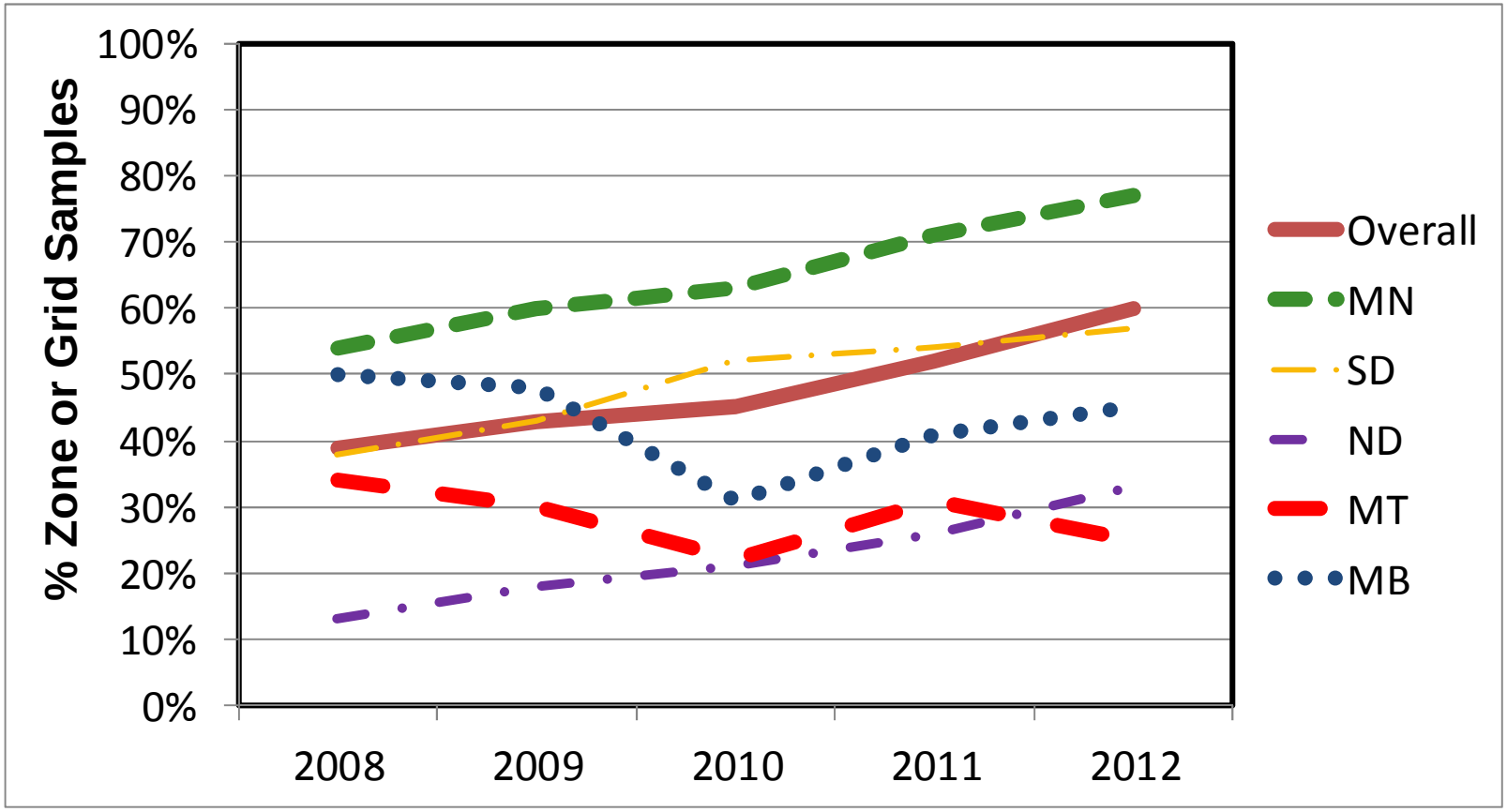
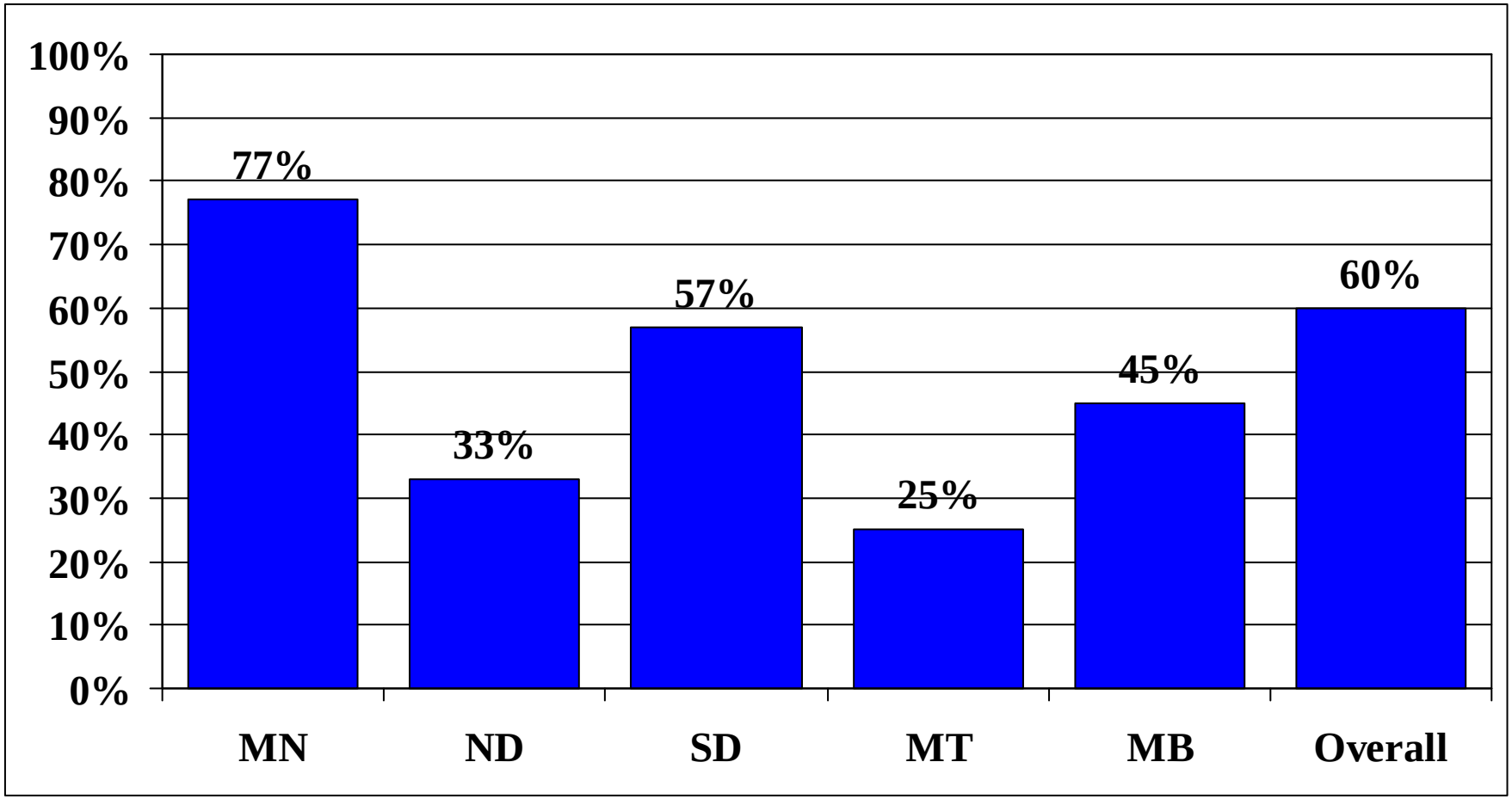
Trend for Precision Soil Testing

