

# ***Cheesemaking workshop with Jim Wallace***



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Center of the cheesemaking universe -  
11 High Street, Shelbourne Falls, MA

# Artisan Cheese Making

Workshops

Tastings

Consulting

Technical help ...

for Individuals, Groups, & Farmsteads

*Jim Wallace*

Artisan Cheese Making

- Workshops
- Tastings
- Consulting
- Technical help

*Jim Wallace*

For Individuals, Groups, & Farmsteads

The “cheese factory”  
is downstairs in  
the basement



The main cheese workroom has the right tool for every job



Specially designed wheeled, insulated sink is perfect for demonstrations



Jim explains each step of the process

#686 Date 10/25/08 Cheese Cheddar Traditional time pH TA Target  
 Milk: 3.0 G 25.8.lbs %Fat 4.8 Source cows RAW (PWP) pasteur?  pH TA Time  
 6.70 0.18

**Starter** Temp 87 F Ripen 90  min  hrs  
 Culture Units gms tsp NECS pk  
 C101 DVI 1.00

**Rennet** Type Calf Rennet 1.60  ml  drops  
 Target Floc 18 x 2.5 = 45  min  hrs  
 x 2.5=

**Cut** Size 1/2" let rest 5 min  
 Stir 15 min  
 Scald 102 F in 30 min  
 Stir 30-60 min  
 Pitch pH=6.1 min

**Cheddar** .....  
**Mill** .....  
**Mold** .....

**Salt** Wt Curd 48.0 oz [ 3.0 Lb] %salt 2.0% bywt = 0.96 oz  
 Mold 8" Flat 10Lb  
 Brine hrs

**Press** weight hours  


 PostPress Curd Wt Lbs 3.00  
 Yield/Gal 1.00  
 Yield/Lbs 11.6%

**Process**  
 Ripen=90 \_Set=45 \_Cut=15 \_Scald=30 \_Stir=60 \_Cheddar= 60-120

Ripen to .01-.02% TA increase from fresh milk Time 90-120 min

Stir until proper break  
 ... proper break will be just as the curd stops matting pH 6.3 - 6.4

transfer to drainer forming matted curd  
 keeping @ 100F begin cheddar phase

salt when pH 5.2 - 5.4 ... (1 oz of salt = 2 Tbs)  
 add salt in 3 cycles waiting ~ 30 before molding...

Use 1 large 8" Molds .. 3.5x8"  
 mold and flip several times to form tight rind

**Affinage**  
 post press allow to dry off for 1-3 days at med RH% 65-75% and cool mid 50s  
 a higher moisture level wax this one  
 hold for 3-6 months  
 ...up to 1 year if dry

Time	pH	TA
00:00		
		0.20
2:45		
3:30		
5:00	6.10	0.16
6:30	5.30	0.45
7:00	5.25	0.70

This is the "recipe" for making traditional cheddar cheese. It is much more than a recipe, however, as it is a carefully timed flowsheet through the process of making this particular cheese. It serves as the outline for the class as Jim Wallace guides you through each step of the process. We started with raw whole milk, along with an explanation of the properties of different kinds of milk. The milk is first heated to 87° F before the starter culture is added. All heating is done in a water bath (similar to a double boiler) that allows easy and fairly accurate temperature control.





Milk heating to 87° inoculation temperature

Milk temperature



Water-bath temperature



Checking flocculation progress by depressing surface tension with spoon



A more accurate measure is with an eyedropper into water



As the milkfat continues to thicken a knife cut will show the texture of the curd



As the cheese continues to ripen the “break” gets firmer and the whey less yellow



This is a clean “break” and the curd is ready for cutting



Preparing for deep cuts with the “wisk tool”



The “wisk tool” is better for multiple horizontal cuts than a knife





After the cuts comes rather tedious stirring while the temperature is raised

Periodically, the curds are examined for texture, here still fairly shiny, slimy, and soft





