

2009 - 2010

# Indiana Aglime Protects Your Green

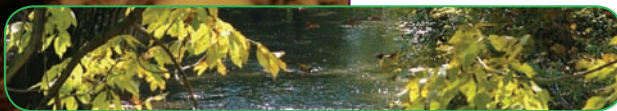
*aglime.org*



Protects Your Investment

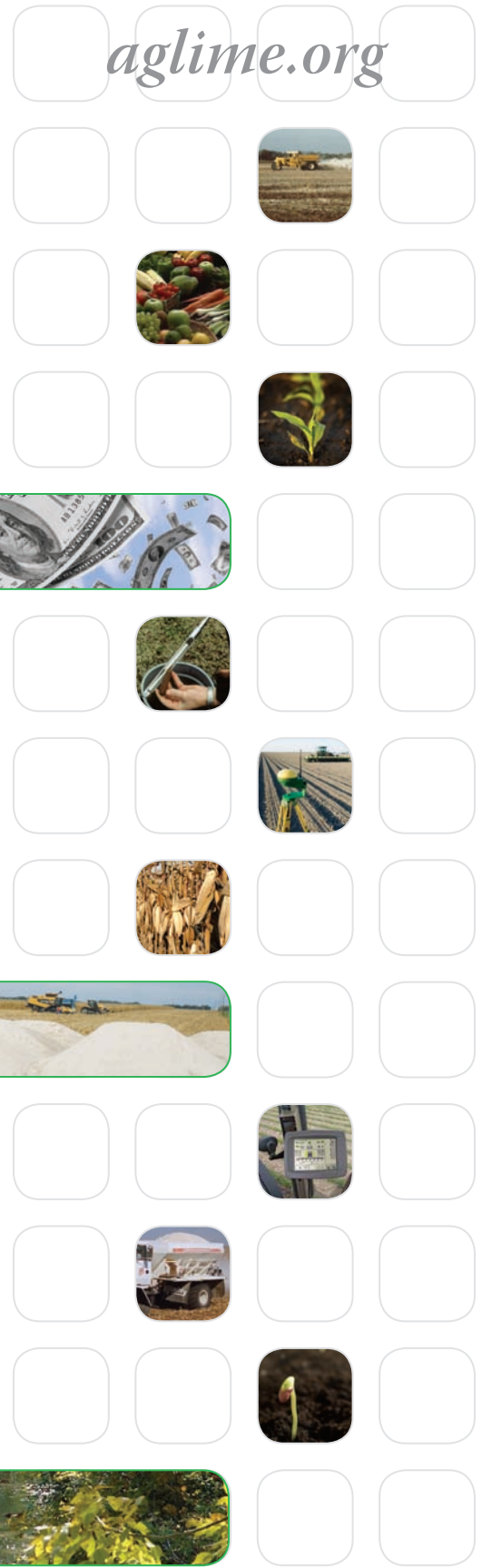


Protects Your Yields



Protects Your Environment

INSIDE: YOUR INDIANA AGLIME QUALITY REPORT



The  
**Aglime**  
Council

*Profitable for You.  
Right for the Environment.*

*aglime.org*

INDIANA AGLIME PROTECTS

# Your Investment

Soils naturally progress toward low pH, resulting in acidic soil. But today, agricultural trends and fertilizer treatments are accelerating this natural progression. Why is this a problem? Because acidic soils undermine the

effectiveness of expensive fertilizers and cause a significant yield drag.

To protect your investment and your yields, balance your soil pH with Indiana Aglime.