% Zone or Grid Samples Tested compared to Total Samples



AGVISE Laboratories

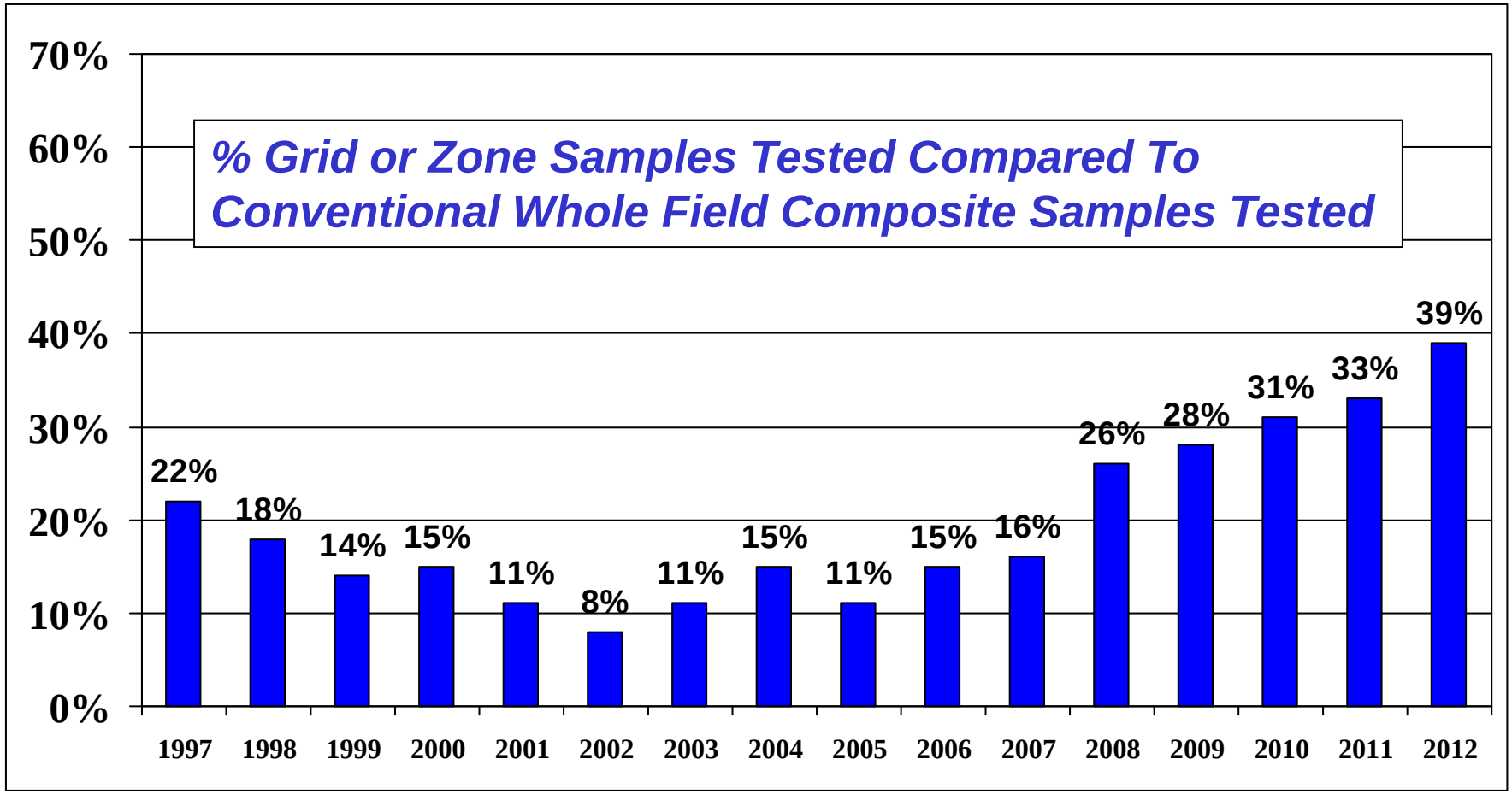
%Zone or Grid Samples Tested Compared to Conventional Whole Field Composite Samples in 2012



