

SUPPLY CHAIN MANAGEMENT (SCM) WITH APPROACH TO QUALITY CONTROL IN MILLING INDUSTRY



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Contents

Changes in FM Industry

BE WINNER IN COMPETITIVE MARKET

Defining a Supply Chain

SCM stages in flour production

Risks in SCM of Flour production

Role of each chain in Flour Quality

***RAISE THE QUALITY IN FLOUR PRODUCTION
CHAIN***



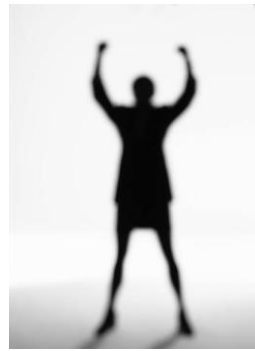
Changes in FM Industry

- New competitors entering through establishment of new production plants.
- Basic changes in role of governments in flour market.
- Increase role of the importation of wheat for flour production plants and its price fluctuation.



BE WINNER IN COMPETITIVE MARKET

- The first victory in competitive market is to **stay** and **survive**
- Quality is a MUST to win
- Only focused on increasing product quality and quantity **only focusing in their plants.**
- worldwide overview of quality for managers in of flour industry





Defining Supply Chain Management

- A chain of activities that creates and delivers the products and services to customers.
- An integrated group of processes to “source,” “make,” and “deliver” products

“Quality management from farm to fork”



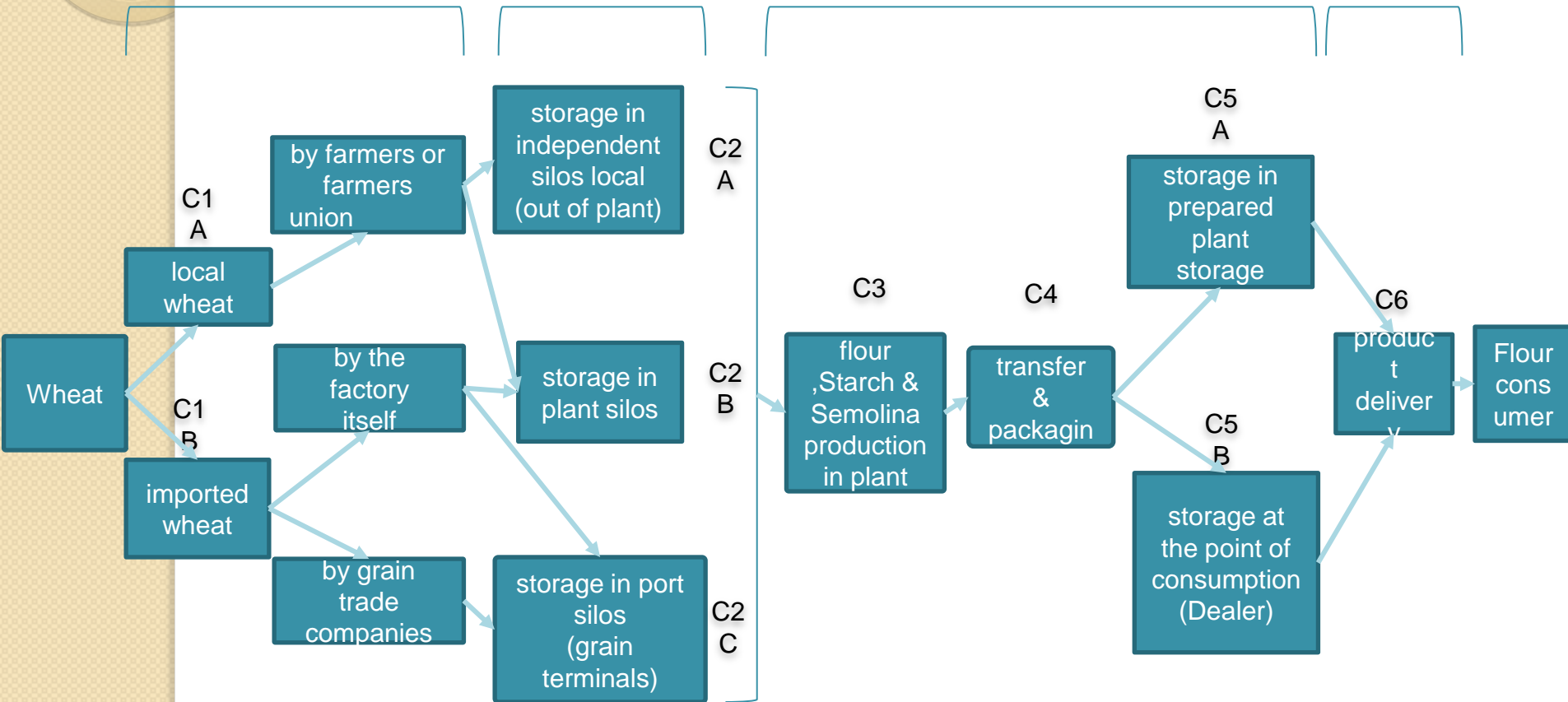
SCM stages in flour production

procurement of raw material (wheat)

