RECEIVING AND HANDLING GRAPES

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HARVEST PARAMETERS

-chemical harvest parameters:

(Brix ~ 14° range, pH < 3.4 and TA ~5.5 – 8.2)

-harvest based on chemical analysis of berry samples in tandem with developing flavor profiles and physical traits of berry maturation (skin color, pulp texture and seed color)

MACHINE HARVESTING

-early morning to avoid excessive heat

-set speed and amplitude of picker

-TOO VIGOROUS= lots of green fruit being harvested

-berries dropping off canopy ahead of picker (shattering)

BENEFITS OF MACHINE HARVESTER

Machine harvesting is the optimal way to harvest Muscadine grapes on a normal commercial scale.

Benefits:

green berries are automatically separated

fast harvesting gets grapes straight to crushpad and out of heat

much less expensive compared to hand harvesting and hand sorting!

LOADING GRAPE BINS

In our excessive heat, maintaining fruit quality is a big issue

Options to prevent wild yeast fermentation and microbial spoilage while waiting on press

Cold storage: @ ~ 32-60F depending on length of storage

Chemical: sprinkle KMBS powder @ ca 20 g per bin while loading

WEIGH TAGS

Consider renting or purchasing a large scale to weigh the bins as they are delivered to the crushpad

-Concise tonnage on your final harvest,

-Indications of issues (disease, irrigation problems) in specific fields

-Important for compliance

-Helps calculate additive needs especially if bin fermenting reds

-Ensures weight limit of press is not exceeded

WEIGH TAGS


TAG NO. 0481
ARTICLE OR KIND OF MATERIAL
Carlos
TAG NO. 0480
COUNTED BY NH
CHECKED BY CE
AMOUNT 1480 #
REMARKS BIN 120 #
DATE 9/19
STAPLES

BEFORE PROCESSING

Additions that need to be made to the grapes now are pectic enzymes and color enhancing enzymes (reds). Follow the instructions on package.

Before loading into the crusher/destemer, make sure you have rice hulls available and on hand.

Do not add SO2 at this point!!!! SO2 would cause enzymes to become ineffective.

RICE HULLS

Why do we need rice hulls?

When pressing with a bladder press, the unique gelatinous structure of the muscadine berry would result in clogged juice pores on the press

-major loss of juicing potential

-major mechanical issues with press

-much heartache and pain during harvest.