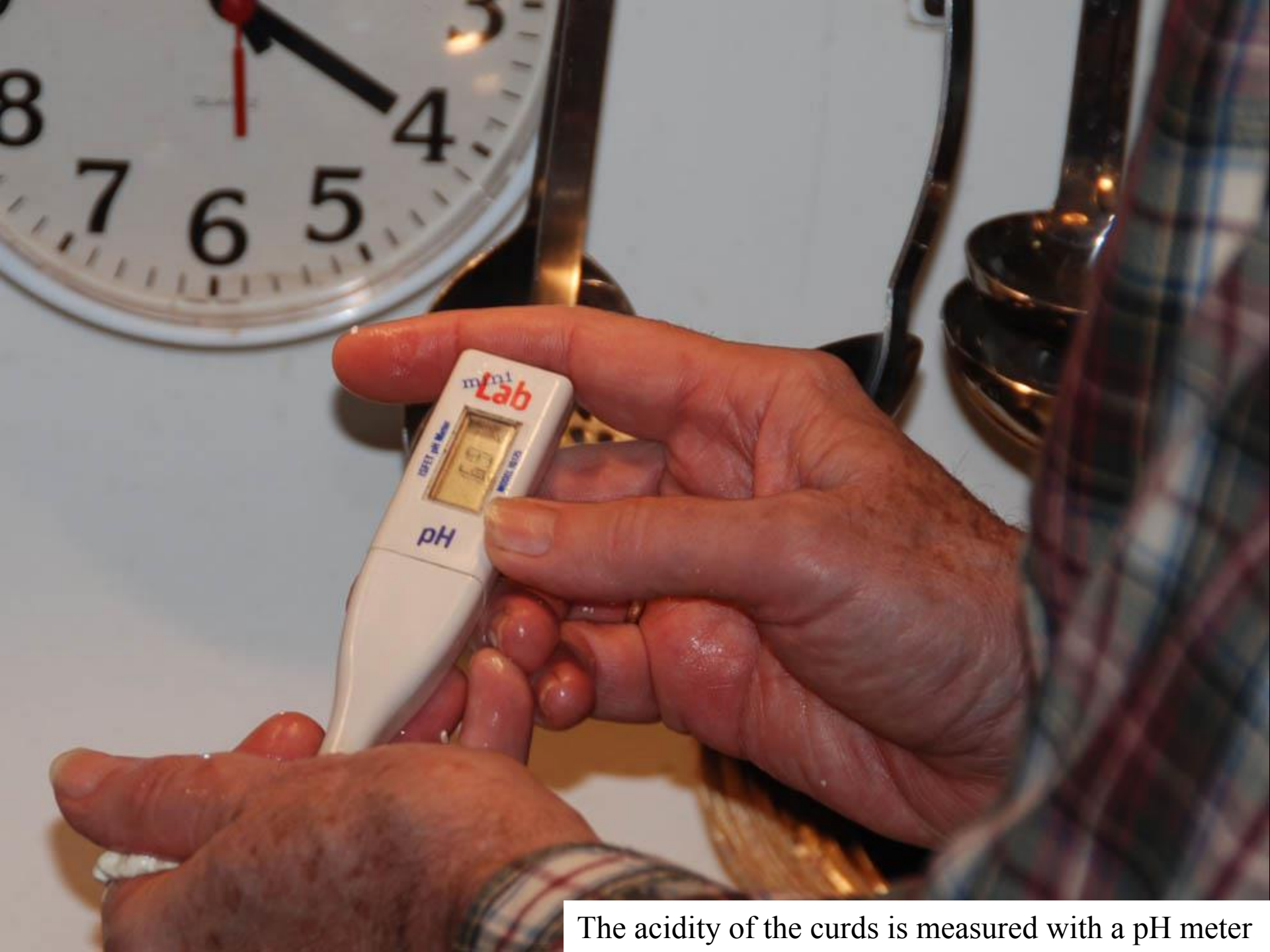
The curds also are evaluated for taste



Squeezing the curds releases more of the whey



The curds are now more solid



The acidity of the curds is measured with a pH meter



When the curds are firm and crumbly they are ready for dewatering (whey)





