2015 Metro Production Conference

Lightweight Newsprint

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WHY ?

Lightweight newsprint – WHY?

Newspaper Market

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Reduction of newsprint consumption has been attributed to:

- **Page size - web width and cut off reduction**
- **Pagination - less pages**
- **Circulation**
- **Basis Weight or Grammage**

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History….

Web width reduction …55, 54, 52, 50, 48, 46, 44

Equipment upgraded with ROI based on smaller pages

Basis Weight	**48.8 to 45**
Pagination	**tighter page counts, less advertising**
Circulation	**overall reduction**
Page size	**format, press cutoff**
Basis weight	**45.0 to 42.5**
Basis weight	**45.0 to 40**

Lightweight Newsprint

What is “Lightweight Newsprint”?

The new “Lightweight” is
less than 45g or 27.7#

“Basis Weight” or “Grammage”

?

Basis Weight

Newsprint basis weight is calculated by:

Weight of a Ream of newsprint.

Ream of newsprint = 500 sheets of 24” x 36” size

Weight of this “Ream” = basis weight in pounds

Designated as 30#, 27.7#, 26# …

Grammage

Newsprint grammage is calculated by:

Weight of newsprint equals to grams per square meter.

G/M2

Designated as 48.8, 45, 42.5, 40g.

Basis Weight
=
Grammage

Metric		**Standard**
48.8 g.	=	30 lb.
45.0 g.	=	27.7 lb.
42.5 g.	=	26.1 lb.
40.0 g.	=	24.6 lb.

Lightweight Newsprint – Why?