RICE HULLS

ADD RICE HULLS DIRECTLY TO THE HOPPER

WHILE LOADING GRAPES INTO CRUSHER

CRUSHER DESTEMMER

TRANSFERRING TO PRESS

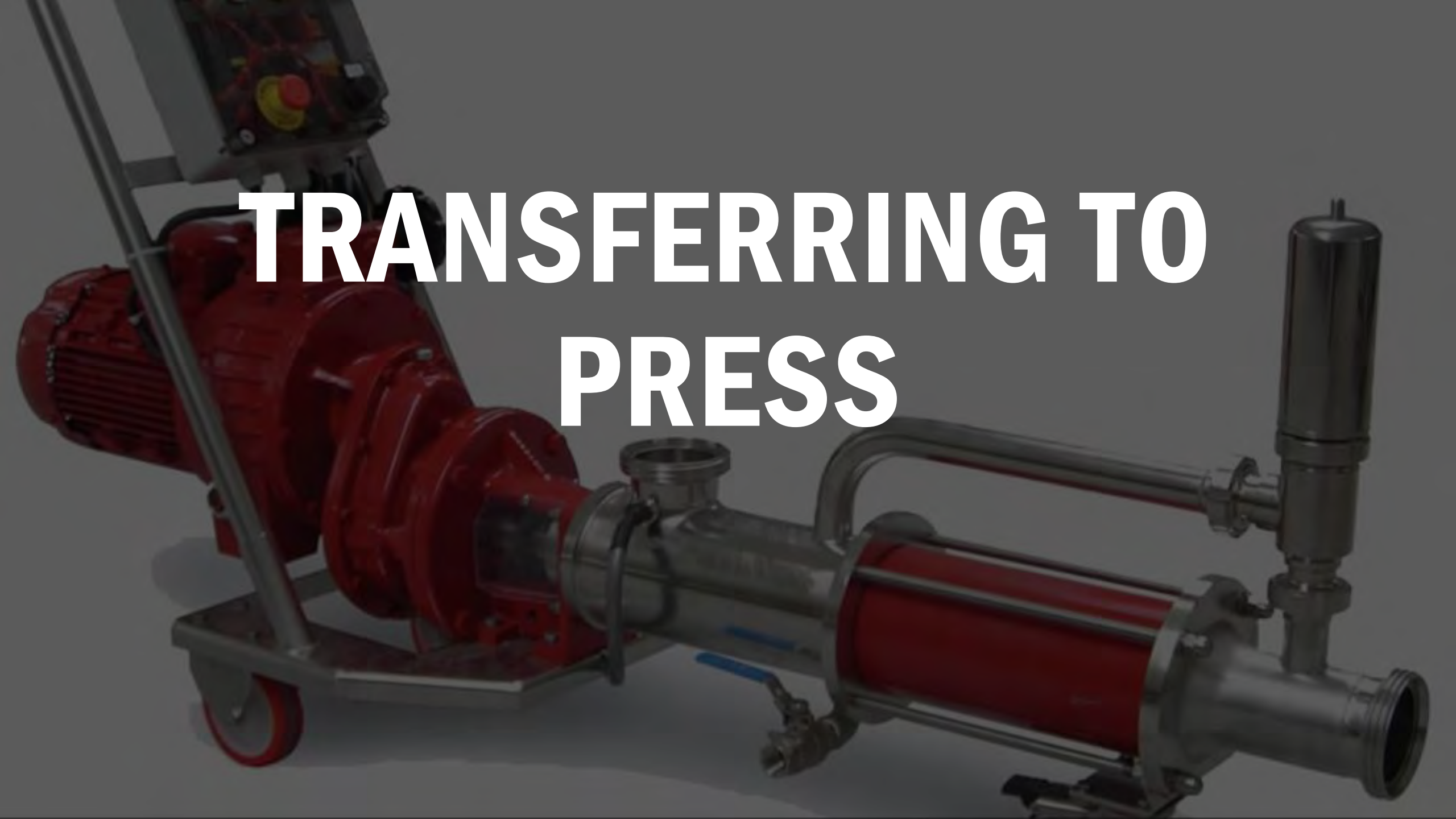
-multiple methods….must pumps, conveyor systems, direct dumping of bins in press, direct transfer from trailer with auger

-those that have least amount of mechanical shear will result in less gross sediment and colloidal particles

-less colloids, easier early SETTLING and FILTRATION

-avoid flow points less than 3 inches, tight auger spaces or tight setting on rollers below crusher destemer.

TRANSFERING TO PRESS


TRANSFERRING TO
PRESS

PRESSING JUICE

1.Additives

2.How long to press- Tasting juice

3.Fruit quality- Determine pressure and time

4.Fruit quantity-avoid under or overloading

PRESSING JUICE

1. <u>Additives</u>

-SO2 @ 25ppm (healthy fruit)

-SO2 @ 50ppm (high rot)

-Activated Charcoal (very high rot)

PRESSING JUICE

2. How long to press

Take samples of juice at the beginning of each pressure step.

Increase in pH and bitterness consider breaking press early.

High Rot, possible breaking after second or third pressure step.

PRESSING JUICE

3. Fruit Quality

High quality fruit, can complete all stages of pressing.

High MOG and high rot - stop press at 30-40% of press cycle.