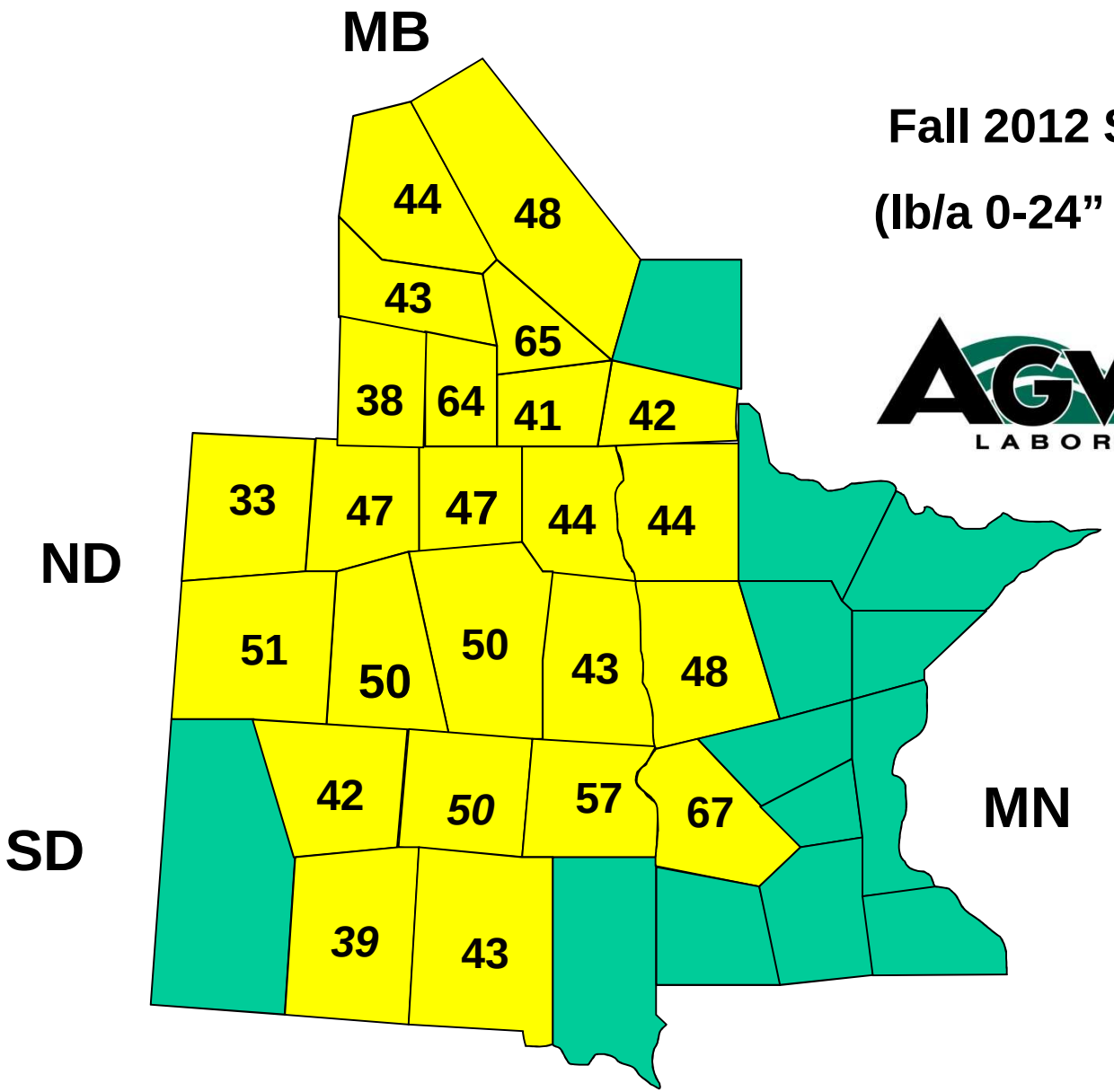
AGVISE Laboratories

%Zone or Grid Samples – Northwood laboratory

1997 - 2012



Average Soil Nitrate following Wheat in 2012