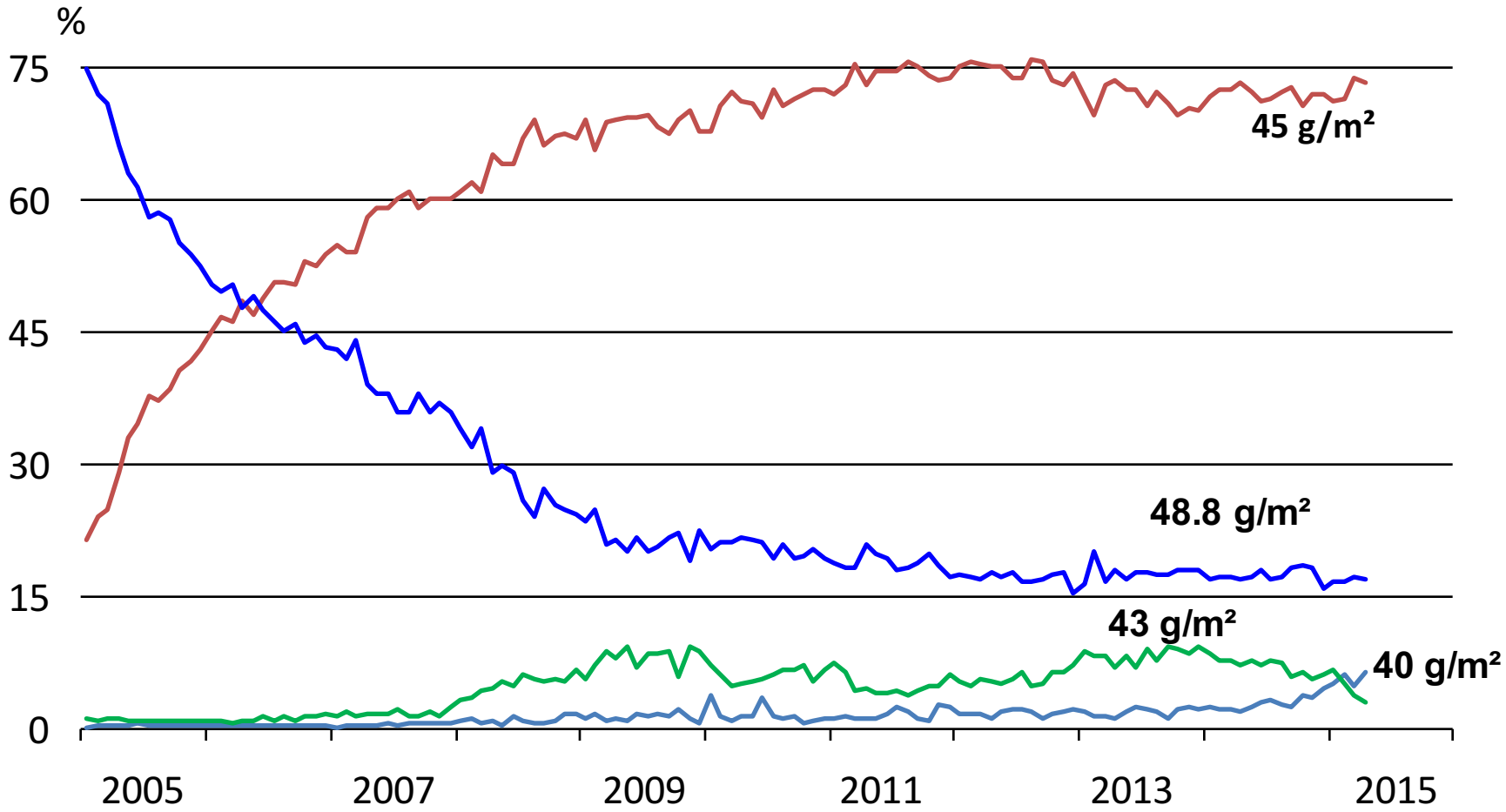
2015

Basis Weight	% of USA market
43g or less	10% ↑
45g	72% ↓
48.8g	18% ↓

“Lightweight” usage continues to increase.

Grammage of newsprint sold in the US

Share of NA newsprint shipments to the US by grammage



Source: PPPC

Yield Comparison

Grammage	Basis Weight	Yield to 48.8	Yield to 45.0
48.8g	30#	0	-
45.0g	27.6#	+ 8%	0
42.5g	26.1#	+13%	+ 6%
40.0g	24.6#	+18%	+11%

The weight of a roll is determined by physical size, basis weight and caliper.
A heavier roll weight alone does not influence yield.

Risk vs. Reward

Strength	- reduced
Print Quality	- opacity

Risk can be managed to provide rewards.

Yield	- pages per pound
Financial savings	- yield
Copies per roll	- lower caliper / less rolls
Roll weight	- heavier roll

-

Newsprint qualities

Comparison of newsprint strength

48.8 to 45.0	-11%
45.0 to 42.5	- 5%
42.5 to 40.0	- 12%

*based on a composite strength calculation

Newsprint qualities

Understanding the Differences

Grade (gsm)	**45.0**	**42.5**	**40.0**
Caliper	77.0	72.0	68.0
Opacity	95.0	94.0	93.0
Porosity	280	280	280
Roughness (PPS)	3.8	3.8	3.8
Tensile MD	2.30	2.20	2.15
Elongation MD	1.25	1.10	1.10
Burst	77.0	73.0	72.0

Review

Lighter newsprint offers a cost saving benefit.
This benefit must be managed to minimize an impact of runnability and product quality.

A Pressroom may not always have control of the paper purchasing decisions.

However, it is up to the PRESSROOM to control operational factors that influence it's performance.

Ultimately, the decision to print on lower basis weight is pressroom specific, and publication specific.

Capabilities of these individual applications can only be determined with an evaluation.

How ?

- Step by step…progressive testing is required.
- Evaluate operation and equipment. Is the switch realistic?
- Printing facilities all have minor differences in equipment and usage.
- The closer to threshold, the more significant the minor differences become.
- Web tension must be reduced!
- Web leads; color, angles, slitters, etc. influence performance.
- Consider product format may influence folder delivery; tabloid, page count, etc.
- Press equipment – Every room has problem units. Do not let the out of tram rollers or the bailing wire, or the duct tape negatively impact the tests.
- Do not ignore the Mailroom. Stacking, inserting, bundle size, pallet, delivery, etc.
- Roll handling – rolls are heavier, but should be within safe handling parameters.
- Ultimately, it is up to the Pressroom to control operational factors that influence runnability. Tension, water, ink, start and shut sequences, E-stops, etc.
- Refinement of print quality is final step.

Thank you

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