PRESSING JUICE

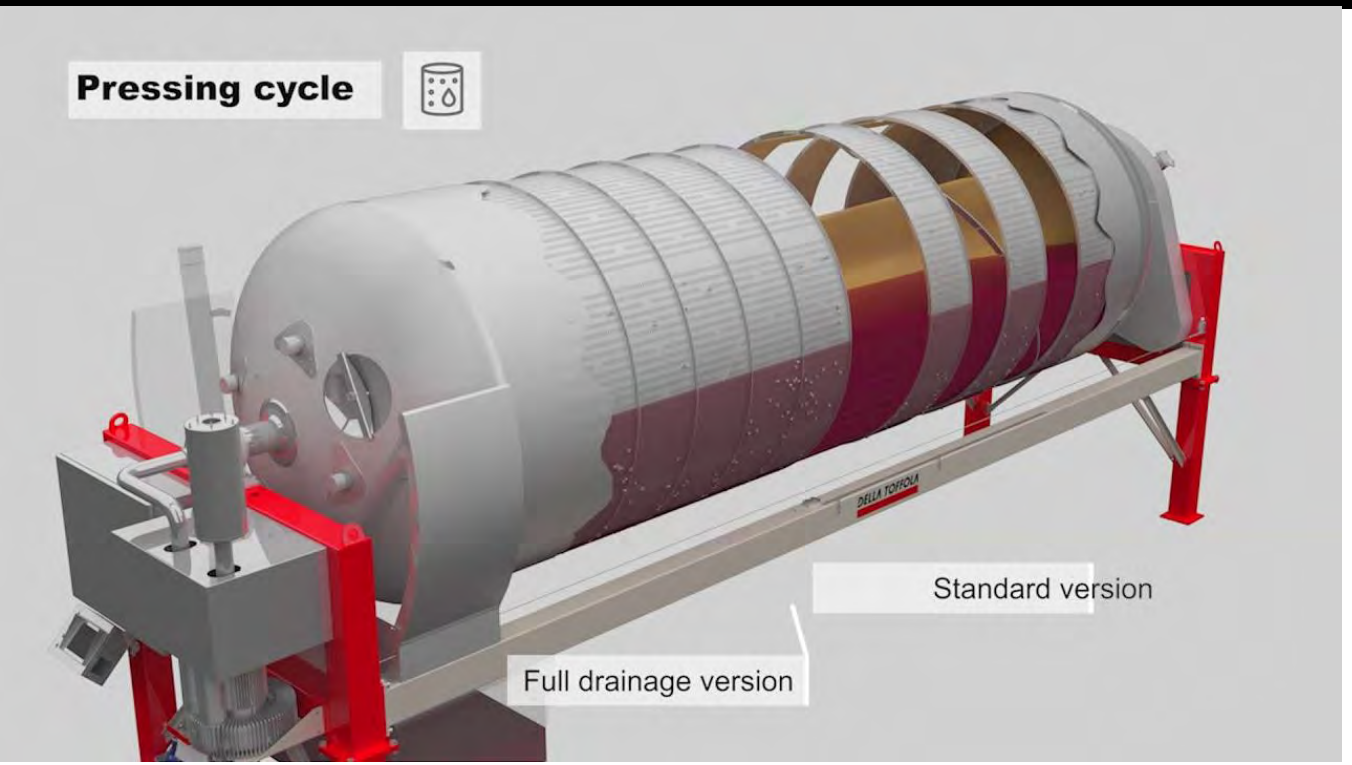
4. Fruit Quantity

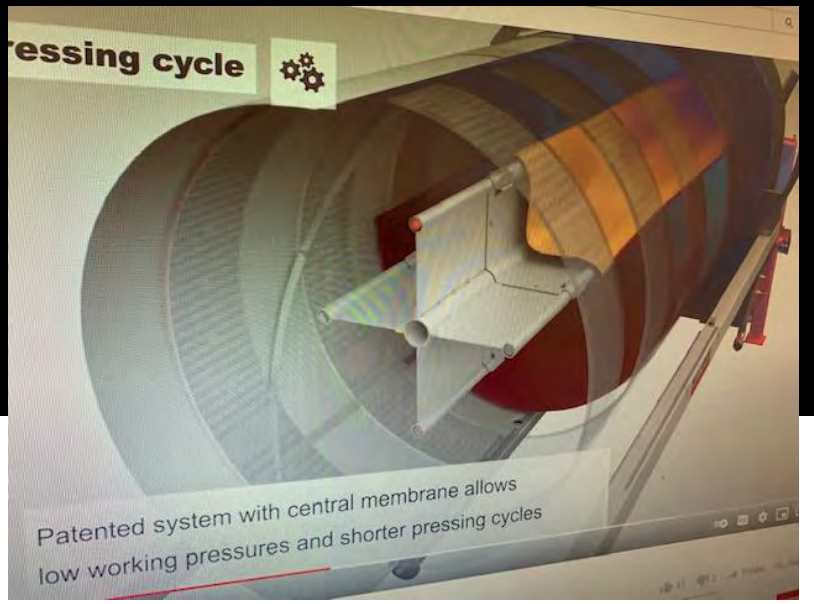
Know max weight of press

Use weigh tags to calculate weight in press!!!!

Know min weight of press to avoid juice loss