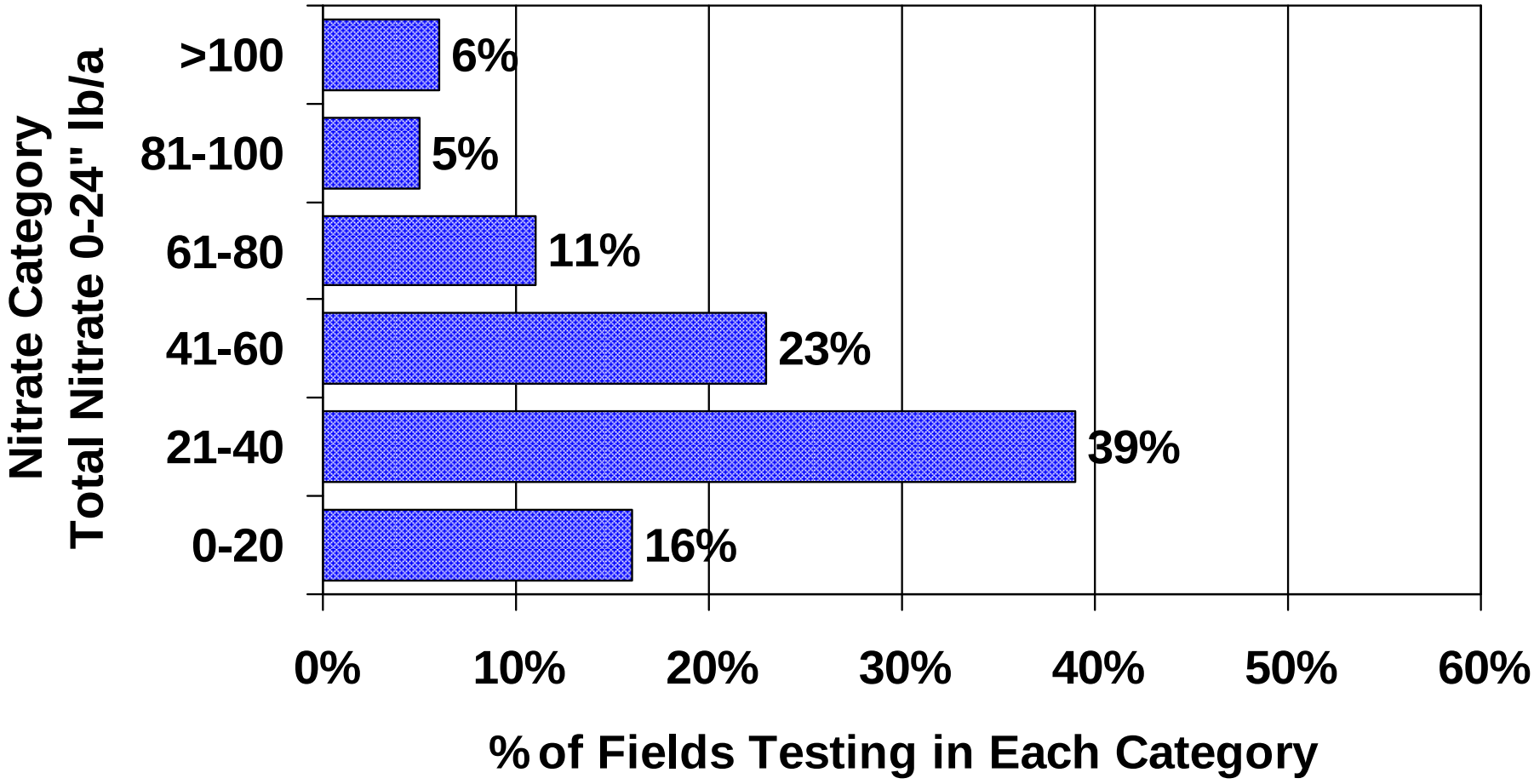


Fall 2012 Samples

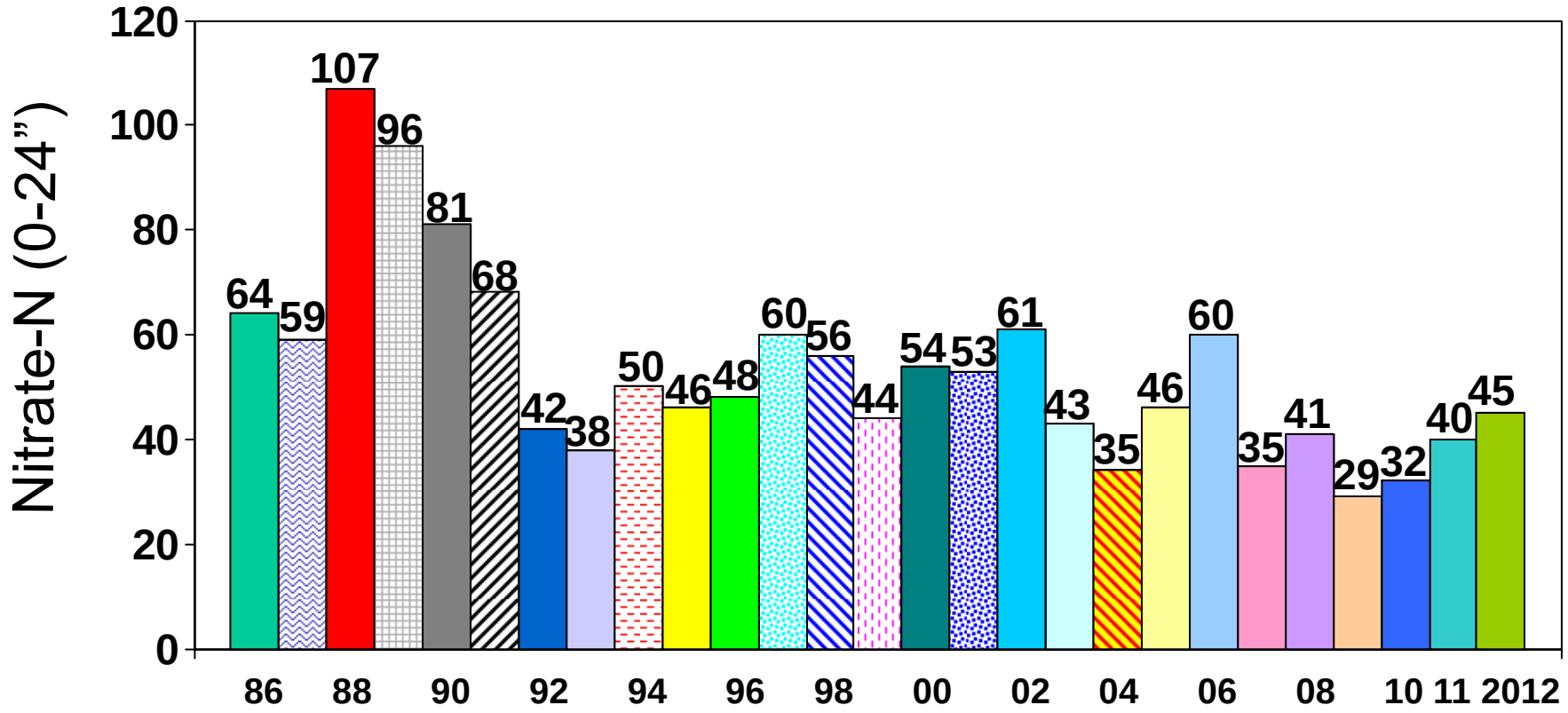
(lb/a 0-24” samples)