## Acidic Soil Decreases Fertilizer Effectiveness

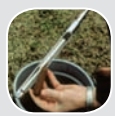
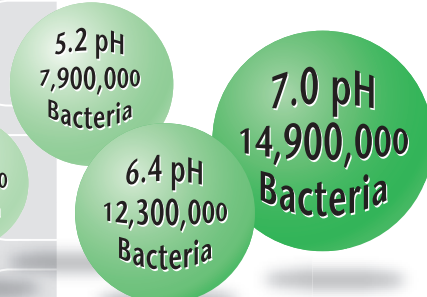
Soil Acidity	Percent Utilized			Fertilizer Wasted	Cost of Fertilizer Wasted*
	Nitrogen	Phosphate	Potash		
Extremely Acid 4.5 pH	30%	23%	33%	75%	\$84.00
Very Strong Acid 5.0 pH	53%	34%	52%	54%	\$61.00
Strongly Acid 5.5 pH	77%	48%	77%	33%	\$37.00
Medium Acid 6.0 pH	89%	52%	100%	20%	\$23.00
Neutral Acid 7.0 pH	100%	100%	100%	0%	\$0.00

*\* Based on conservative application of 200N, 100P & 100K per acre @ July, 2009 average pricing.*

## INDIANA AGLIME ENSURES THE FULL VALUE OF EXPENSIVE FERTILIZERS

- Acidic soils inhibit a plant's ability to uptake and use applied nutrients. When soil pH moves below 6.0, 20% of applied fertilizer is wasted.
- Grubs and weeds, such as vine weed, thistle, dandelion, butter print and horsetail, thrive in acidic soil.

- Acidic soil increases the solubility and toxicity of aluminum, iron and manganese, which adversely affects your crop yields.
- Acidic soil reduces the breakdown of applied fertilizers into usable plant nutrients. Microbial bacteria necessary for breaking down fertilizers cannot thrive in acidic soils. Without bacteria, fertilizers lay inert until they are washed away by leaching, or until a more balanced soil pH is restored.





## INDIANA AGLIME PROTECTS Your Yields

Indiana Aglime is a natural soil remedy, bolstering crop yields through a number of benefits.

When your soil is too acidic, apply Indiana Aglime to:

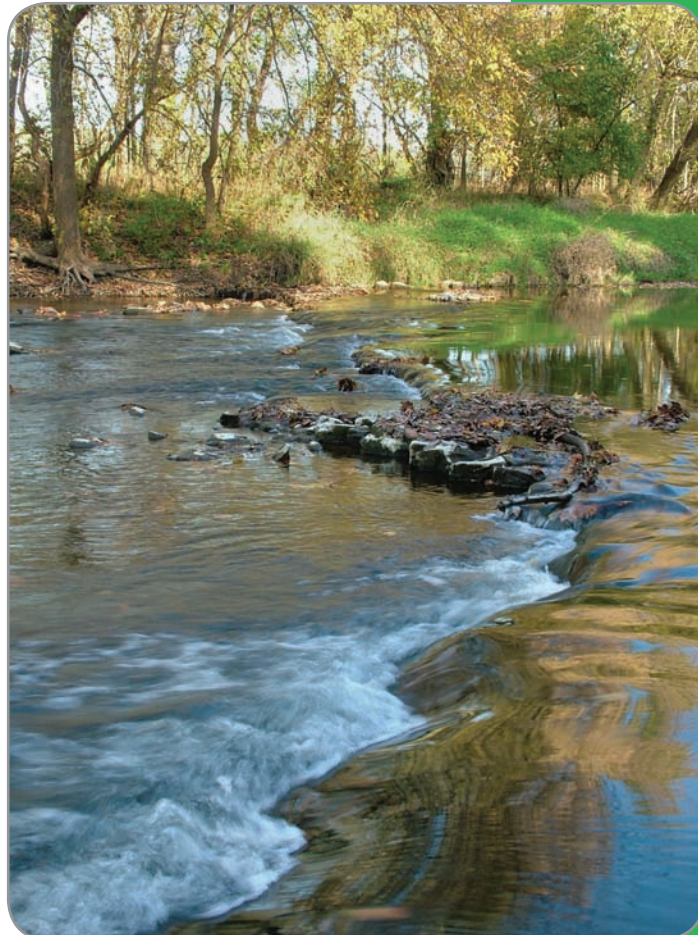
- Balance the soil pH, optimizing your plants' ability to uptake applied fertilizers.
- Slow the leaching of expensive fertilizers, extending their impact.
- Add valuable nutrients such as calcium and magnesium back into your soil.
- Improve soil tilth by increasing the number of microbial bacteria that aid in the decomposition of agricultural residue, such as corn stalks and other plant matter.
- Promote deeper root growth in dry conditions.
- Improve drainage in wet conditions.