PRESSING JUICE



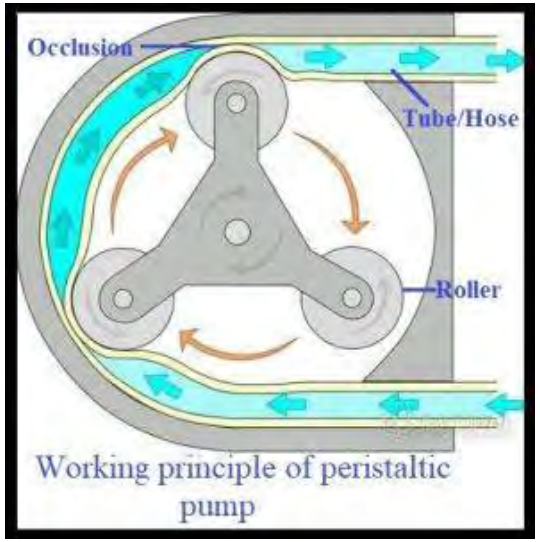


TRANSFER JUICE TO TANKS

TRANSFER PUMPS THAT CAN HANDLE DEBRIS IN JUICE....

PERISTALTIC PUMP

MOHNO PUMP



TRANSFER JUICE TO TANKS

TRANSFER PUMPS THAT CAN HANDLE DEBRIS IN JUICE....

