

IPPS New Zealand 2016

Lean Production and Your Plant Factory



MISSISSIPPI STATE
UNIVERSITY™

MS AGRICULTURAL AND
FORESTRY EXPERIMENT STATION

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Presentation Overview



What is Lean?

History

Will it Work for Me?

Lean Details / Examples

Summary

What is Lean?

- Doing more with less
- Focuses on satisfying the customer
 - QCD
- Waste reduction
- Organization
- Structured approach to improvement

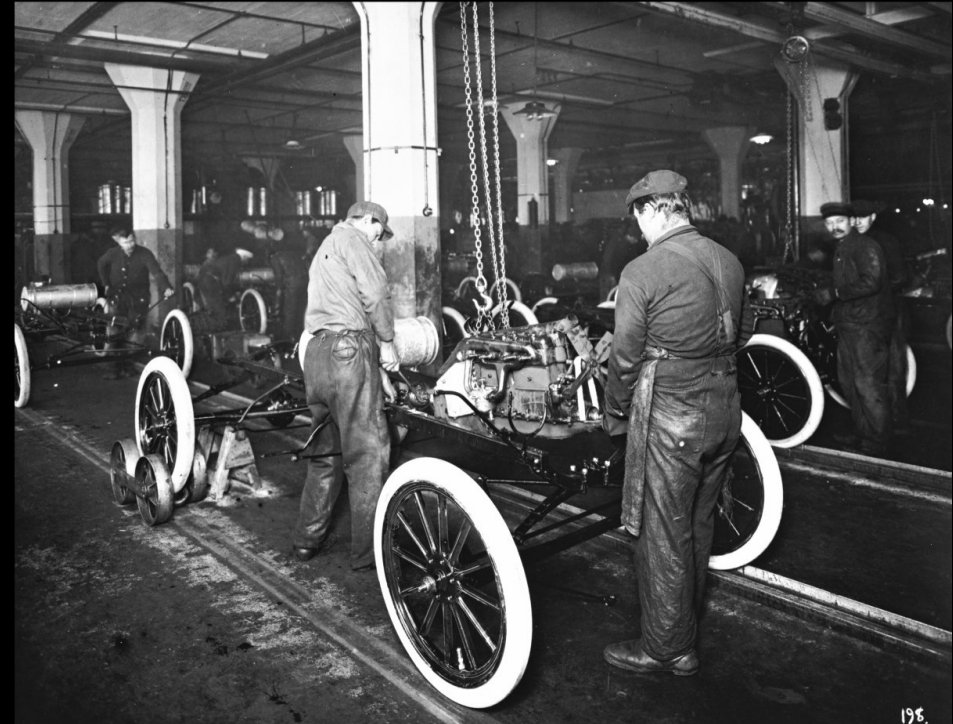
Quality

Cost

Delivery

History

- Early production lines
- Toyota Production
- Help from others
- The 1980's quality revolution
 - World Class Manufacturing
 - Total Quality
 - Continuous Flow Manufacturing



Will it work for me?

Nursery

- Typical ~~manufactured~~ item characteristics
 - Customer order driven
 - Orders drive inventory
 - Raw materials
 - Labor component / Processing time
 - Main concerns include cycle time and quality
 - Time sensitive shipping / delivery
 - Customer satisfaction feedback loop



Flowerwood Nursery - Loxley, AL
1-800-858-3521 Fax 251-9641

Stage Area	Trx No	Set Of	Order #	Rack Of	No Shelves	Message
St:G43	041579	39 of 53	478958	2 of 2	3	

Sold To: THE HOME DEPOT 770-433-8211 Ship to: HOME DE
77906 DEPT #28 AP# 82450 MARCH #
P O BOX 105728 603 STR
ATLANTA GA 30348 ORANGE

Shlf	T	P	Qty	Product #	Product Name
4	S	L	10	5169 3	RAPHIOLEPIS SPRING SONATA TM PP#1
3	S	L	32	0287 Q	AGAPANTHUS 'LITTLE BLUE FOUNTAIN'
2	S	L	32	2096 Q	GARDENIA JUBILATION TM PP#21983
1	B	L	21	8051 1	AZ. ENCORE A. EMBERS TM PP#10581

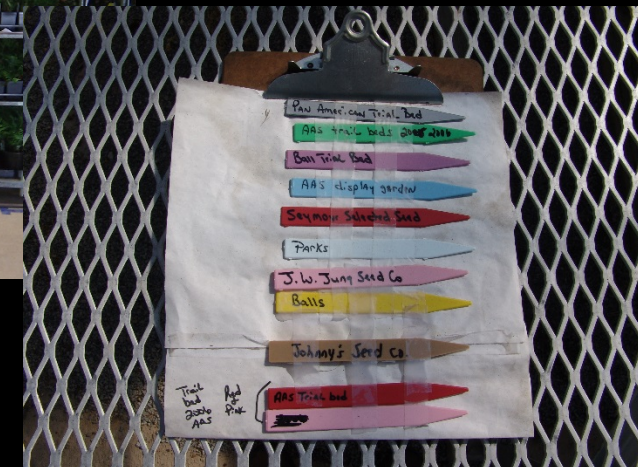
LA

Lean Components

- Lean Terminology
 - 5S's
 - Kaizen
 - Wastes (Muda, Muri, Mura)
 - Jidoka
 - Kanban
 - Autonomation
 - Poka Yoke

5 S's

- Sort
 - Separating the necessary from the unnecessary
- Set in order
 - Arranging needed items in an orderly fashion
- Shine
 - Keeping work places clean
- Standardize
 - Where possible, develop (and follow) standard procedures
- Sustain
 - Develop a shared set of values among the entire team



Waste

Typically thought of as...

- Product not sold
- Un-sellable product
- Damaged plants
- That dump out back

Waste defined

- Any non value-added process within your operation
- Muda, Muri, Mura
- 7 Wastes
 - Waiting
 - Transport
 - Motion

Motion

Movements of your most valuable resource

- Placement of items and proximity to workers
- Excessive movement
- Reaching / twisting
- Transfer of items in hands
- Safe moves



Transport

Movement of product through your operation

- Trailer/Wagons
- Conveyors
- Human transport



Automation

- Recognize that integration of equipment / mechanization requires that the operator and machine become 'one'
 - Proper training
 - Machine feedback
 - Employee understanding and buy-in



Poka Yoke



Kanban Goal Boards



Work Pacing



Lean Innovations



Flowerwood Nursery - Loxley, AL
WK 1216

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Sold To: 77906
ATLANTA GA 30348

Ship to: HOME DEPOT
MERCH #82
603 STRIC
ORANGE

Shlf	T	P	Qty	Product #	Product Name
4	S	L	10	5169 3	RAPHIOLEPIS SPRING SONATA TM PP#179
3	S	L	32	0287 Q	AGAPANTHUS 'LITTLE BLUE FOUNTAIN' T
2	S	L	32	2096 Q	GARDENIA JUBILATION TM PP#21983
1	B	L	21	8051 1	AZ. ENCORE A. EMBERS TM PP#10581

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Lean Management

- Number one reason why lean projects fail is management related
- Managers must evolve their management style
- Focus needs to be on continuous improvement
- Focus on the long term
- Entire organization must share in problem resolution

Lean Principles

Principle #1

Eliminate non value-added
activities

Lean Principles

Principle #2

Order will drive efficiency

Lean Principles

Principle #3

Improvements = Profit

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Principle #4

Movement \neq Work

Lean Principles

Principle #5

Management style drives
culture

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Lean Production and Your Plant Factory Thanks!!



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