufacturing Deli Meat
- Based in Lansing, IL
- Customer satisfaction



Team Organization

- Individuals' Expertise
- Minimal Subdivision
- Small Group Size
 - Equal task distribution

Name	Major
Alemayehu, Matti	Chemistry
Amegasse, Pierre-Paul	Chemical Engineering
Hogan, Michael	Computer Science
Isoda, Mitchell	Applied Mathematics
Mick, Emily	Chemistry
Torres, Edgar	Computer Science

Formulation Process

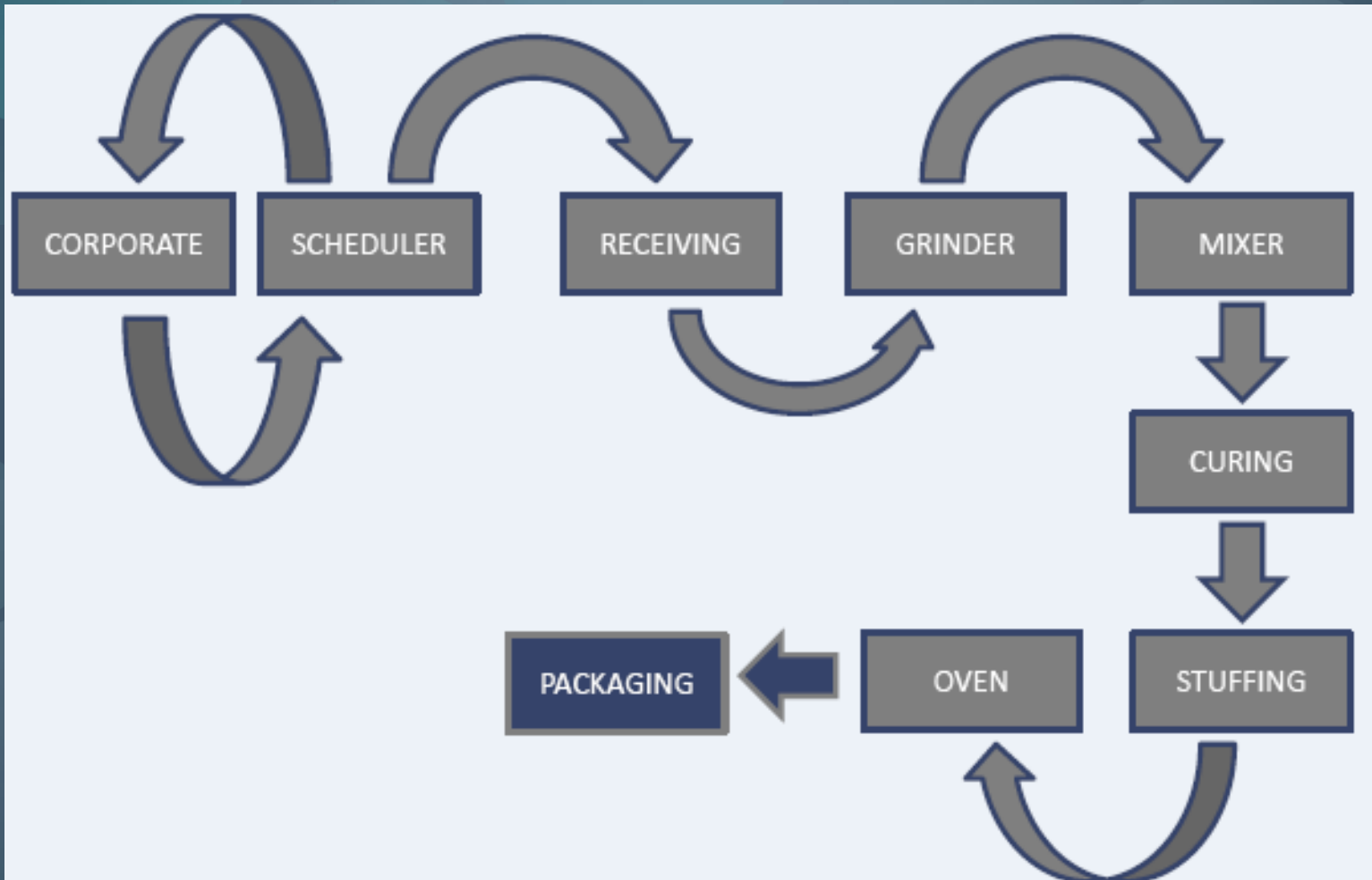
- Corporate
- Scheduler
- Receiving
- Grinder
- Mixer
- Curing
- Stuffing
- Oven





PROBLEMS

Process map



Problems

- Corporate
 - Lack of surveys
- Scheduler
 - Extensive Manual Data Entry

Corporate|Scheduler|Receiving|Grinder|Mixer|Curing|Stuffing|Oven

Problems

- Receiving
 - USDA regulations
- Grinder
 - Different types of tools for similar processes
 - Tools breakage

Corporate|Scheduler|Receiving|Grinder|Mixer|Curing|Stuffing|Oven

Problems

- Mixer
 - Plant layout arranged by process
- Curing
 - Keeping track of materials

Corporate|Scheduler|Receiving|Grinder|Mixer|Curing|Stuffing|Oven

Problems

- Stuffing
 - Outdated Equipment
- Oven
 - Inefficient rack use

Corporate|Scheduler|Receiving|Grinder|Mixer|Curing|Stuffing|Oven



SOLUTIONS

Solutions

- Corporate
 - Create a quiz to ensure workers understand the information presented to them in training.
- Scheduler:
 - Create a new system for scheduling, such as a computer program

Solutions

- Receiving:
 - Install an electric eye device, like in garage doors, to respond when materials are placed too close to the wall
- Mixer:
 - Revise the plant layout by organizing according to product or line rather than process

Solutions

- Grinder:
 - Use fewer tools.
 - Every tool should be welded.
 - Policies concerning tools should be implemented requiring tools be examined before they are used.
 - Tool breakages should be tracked, and tools should be discarded preventatively according to these records.

Solutions

- Curing

- Use a computerized tracking system when arranging the curing rooms

- Stuffing:

- Replace outdated equipment. This includes purchasing new machines on the market that are faster, as well as searching for automated alternatives.

Solutions

- Oven
 - Use flexible rack system to accommodate more shelves when smaller log sizes are used



Challenges

- Industry Inexperience
- Non-Disclosure Agreement
- Unable to implement suggestions



Looking ahead...

- Continue work on formulation
- Progress work to packaging
- Maintain communication with sponsor

Acknowledgments

- Land O' Frost
- Professor Philip Lewis
- Dr. Sheldon Mostovoy
- IPRO office

Questions