## INDIANA AGLIME PROTECTS Your Environment

Indiana Aglime helps to keep water supplies clean and healthy by reducing the amount of nitrates and other fertilizer components that otherwise seep into the groundwater.

Furthermore, Indiana Aglime is a cost-efficient remedy for treating acidification in lakes, reservoirs and ponds. It reduces the toxic effects of aluminum, lead, zinc and other metals harmful to humans and aquatic life.

By adjusting the pH in water, Indiana Aglime supports the survival and reproduction of many fish populations and adds calcium, which aids in the growth and development of bones, scales and shells.



*In a recent U.S. Department of Agriculture release, Indiana ranked 6th worst among states responsible for pollution from farm nutrient runoff into the Mississippi River.*

YOUR INDIANA AGLIME

# Buyers Guide

## TEST YOUR SOIL

Regular soil tests provide vital information used to determine the best treatment plan for your specific soil needs. Soil pH, fertility, drainage, organic decomposition and other factors derived from the tests will drive the plan for healthy soil maintenance and optimum yield potential.

### How often you should test your soil

depends on a number of variables, including soil type, crops grown, amount of rain, irrigation tools, type and amount of applied fertilizer, and other farming practices. As a general rule, experts recommend testing your soil every 2 to 3 years.

### How deep you should take your soil samples

is a science, but, in general, samples should be taken at 2, 4 and 6 inches from at least three different locations for every two acres.

**It's important to note:** every laboratory uses its own standard of particle size when recommending Indiana Aglime based on soil test results. Learn your lab's particle-size standard to ensure you buy the correct amount and type of Indiana Aglime.

### Particle Size Matters

Common perception is that aglime is a slow-acting material with little to no results until one or two years after application. This is only true for particle sizes larger than that passing through a #8-mesh sieve.

Particles passing through a #60-mesh sieve have an immediate effect upon contact with the soil, and are fully used within one year.

Particles passing through a #100-mesh sieve are fully used within one month.



## Aglime Effectiveness by Particle Size and Rate

Physical Description and Use	Particle Size	Within 1 Year	Within 4 Years
<p><i>Coarse: like sand with fine particles</i></p> <ul style="list-style-type: none"> <li>• For sustained pH adjustment</li> <li>• To add calcium or magnesium</li> <li>• For soil treatment</li> </ul>	Between the #8 and #60 sieve	~50%	100% efficient
<p><i>Fine: very fine to pulverized</i></p> <ul style="list-style-type: none"> <li>• For rapid pH adjustment</li> <li>• To add calcium or magnesium</li> <li>• For soil treatment</li> <li>• When buyer desires the full value of aglime within the first year</li> </ul>	Passing the #60 sieve	100%	Offers no sustained benefit after the first year





# Reading the Quality Report

The Indiana Aglime Quality Report indicates the percentage of calcium (Ca) and magnesium (Mg) inherent in the aglime you can buy.

**Calcium** is necessary for organisms that break down and transform unusable nitrates in the soil into usable plant nutrients. Calcium may be deficient in soils that have not been limed, where potash fertilizer is used and where crops are subject to drought.

**Magnesium** may be deficient in some soils. Dolomitic or high-magnesium Indiana Aglime is the most economical way to add this precious nutrient back into your fields.

## PARTICLE SIZE + PURITY = RNV

Understanding the significance of these two variables is key to making the wisest aglime sourcing selection for optimum results and value.

### Particle Size Sieve Analysis

Particle size has a bearing on how fast Indiana Aglime will react in your soil and is depicted by the percent passing through a specified sieve size. #8 and #60 are the most commonly used measures.

Acidic soils needing an immediate pH balance adjustment call for a high percent of fine particles small enough to pass through #60 sieve.