The liquid whey is siphoned away from the curds



The remaining curds are poured into cheesecloth-lined drain bins



As the curds are arranged in the cheesecloth more whey drains

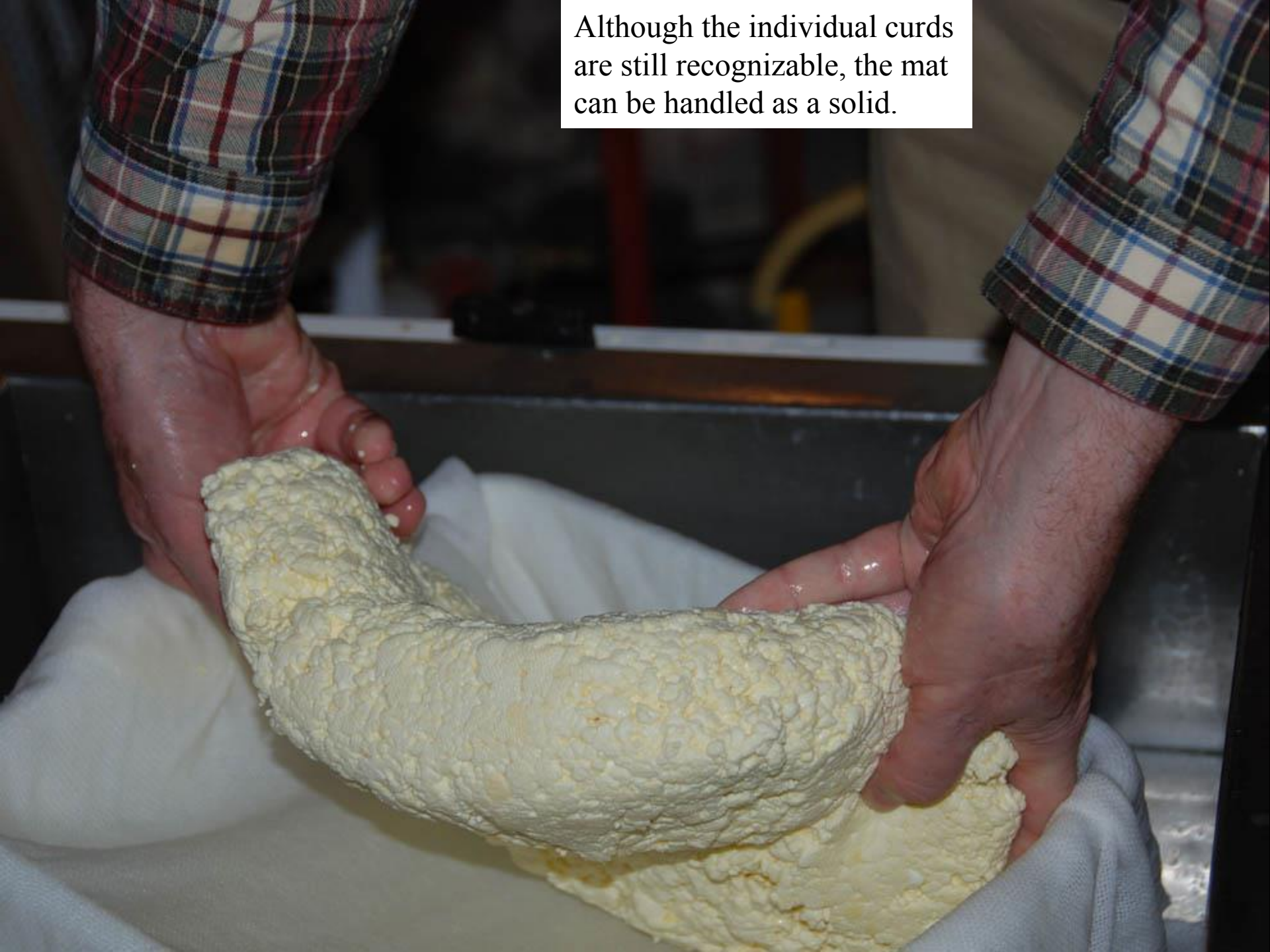


The curds are pressed by hand to remove more whey



In a remarkably short time, much of the whey has drained out and the curds have assembled into a coherent mat.

Although the individual curds are still recognizable, the mat can be handled as a solid.





The pH of the mat has now dropped to  $\sim 5.4$



Then the mat is torn into small pieces for salting





The salt is applied (~2%)  
and then mixed in.



