

BBGA Rye Handout

Pentosans- 5 carbon sugars (polysaccharides) which swell and absorb considerable amounts of water in Rye doughs.

Arabinoxylans (AX)- Pentosans which are key to the structure and performance of rye doughs. The main fiber in Rye.

Water soluble Arabinoxylans (WS AX) – are desirable because they produce softer crumb, pleasing aroma, darker crust, greater volume.

Water insoluble Arabinoxylans (WU AX) – less desirable because they produce a less plastic dough, lower volume, drier crumb.

Falling Number – A method of expressing the alpha enzyme activity in flours. A flour and water slurry is cooked until it thickens, and the amount of time it takes a plunger to descend to the bottom is expressed in seconds. Thicker mixture = more time to descend = higher falling number. Thinner mixture = less time to descend = lower falling number. In Germany falling numbers of 120 to 150 are considered ideal. In North America the numbers are usually much higher.

Typical German Flours – Type 997 and Type 1150 flours account for around 75% of rye flour sales, and are used for the most typical German rye loaf which contains 60% to 70% rye (the rest is wheat). Expressed in North American terms (including 14% moisture), between them, the ash content is between 0.75 to 1.08%. Ash figures I've seen for North American 'medium' ryes (there are no government standards) are between 1.11% and 1.58%, meaning that overall, they are darker. Increased ash content in rye flours is accompanied by greater greater proportions of less desirable water unextractable arabinoxylans.

Clear flours – comprise only a small percentage of flour sales in Germany and are not used in the typical 60% - 70% rye loaf. The addition of vital wheat gluten is not done.