AGVISE LABORATORIES

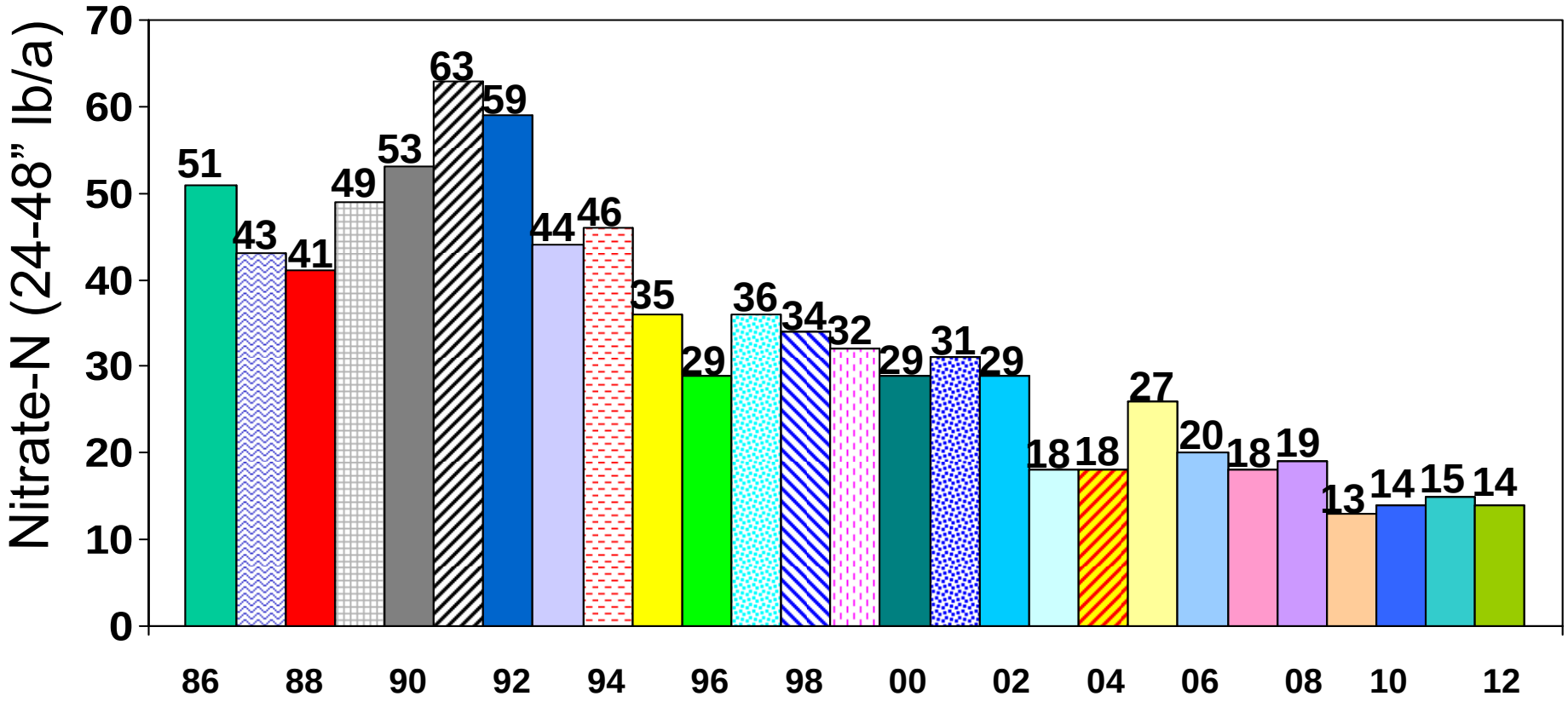
Soil Nitrate Variability Between Fields Following "WHEAT" in 2012



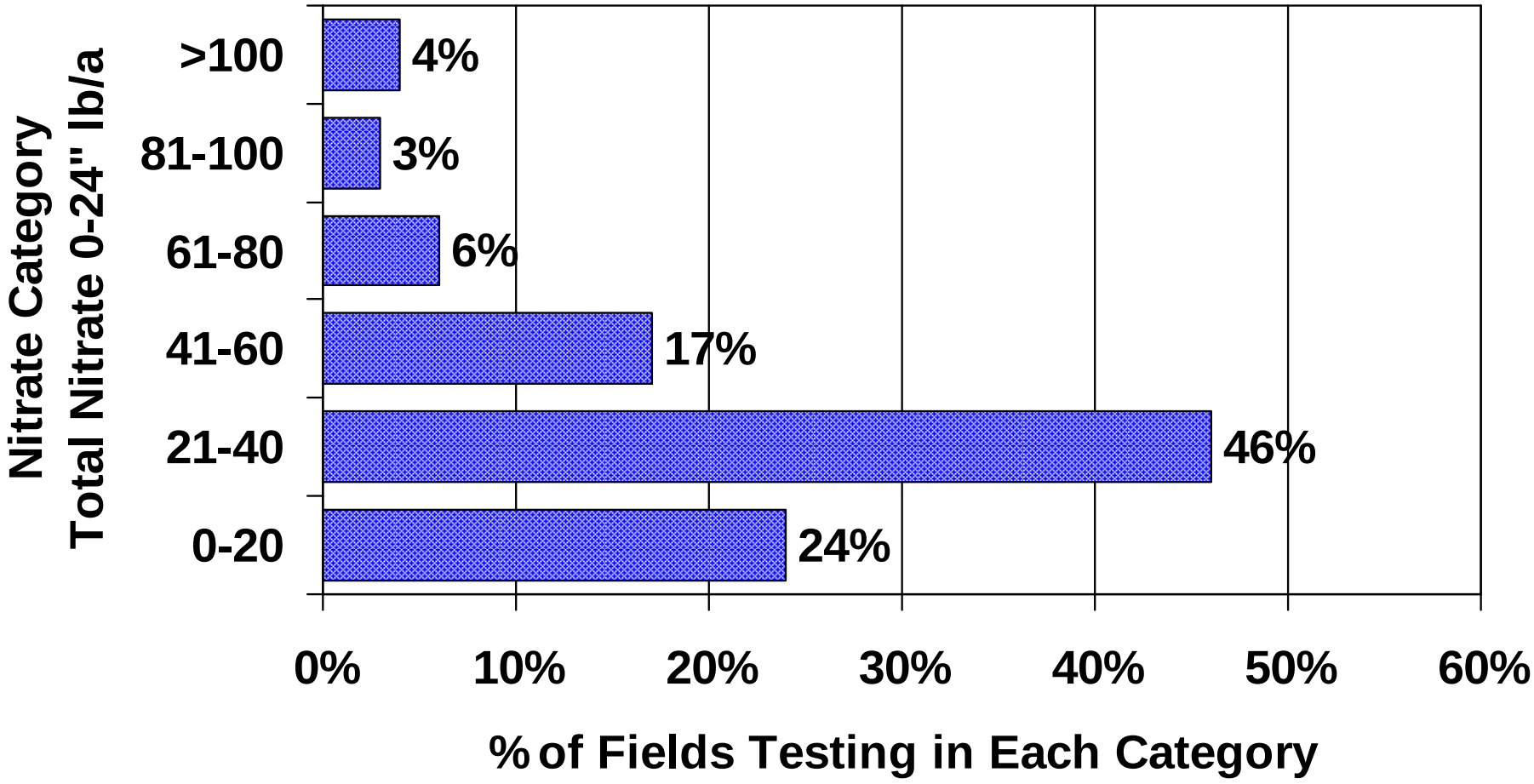
Average Soil Nitrate Following "WHEAT" 1986-2012 26 Years of history!