To ensure full use of applied fertilizers, specify an Indiana Aglime product with a mix of coarse and fine particles, ensuring both a quick and sustained interaction.

### Purity CCE NV Percent

Chemical purity is defined as “CCE NV percent” (or Calcium Carbonate Equivalent Neutralizing Value Percent).

Simply stated, CCE NV is a measure of an Indiana Aglime product’s ability to neutralize soil acidity, relative to that of pure calcium carbonate. For example, a CCE of 100 is equal to pure calcium carbonate.

Therefore, the higher the aglime product’s CCE, the less of it is needed to neutralize the soil.

### RNV INTERACTION

This figure identifies the overall effectiveness of any particular Indiana Aglime product. The RNV percent, or Relative Neutralizing Value, indicates the interaction between particle size and chemical purity during the first year.



2009 - 2010

# INDIANA AGLIME QUALITY REPORT



aglime.org

Sieve Analysis  
(Mesh Size)  
Percent Passing  
#8 #60 #100

CCE NV<sup>1</sup> %

Ca %

Mg %

RNV<sup>2</sup> %

County	Producer - Member	Description	#8	#60	#100	CCE NV <sup>1</sup> %	Ca %	Mg %	RNV <sup>2</sup> %
Allen	<b>HANSON AGGREGATES MIDWEST, LLC</b> Midwest Quarry - Woodburn, IN (260) 632-1410 Rick Hullinger	Ledges 3-8, Dolomitic Fine	99	56	45	101.6	21.9	11.0	78.7
	<b>HANSON AGGREGATES MIDWEST, LLC</b> Ardmore Quarry - Fort Wayne, IN (260) 747-3105 Rick Hullinger	Ledges 1-7, 8-9, Dolomitic Fine	100	95	89	99.0	20.7	11.3	96.5
		Ledges 1-7, 8-9, Dolomitic Coarse	72	27	23	103.8	22.0	11.7	51.3
	<b>HANSON AGGREGATES MIDWEST, LLC</b> LHR Quarry (260) 478-9992 Rick Hullinger	Ledges 2-908, 908-11, Fine	98	91	88	96.7	20.4	11.1	91.1
Ledges 2-908, 908-11, Coarse		93	28	23	103.6	20.9	12.0	63.0	
Bartholomew	<b>MESHBERGER STONE, INC.</b> Columbus Plant - Columbus, IN (812) 579-5241 Jeff Brown	Ledges 11-12, Calcitic Regular	93	33	28	94.6	31.4	3.1	59.6
Carroll	<b>U.S. AGGREGATES, INC.</b> Delphi Quarry - Delphi, IN (765) 564-2580 Joe Mayfield	Ledges Hannah Level II Dolomitic Regular	95	22	17	106.2	21.8	12.1	62.0
Cass	<b>ENGINEERING AGGREGATES CORP.</b> Logansport Plant - Logansport, IN (574) 753-5506 Tom Busch	Ledges 1-5, Calcitic Regular	92	37	32	91.5	27.3	5.6	59.0