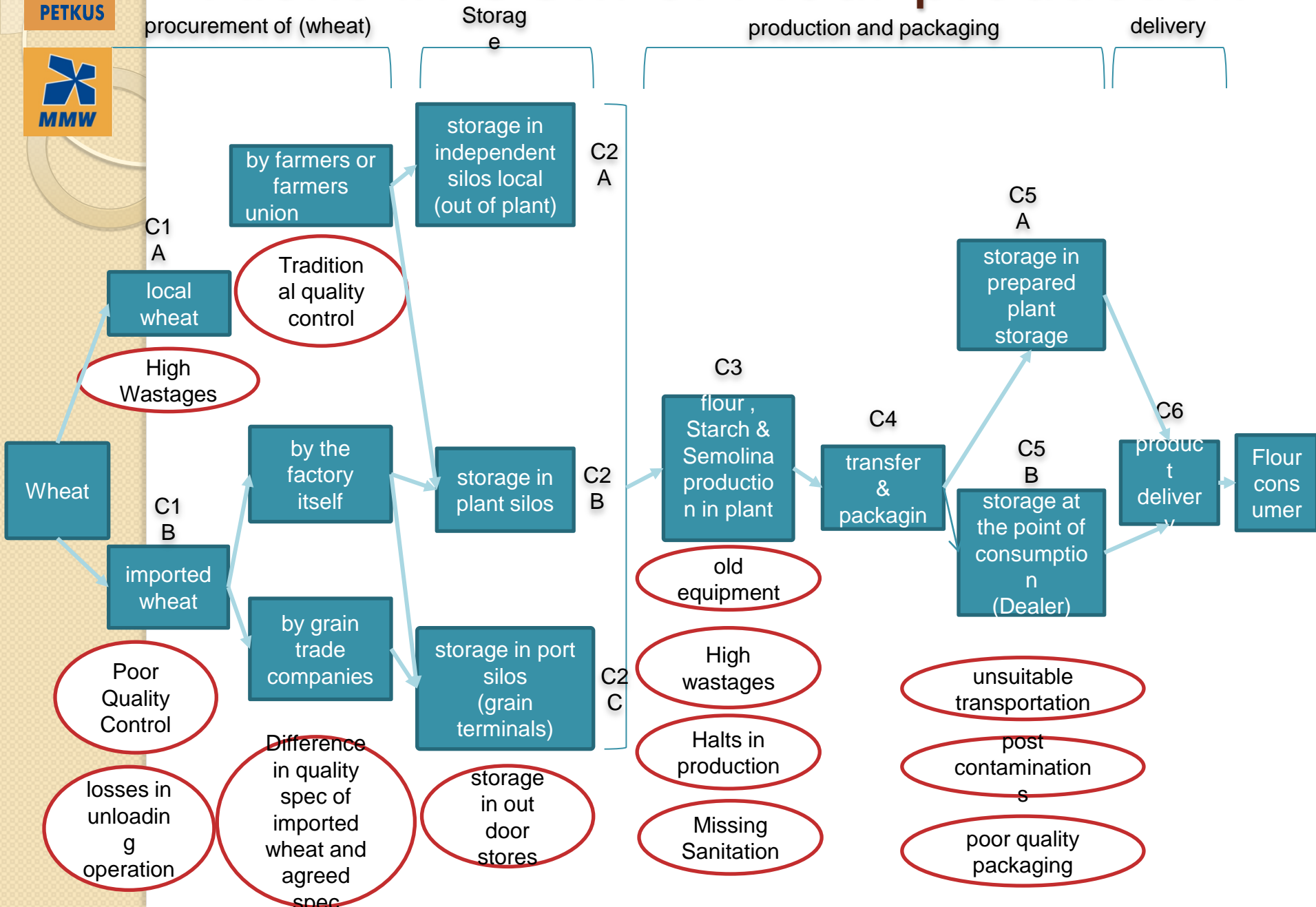
Storage

production and packaging

delivery



Risks in SCM of Flour production





Role of Each Chain in Flour Quality

Chain Code	Title	Probable percentage of waste	Cause/Causes	Results
C1A	Wheat locally produced	8.5 To 10%	✓ Not using optimum procedures in planting, growth and harvesting stages	✓ As the most important input in the chain it will affect all the following stages
C1B	Wheat from import	4 To 5%	✓ Utilizing traditional unloading equipment from ship or wagon ✓ Not taking samples and proper quality control after import	✓ Utilizing traditional equipment and procedures will damage the wheat and causes quality and quantity damages. ✓ The plant imports the wheat on the basis of quality inspection at original point.
C2A C2B	Storing in open and non – standard stores	At least 8 to 10%	✓ Not having mechanized and standard storages ✓ Not paying attention to the importance of maintenance in the chain of flour production	✓ Increase of quality and quantity wastes because of environment and pests