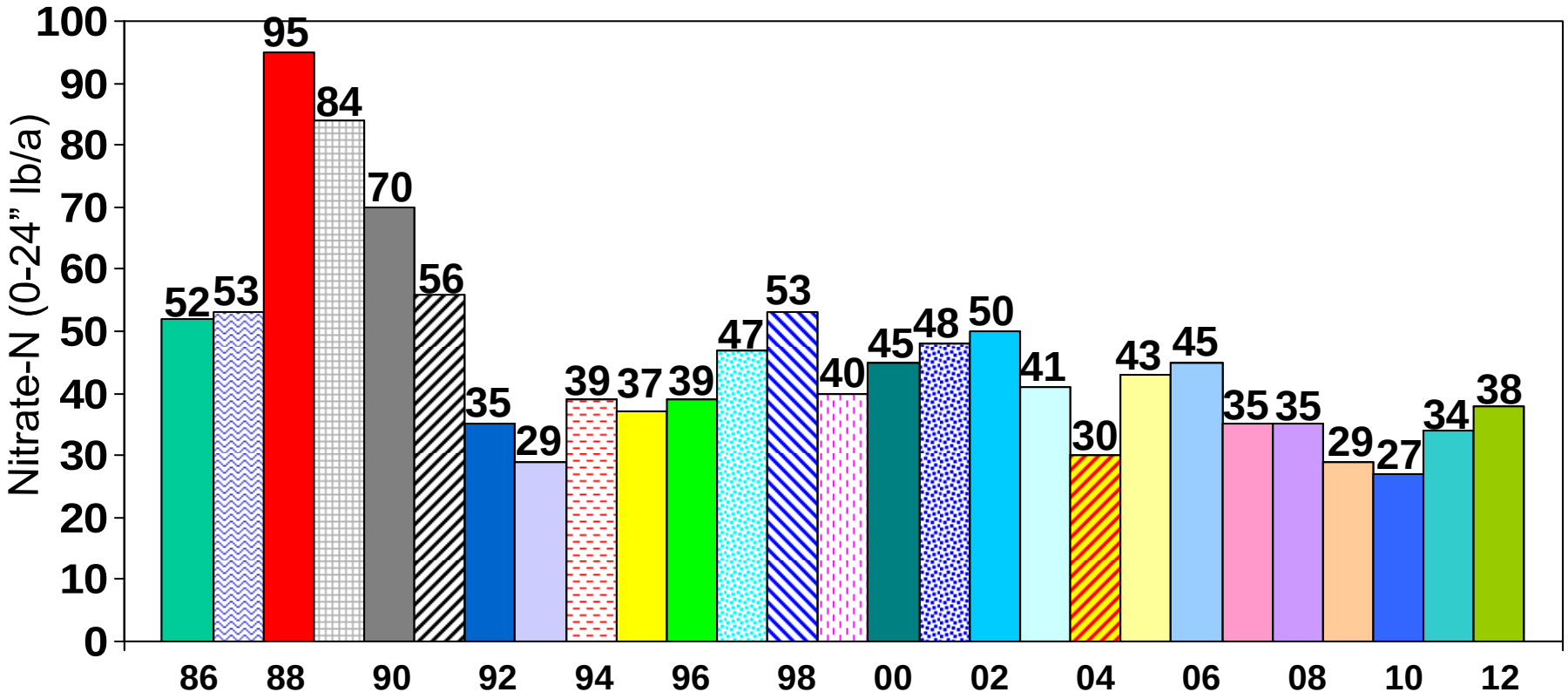
Average Soil Nitrate Following Wheat For Region (1986-2012) Deep "N" (24-48" lb/a)



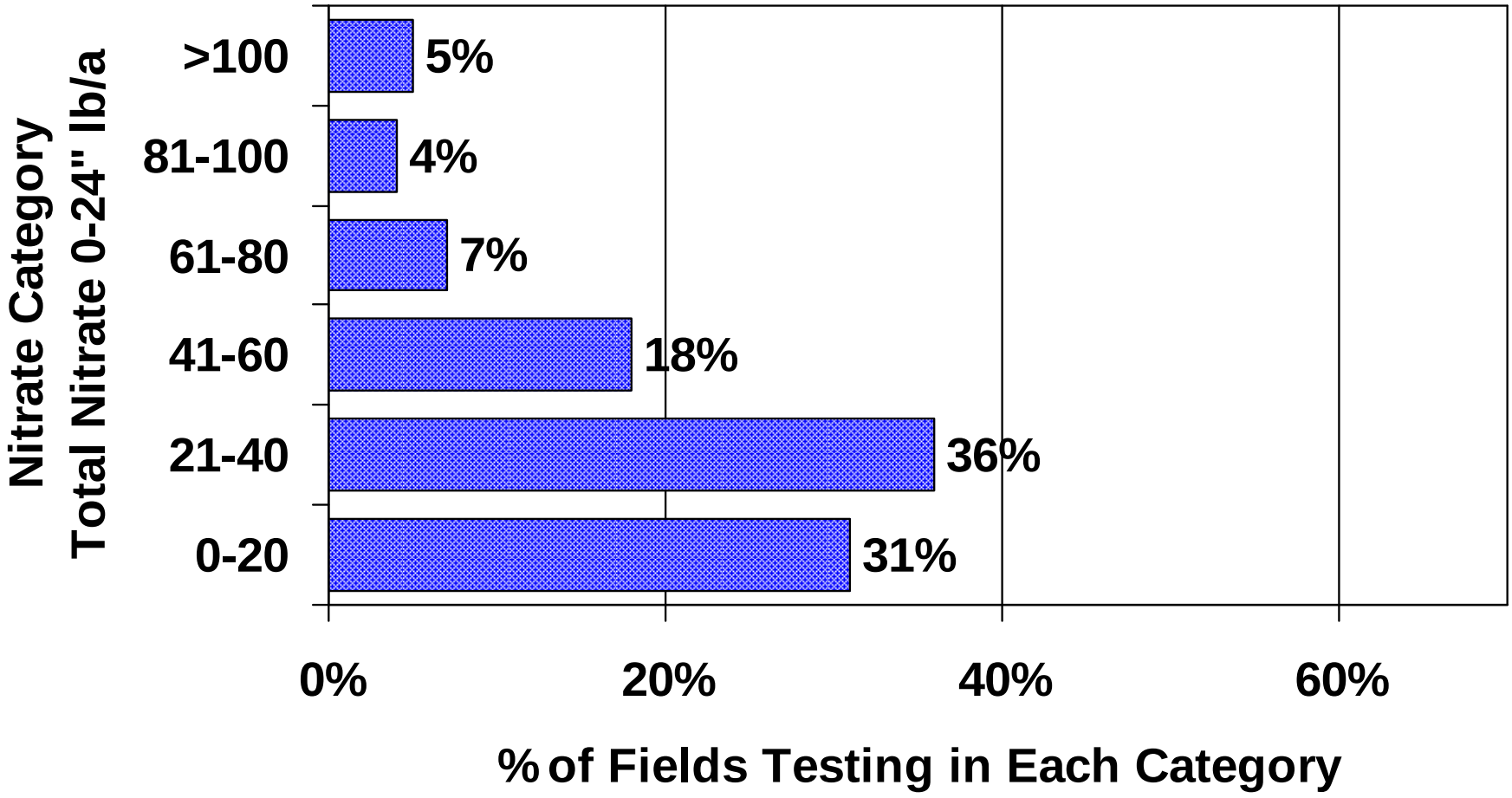
Soil Nitrate Variability Between Fields Following "Barley" in 2012