		Ledges 6-9, Dolomitic Regular	93	38	34	98.2	20.9	10.5	64.4
Clark	<b>MULZER CRUSHED STONE, INC.</b> Charlestown Plant - Charlestown, IN (812) 256-3346 Mike Bartelt	Ledges 5-603, Dolomitic Regular	84	29	24	100.2	20.3	11.5	56.6
		Ledges 1006-3, Dolomitic Regular	88	33	29	99.3	25.0	8.9	60.2
Crawford	<b>MULZER CRUSHED STONE, INC.</b> Cape Sandy Quarry - Leavenworth, IN (812) 739-2929 Mike Bartelt	Ledges 603-610, Calcitic Regular	100	43	35	95.3	34.6	2.0	68.2
	<b>MULZER CRUSHED STONE, INC.</b> Temple Quarry - English, IN (812) 365-2145 Mike Bartelt	Ledges 401-402, Calcitic Regular	95	34	26	94.3	34.0	1.8	60.6
	<b>MULZER CRUSHED STONE, INC.</b> Tower Quarry - Leavenworth, IN (812) 739-4777 Mike Bartelt	Ledges 201-202, Calcitic Regular	94	34	28	97.4	34.2	1.9	62.5
Decatur	<b>NEW POINT STONE COMPANY</b> Harris City Plant (812) 852-4225 Steve Wanstrath	Ledge - White, Calcitic	96	33	25	94.3	32.6	2.8	60.8
	<b>NEW POINT STONE COMPANY</b> New Point Plant (812) 852-4225 Steve Wanstrath	Ledge - White, Regular	100	44	38	93.5	25.9	7.1	67.3
Franklin	<b>NEW POINT STONE COMPANY</b> Derbyshire Plant (812) 852-4225 Steve Wanstrath	Ledge - Brown, Dolomitic Regular	92	37	30	97.6	19.8	10.9	63.0
		Ledge - White, Dolomitic Regular	89	31	26	92.3	24.9	7.2	55.6
Grant	<b>IRVING MATERIALS, INC.</b> Pipe Creek Jr. - Swayzee, IN (765) 661-0312 Mike Gross	Ledges 1 & 2, Calcitic Regular	97	41	35	90.9	27.0	4.4	62.4
		Ledge 1 & 2, High Calcium Regular	99	39	30	97.9	39.0	0.4	67.7
Hamilton	<b>IRVING MATERIALS, INC.</b> Stoney Creek - Noblesville, IN (765) 661-0312 Mike Gross	Ledges 7-14, 16-21, Calcitic Regular	97	45	38	97.3	23.4	9.4	69.2
Harrison	<b>MULZER CRUSHED STONE, INC.</b> New Amsterdam Quarry - New Amsterdam, IN (812) 732-1002 Mike Bartelt	Ledges 612-615, Calcitic Regular	94	35	29	93.2	31.7	3.7	60.3
Howard	<b>MARTIN MARIETTA AGGREGATES</b> Kokomo Plant - Kokomo, IN (765) 459-3194 Brent Leininger	Ledges 502-10, Calcitic Regular	79	26	22	86.6	29.1	2.9	45.4
Huntington	<b>IRVING MATERIALS, INC.</b> Huntington Plant - Huntington, IN (765) 661-0312 Mike Gross	Ledges Composite, Dolomitic Regular	92	46	38	103.1	21.0	11.8	71.2