Every Chain Role in Flour Quality Continue

C2C	Storing in non-standard port stores	At least 3 to 4.5%	<ul style="list-style-type: none">✓ Not having standard grain silos at importing and exporting ports.✓ Not having mechanized handling equipment	<ul style="list-style-type: none">✓ Increase in wastage because of environment condition insects and pests✓ Increase in wastes due to storing adjacent to other bulk material and their contamination pollution like coke , cement ,etc.
C3	Flour production process	Low productivity	<ul style="list-style-type: none">✓ Production by old machinery✓ Low technology (no optimized production diagram)✓ Technical production problems✓ Missing Sanitation✓ Poor Quality management	<ul style="list-style-type: none">✓ Production stoppages✓ Decrease in capacity of production✓ Decrease in output✓ Increase in wastages✓ Decrease in variety of products✓ Damaging flour starch
C4	Product packaging (flour)	1 to 1.5%	<ul style="list-style-type: none">✓ Utilizing un proper packaging material✓ Utilizing used and old packaging machinery	<ul style="list-style-type: none">✓ Falling during distribution due to un proper bag sealing✓ Low quality and attractiveness of packages of packages in case of added value flour like cakes.

Every Chain Role in Flour Quality

Continue



C5A C5B	Ready to use storage at plant or point of consumption	1 to 1.5%	<ul style="list-style-type: none"> ✓ Secondary contamination ✓ Effect of environment like humidity on the product 	<ul style="list-style-type: none"> ✓ Transfer of contamination to the product ✓ Wastage due to penetration of humidity
C6	Product delivery	0.5 – 1%	<ul style="list-style-type: none"> ✓ Improper transportation 	Qualitative and quantitative wastes due to improper transportation



HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



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C1A

Locally
produced
wheat



- ✓ Finding local high quality wheat producers and signing long term contract



- ✓ Using agriculture consultants to increase productivity and quality of the main local producers.



- ✓ Investment on agricultural machinery and procurement of the machinery instead of cash payment for local wheat



HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



PETKUS



MMW

C1B

Imported
wheat



Finding proper imported wheat providers



To evaluate the quality specs of the purchased wheat



Unloading from the ship by automatic ship - unloader



Secondary quality control at the time of delivery





C2A

C2B

C2C

Storing in silos

HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



Using standard silos , not using sole and open storage



Silos to be equipped with safe temperature control system



Ventilation System to maintain wheat conditions during storage



Pre –cleaning prior to wheat entrance to silos if necessary





C3

Flour production

HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



Improving production by optimizing proper diagram



To utilize modern technology machinery and equipment



To employ experienced and expert personal



Regular repairs and preventive maintenance (PM)



Applying effective machines in pre-cleaning and
cleaning



To meet Sanitation requirements



HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



Using packaging machine with proper technology



Services from consultants and experts in packaging specially for flour with high added value



To employ experienced and expert personal



Proper quality control after packaging





C5A

C5B

Storing End
Product

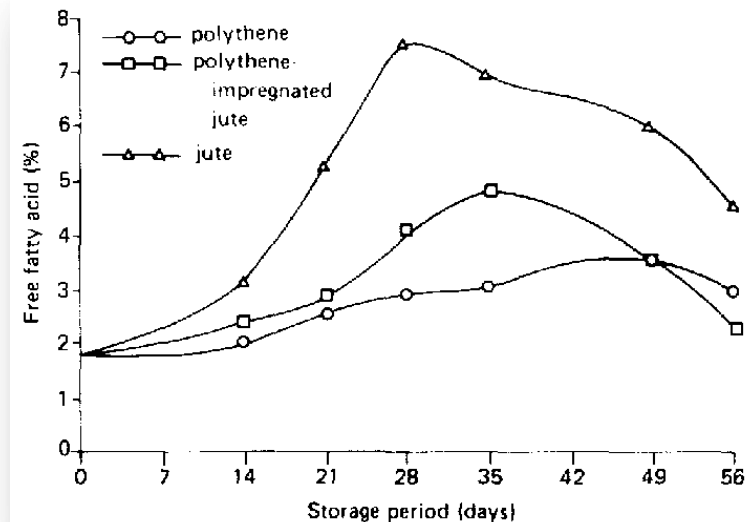
HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



