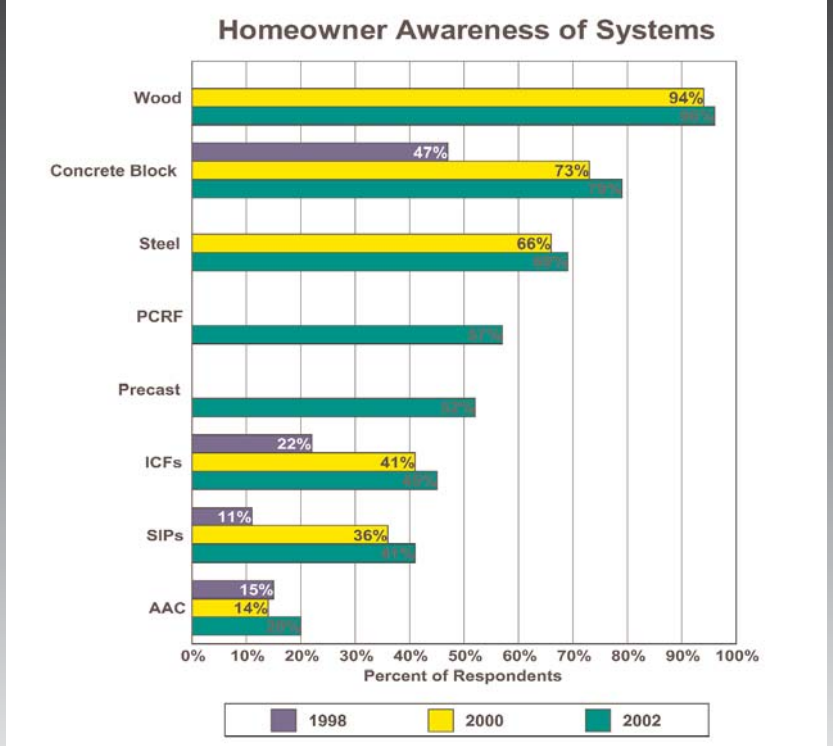
PCA Portland Cement Association

CONCRETE HOMES

September 2002

2002 Homeowner Survey



In addition to measuring the general awareness of concrete home-building, data was collected on the awareness and use of specific systems. In 2002, wood (96%), concrete block (79%) and steel (69%) had the highest awareness among homeowners. Awareness for all concrete systems increased between 2000 and 2002. Wood and steel were included for the first time in the 2000 survey.

Impressive increase in consumer awareness for concrete homes

Awareness of concrete homebuilding returned to its high of 68% in 2002 after dipping in 1998 (52%) and in 2000 (55%). It also increased in all nine regions of the country and in all eight target states.

Awareness increased of all above-grade systems between 2000 and 2002. ICF awareness increased from 41% to 45% during that period and also increased in most of the regions and eight targeted states.

PCA Market Research surveyed homeowners across the United States in 2002 to assess the awareness and use of concrete above-grade wall systems and competing materials, as well as to measure the attitudes and perceptions of homeowners toward these systems. In addition, PCA hoped to learn where homeowners seek and receive information on the building materials in their homes.

The research was conducted as part of the measurement criteria research program, which strives to measure the effectiveness of promotions by tracking market share, promotional successes, and the attitudes and perceptions