CENTRIFUGAL PUMP

DIAPHRAGM PUMP

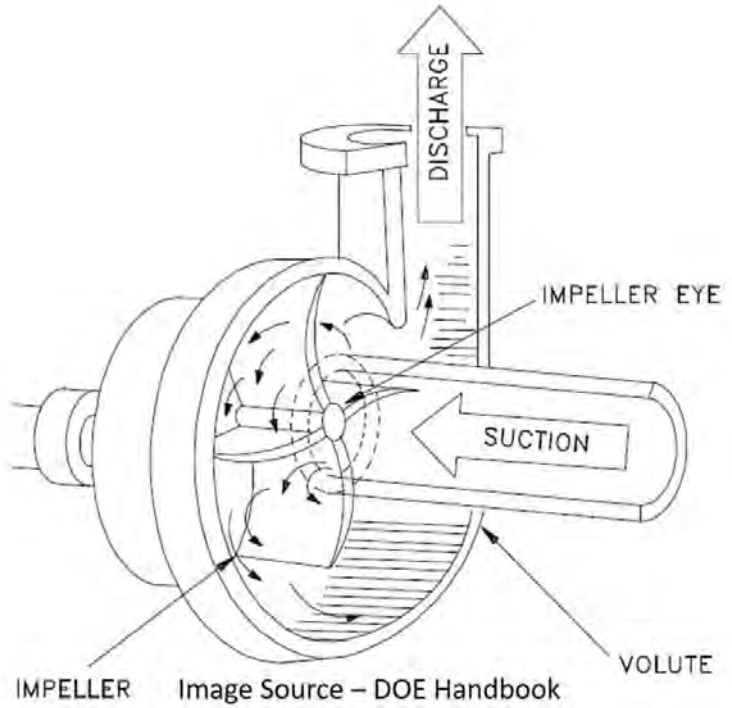
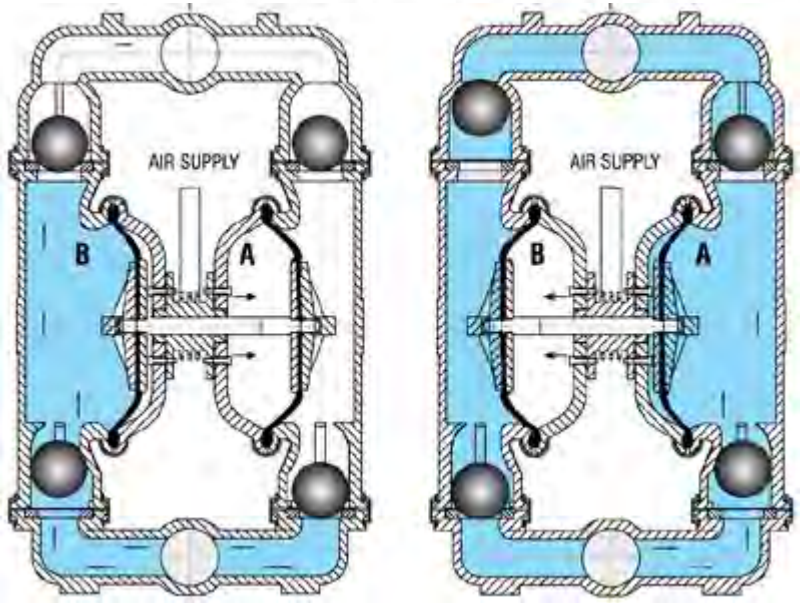