The pieces are then packed into a cheesecloth-lined mold

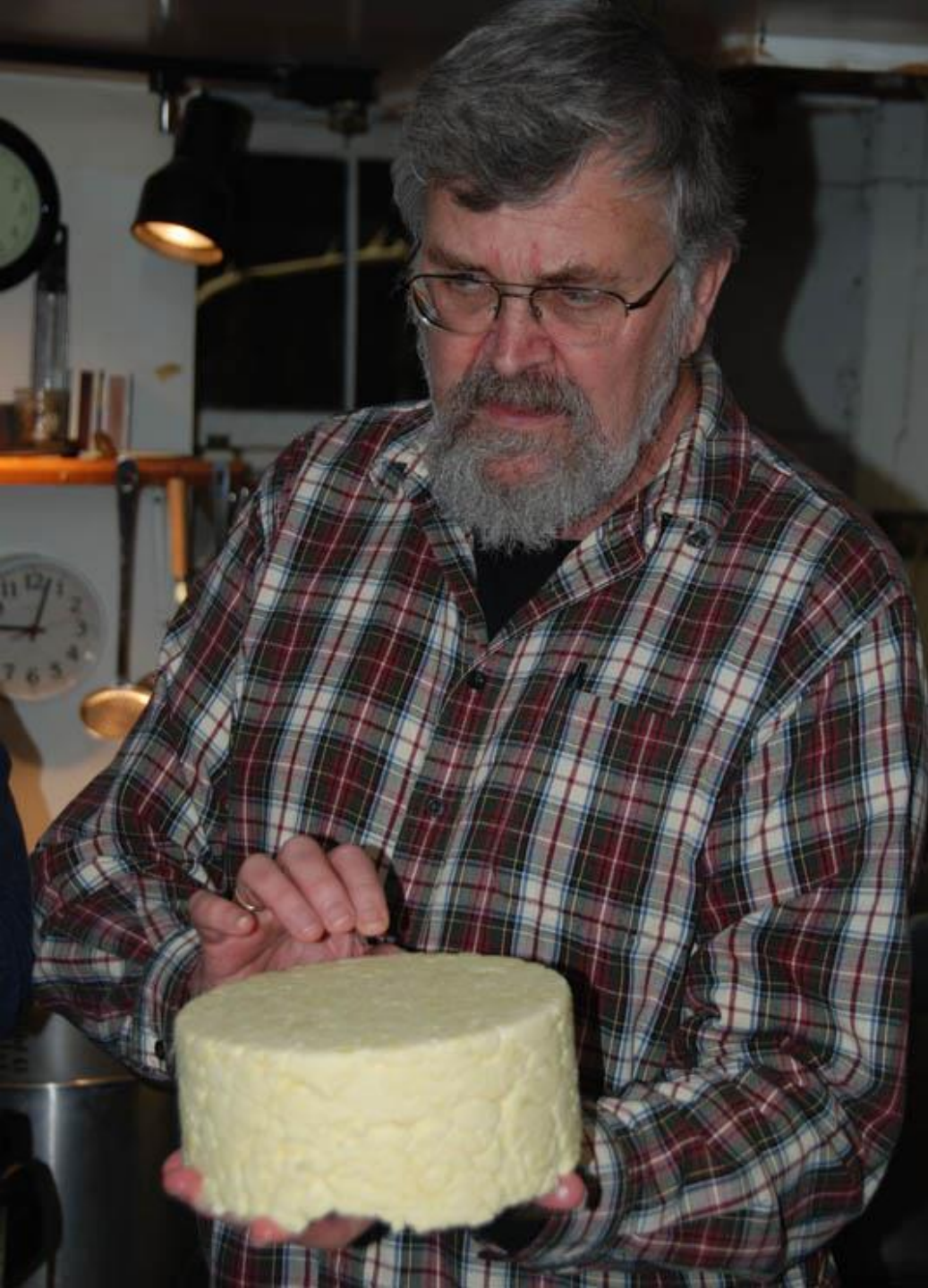




When the mold is full, the top (follower) is put on and the entire mold put in the cheese press



Springs or weights are used to gradually increase the pressure on the ripening cheese



Periodically the press is unpacked, the cheese is flipped over, and pressed again with increasing weight so that it gradually turns into the smooth rounded shape associated with a fine wheel of cheddar cheese.

A fully formed cheddar





A final step before aging is a dip in hot  $\sim 250^{\circ}$  F wax to seal and sterilize the rind.





The waxed cheese is ready for “the cave”



The cheese cave

Proper humidity and temperature are critical for “the cave”



After months, and sometimes years, of aging the cheese will develop a coating of “just the right molds”





Cheesemaking workshop, Oct. 25-26, 2008