Storing in good condition in terms of humidity and keeping the insects out



Using scientific storage procedures on the basis of LIFO , FIFO





C6

Product
delivery

HOW TO RAISE THE QUALITY IN FLOUR PRODUCTION CHAIN



Quality Control Monitoring before Delivery



Supervising transport and product delivery



Monitoring the time, quantity and delivery conditions to customer



Using customer feedback questioner forms to measure customer satisfaction



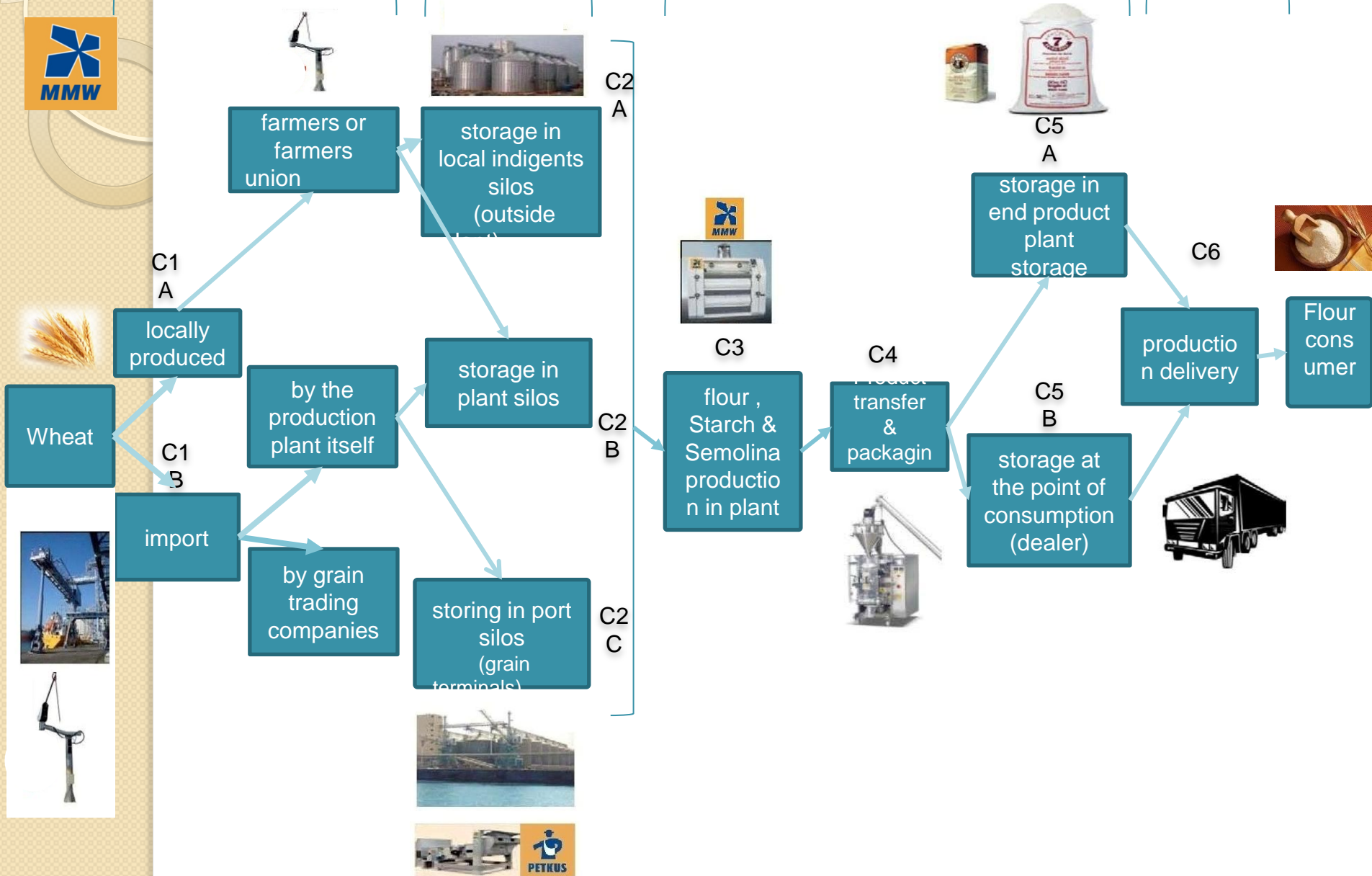


procurement of wheat

Storage

production and packaging

delivery





Thank you for your attention

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