Image Source – DOE Handbook

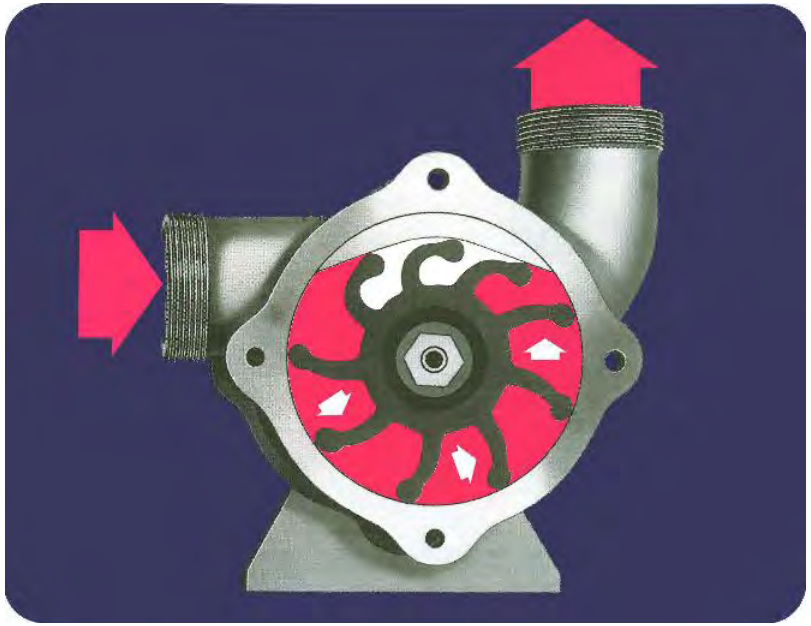


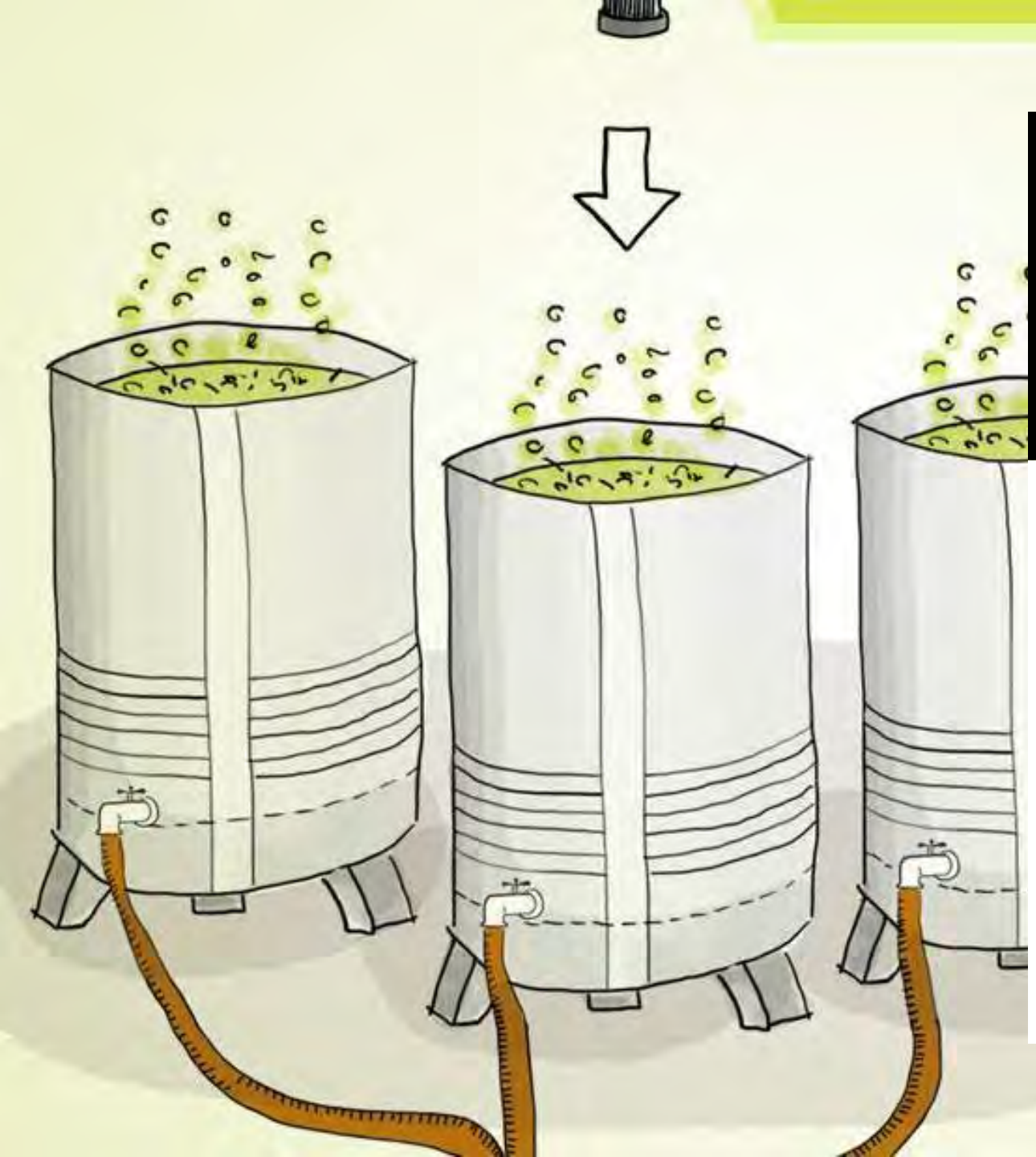
NOT FOR THIS PURPOSE

FLEXIBLE IMPELLER PUMP

-should be used only to transfer racked and clear wine

-trouble with debris in juice, lees and carbonation





AND NOW.....

IT'S TIME TO FERMENT BABY!!!!!

ANY QUESTIONS BEFORE WE MOVE ON TO THE NEXT TOPIC???