Average Soil Nitrate Following "BARLEY 1986-2012

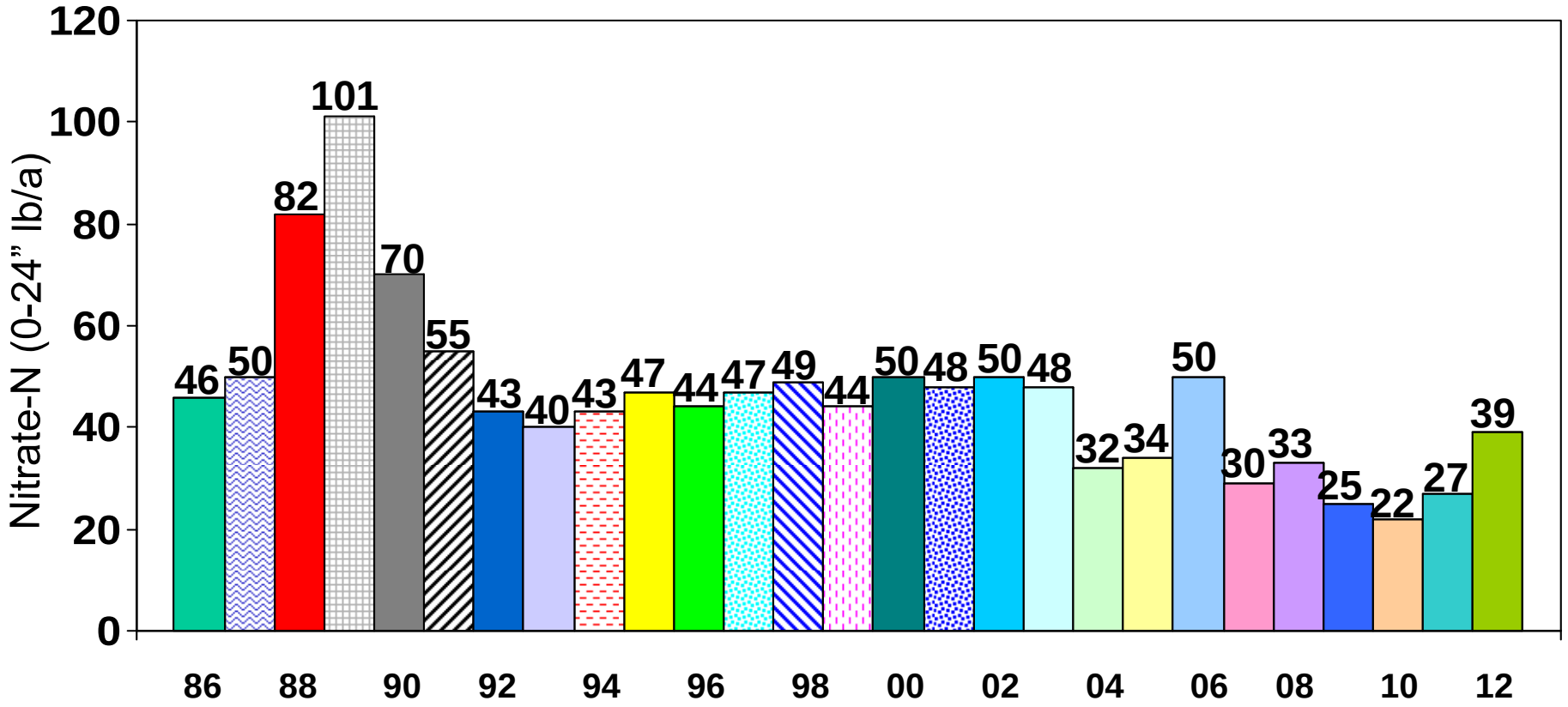


Soil Nitrate Variability Between Fields Following "Sunflower" in 2012

