Washing and schmier development

November 2013

http://cheeseforum.org/forum/index.php/topic,11989.msg94024.html#msg94024

From Francois:

You are getting soft rinds because you haven't dried it properly before washing and now you have a thick boundary layer of wild yeasts. Unfortunately if you try to firm off the rind now by refrigeration you'll interupt the gas producing phase by being off the correct pH path. The best you can do is keep them in lower humidity (no ripening box), give them a descent vinegar wash and then rub with coarse salt. Wipe the salt off after grinding it into the rind. You want to remove moisture from the rind but try to keep the salt migration into the paste as low as possible, otehrwise you'll get an oversalted cheese. After a few days you should have a nice firm rind that you can start washing again. Washing shouldn't be everyday. It's a cascade. You start off with frequent washes and and then taper them off as the correct rind forms.

From Alp:

To reiterate what Francois says,

When we wash our cheeses, we have a board we place them on to get washed. We will take a cheese and place it on this board, having flipped it over in the process. We wash only the top and sides, leaving the side that had been washed the previous day untouched so it can dry out.

This is often an afternoon activity. Before this, first thing in the morning, the previous day's cheese is removed from the brine and put on this board to dry out. It doesn't get washed that first day -because it has been soaking in brine.

So Francois is right, you need to let it air out some. BUT, after the washing starts it had better stay wet or it will mold.

From linuxboy:

To add one more point. Schmiers have succession of flora that are very exact and require rather technical precision. It goes like this
- Yeasts (generally candida, debromyces, kluyveromyces, geotricum, and actually a bacterium, staph) settle and eat up surface lactic acid to deacidify the surface. Your wash at 3% keeps them a little bit in check. Rind at this time needs to have a moderately high aW, somewhere in the mid .90s. Not super high, you need a little dryness. Humidity needs to be lower, 60-70%, temp needs to be somewhat high, 55ish. This is the haloir phase of your schmier development. If you go directly to cave with a higher humidity, it's not the end of the world.
- After you have surface deacidification, the rind itself should maintain moderately high aW, same

around low .90s. And the wash will introduce the corynebacteria (arthrobacter, b linens, staph xylosus, etc). Surface pH needs to be 5.6 or higher (5.8 usually target). This needs to happen 48-72 hours after brining. And humidity should be fairly high, low 90s, with a temp around 52F. The frequent washing helps to spread bacteria and really establish it on the rind. Because rind aW is a bit lower than the beginning, the yeasts tend to get incorporated into the polysaccharide and casein schmier matrix, creating a kind of "skin". Managing this skin is what you're after with the successive washes. - Afterward, with regular washing to establish this skin, you go to maintenance mode just to keep it all alive and going, and molds at bay. Can knock humidity down a bit, and lower the temp, depending on the maturation targets.

If you mess any of these up... such as high surface aW, inadequate coryneforms in your wash, humidity/temp issues, pH gradients on surface due to uneven cut, etc, it's pretty tough to get back on track. Every little thing matters and errors and compounded and magnified. Which is why a proper beaufort or other gruyere style, or a well done high moisture stinky is such a high expression of our art.

Make a bit more sense, hopefully? Watch the surface aW, begin with proper moisture by managing the make, and then manage cascade and microbial community succession through humidity, temp, and wash frequency and you'll be set. Easy