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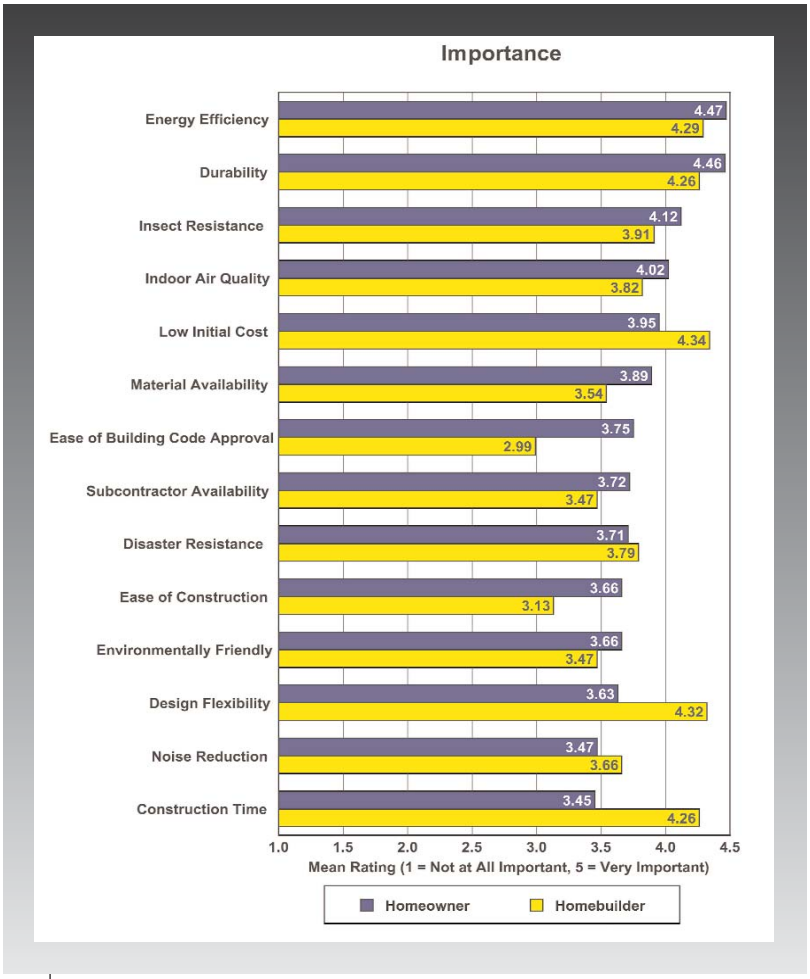


The three most important variables for homeowners when selecting a new home were energy efficiency (4.47), durability (4.46), and insect resistance (4.12). Results of the 2001 Homebuilder Report are also included in this graph.

of decisionmakers. This survey is a follow-up to an original benchmark survey conducted in 1995 and two subsequent studies conducted in 1998 and 2000. Powerful comparisons are made among these four homeowner surveys and three homebuilder surveys conducted in 1997, 1999, and 2001. Future surveys planned include an update of the homebuilder survey in 2003 and an update of the homeowner survey in 2004.

Wood framing is the main competitor for concrete homebuilding, but steel studs and structural insulated panels (SIPs) are also serious contenders for market share. Steel studs are a system similar to traditional wood framing using light-gauge formed steel studs. SIPs are a system that has a structural composite wall panel consisting of rigid insulation sandwiched between two sheets of plywood, oriented strand board (OSB), or wafer-board sheathing.

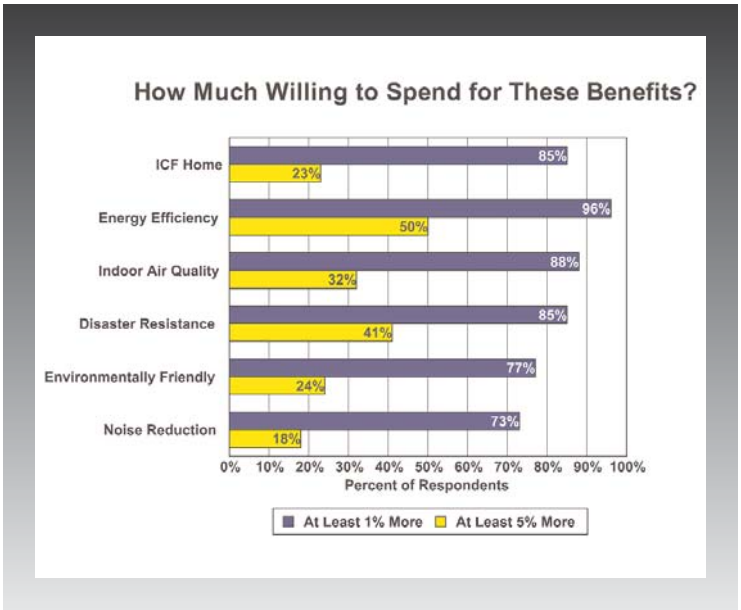
Concrete homebuilding includes a variety of traditional and innovative systems. The most heavily promoted systems are concrete block, insulating concrete forms (ICFs), and autoclaved aerated concrete (AAC). ICFs are a system in which two parallel sheets of polystyrene are filled with concrete and left in place, acting as the insulation for the wall. AAC is a system of lightweight concrete blocks made with extremely fine aggregates and an expanding agent. Other concrete systems mentioned in this report include conventional poured-in-place concrete, precast concrete, shotcrete, and solid brick.