2009 - 2010

# INDIANA AGLIME QUALITY REPORT



Sieve Analysis  
(Mesh Size)  
Percent Passing  
#8 #60 #100

CCE<sup>1</sup> %

Ca %

Mg %

RNV<sup>2</sup> %

County	Producer - Member	Description	#8	#60	#100	CCE <sup>1</sup> %	Ca %	Mg %	RNV <sup>2</sup> %
Jay	<b>MESHBERGER BROS STONE, CORP.</b> Portland Plant - Portland, IN (260) 726-7642 Eric Reynolds	Ledges 1 & 2, Dolomitic Fine	100	99	92	108.3	21.9	12.7	107.6
Lake	<b>VULCAN MATERIALS COMPANY</b> Lowell Plant - Lowell, IN (217) 696-5467 Ron Kamstra	Ledges 1 & 2, Dolomitic Coarse	72	22	18	101.6	20.9	11.6	47.5
Lawrence	<b>ROGERS GROUP, INC.</b> Mitchell Quarry - Mitchell, IN (812) 849-3530 Craig Huffine	Ledges 1-7, Calcitic Regular	90	34	28	95.6	37.0	1.0	59.3
	<b>ROGERS GROUP, INC.</b> Sieboldt Quarry - Springville, IN (812) 279-3539 Craig Huffine	Ledges 3-9, Fine Calcitic Ledges 3-9, Coarse Calcitic	100 76	90 27	76 23	94.1 96.4	36.5 35.5	0.8 1.6	89.1 49.7
Miami	<b>ROCK INDUSTRIES, INC.</b> Peru Plant - Peru, IN (765) 473-5578 Holly Ward	Ledges 3-4, E Calcitic Regular	87	33	29	89.2	24.3	6.6	53.8
	<b>HANSON AGGREGATES MIDWEST, LLC</b> Milner Quarry - Peru, IN (765) 689-9074 Rick Hullinger	Ledges 1-4, 5, 6-8 Dolomitic Fine	95	40	36	100.4	22.1	10.5	68.0
Monroe	<b>ROGERS GROUP, INC.</b> Bloomington Plant - Bloomington, IN (812) 333-8560 Gary Barrow	Ledges 1-3, Calcitic Coarse Ledges 4-6, Calcitic Coarse	74 70	25 27	20 22	96.3 95.4	38.7 35.4	0.4 1.6	47.5 46.5
	<b>ROGERS GROUP, INC.</b> Newton County Stone - Kentland IN (219) 474-5125 Mark Scanlon	Ledges 1-2, 4-5-6, Regular Ledges 1-2, 4-5-6, Fine	86 100	27 44	24 35	84.7 106.4	16.3 21.8	9.2 12.5	47.8 76.2
Owen	<b>ROGERS GROUP, INC.</b> Owen Valley Quarry - Spencer, IN (812) 829-2066 Dana Boyd	Ledge 2011-505, Calcitic Regular	96	58	47	85.9	28.4	4.1	66.4
Pulaski	<b>VULCAN MATERIALS COMPANY</b> Francesville Plant - Francesville, IN (219) 567-9155 Ron Kamstra	Level 1, Ledge 9, Dolomitic Fine Level 1, Ledge 9, Dolomitic Coarse	96 79	35 21	30 16	107.3 107.4	21.9 21.9	12.7 12.7	70.5 53.8
	<b>MARTIN MARIETTA AGGREGATES</b> Cloverdale Quarry - Cloverdale, IN (765) 795-3536 Chris Hill	Ledge 101-4, Calcitic Regular	75	27	22	94.1	36.3	1.0	48.0
Ripley	<b>NEW POINT STONE COMPANY</b> Napoleon Plant - Napoleon, IN (812) 852-4225 Steve Wanstrath	Ledge White Lime, Calcitic Ledge Brassfield High Calcium - Calcitic	97 96	35 55	29 48	94.8 92.8	34.0 34.6	2.0 0.9	62.5 70.1
	<b>RUSH COUNTY STONE CO., INC.</b> Milroy Plant - Milroy, IN (765) 629-2211 Bob Cheek	Ledge 1-3, Dolomitic Regular Ledge 5-10, Calcitic Regular	89 81	44 40	40 35	102.6 87.3	23.1 25.7	10.8 6.5	68.4 52.7
Shelby	<b>MESHBERGER STONE, INC.</b> Cave Plant - Flat Rock, IN (765) 525-6442 Jeff Brown	Ledge 4-9, Dolomitic Regular	92	39	33	100.7	23.9	9.5	65.7
	<b>NEW POINT STONE COMPANY</b> St. Paul Plant - St. Paul, IN (812) 852-4225 Steve Wanstrath	Ledge 1 & 2, Brown Dolomitic Regular Ledge 5 & 7, White Calcitic Regular	90 95	40 40	36 31	103.4 95.9	23.0 33.8	10.9 2.4	67.5 64.7
Wayne	<b>BARRETT PAVING MATERIALS, INC.</b> Richmond Plant - Richmond, IN (765) 962-6596 Claude Seibel	Ledge 2-6, Regular	99	40	34	98.0	23.1	8.9	68.5
White	<b>VULCAN MATERIALS COMPANY</b> Monon Quarry - Monon, IN (219) 253-6686 Adam Regich	Ledge 1 & 2, Dolomitic Coarse	85	15	9	106.8	21.7	12.4	53.4

\*Samples taken by The Aglime Council. Samples tested by Bowser-Morner Testing Laboratories, Dayton, OH

**INDIANA AGLIME PROTECTS**

Your Investment Your Yields

Your Environment Your Green! Right for the Environment.



Profitable for You.



# Indiana Aglime Protects Your Green



*For more information, contact:*



*aglime.org*

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Right for the Environment.*

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