The three most important variables for homeowners when selecting a new home were energy efficiency, durability, and insect resistance. Indoor air quality, low initial cost, and material availability, rounded out the top six. The three most common sources of information on concrete homebuilding were newspapers, magazines, and TV commercials. It was also found that 85% of homeowners would be willing to spend at least 1% more for an ICF home, and 23% would spend at least 5% more.

Perceptions

When comparing concrete and wood, the strongest preferences for concrete were for durability, insect resistance, disaster resistance, and noise reduction, while preferences for wood were for design flexibility, ease of construction, construction time, and low initial cost.

When comparing concrete and steel, the strongest preferences for concrete were for



Homeowners indicated the importance of various features of ICF homes with a willingness to spend at least 1% more for each feature.

energy efficiency, low initial cost, and noise reduction, while preferences for steel were for design flexibility and construction time.

Likelihood to Build a Concrete Home

The majority of homeowners were likely to build a concrete home if it had a comparable cost to wood in 2002 (52%)—up slightly from 2000 (50%). In 2002, 31% of homeowners were likely to build a concrete home if it cost 2% to 5% more—almost the same as 2000 (30%).

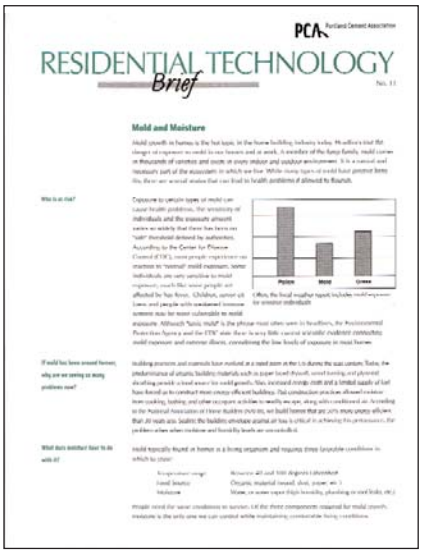
More homeowners were likely to use wood and steel in 2002 than in 2000, while likelihood of building with other systems was either slightly less or unchanged. Homeowners likely to use ICFs decreased from 30% to 25% between 2000 and 2002.

Technical Brief on Mold and Moisture

The PCA Residential department released the latest of its technical briefs discussing the important issues related to mold and moisture. The easy-to-read fact sheet provides current information about one of the most relevant topics in home construction today. Mold, and the moisture that causes it, can contribute to poor indoor air quality, physical damage to building components, and health problems. While not immune to mold growth, concrete wall system components do not provide a food source for mold.

The mold and moisture tech brief lists relevant points about the causes of mold growth and guidelines for preventing mold in residential construction. Also provided are technical resources for more detailed information on this hot topic.

Attractively printed on both sides and sold in shrink-wrapped packs of 50, the mold and moisture tech brief is ideal for trade shows and presentations. ***To order yours, please call Customer Service at 800.868.6733 and ask for the Mold and Moisture Tech Brief - #IS-310.***


PCA
RESIDENTIAL TECHNOLOGY
Brief
Mold and Moisture

PCA Portland Cement Association

We request your assistance

The PCA Residential department asks that you take a few minutes to complete and return the enclosed survey. When completed, fax, or mail back the survey.

Market research is important in any promotion effort. This survey will give us a better understanding of who builds concrete homes and at what magnitude. Your information will play an important role in determining future programs and initiatives by this department.

Please return the completed survey by November 1, 2002.

Tools of our trade

This series is designed to highlight important findings of recent research on concrete homebuilding systems. In a single-page format and written in a non-technical style, they are intended to inform the building industry and consumers of the latest breakthroughs in concrete residential construction. They are 8 1/2" x 11", printed on both sides. The Technology Briefs are sold in packs of 50 and cost $10.00 ND.

IS300 Concrete Homes Save Energy
IS301 Building a Better House
IS302 Fire Resistance of Concrete Homes
IS303 Plastic Foams for Concrete Homes
IS304 The Quality of Concrete Costs Little More
IS305 Comfort/Quiet Concrete Homes
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Concrete Homes is a monthly newsletter published by the Residential department of the Portland Cement Association to communicate ideas for promoting the use of concrete in homebuilding. We are:

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For more information on concrete homebuilding visit our Web site or call our toll free hotline:

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The Portland Cement Association is an organization of cement manufacturers to improve and extend the uses of portland cement and concrete through market development, engineering, research, education, and public affairs work.

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