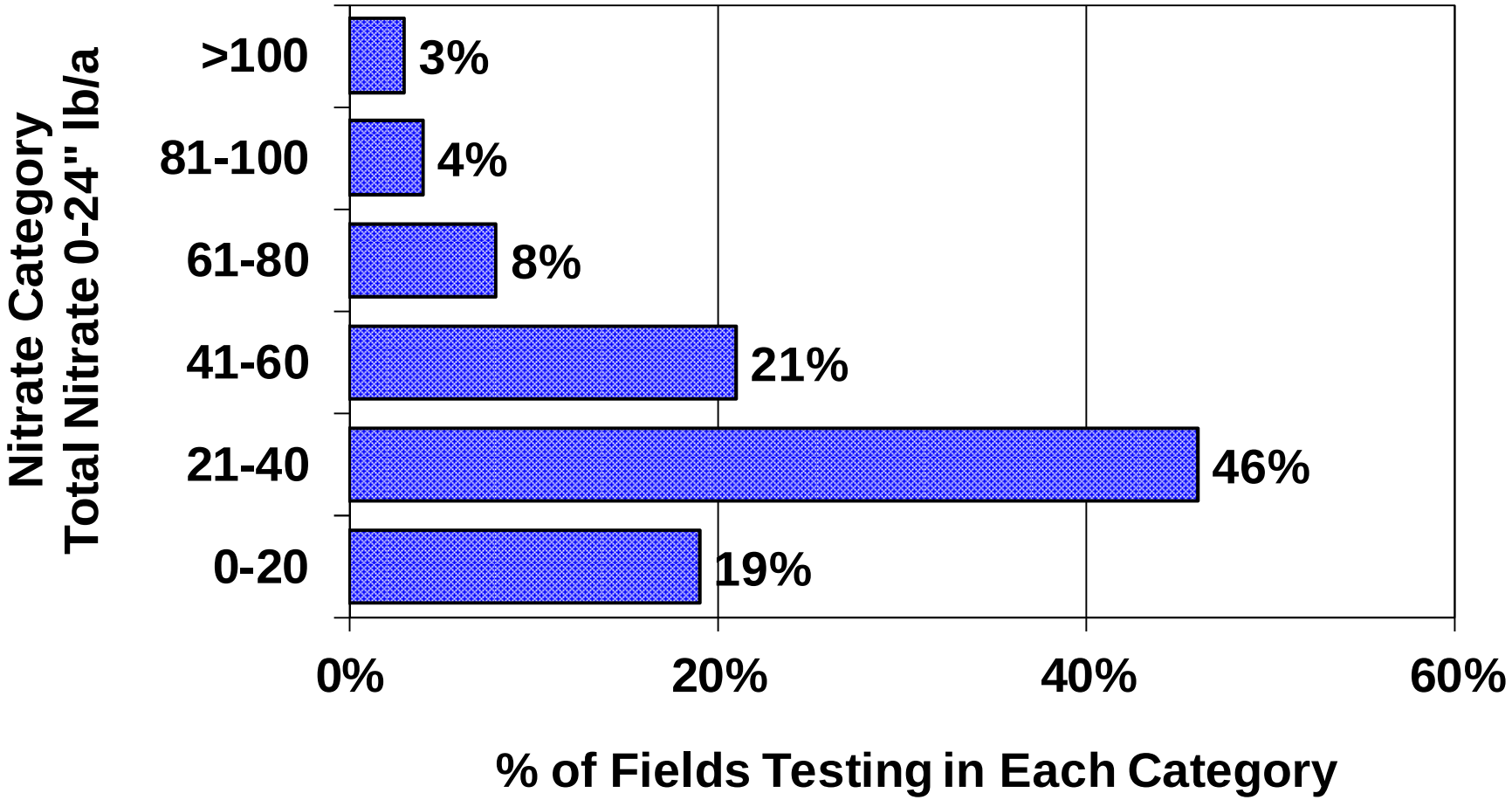


Average Soil Nitrate

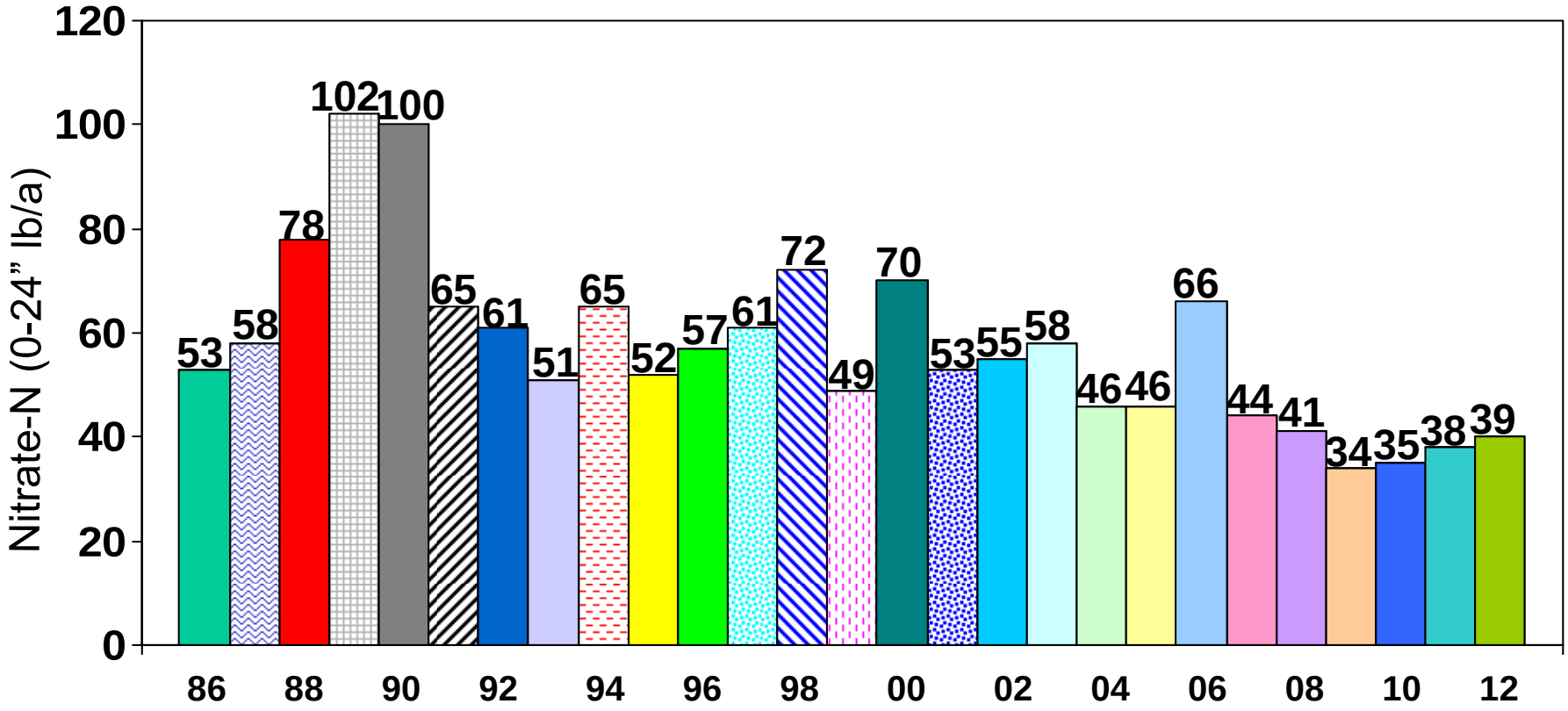
Following "SUNFLOWER" 1986- 2012



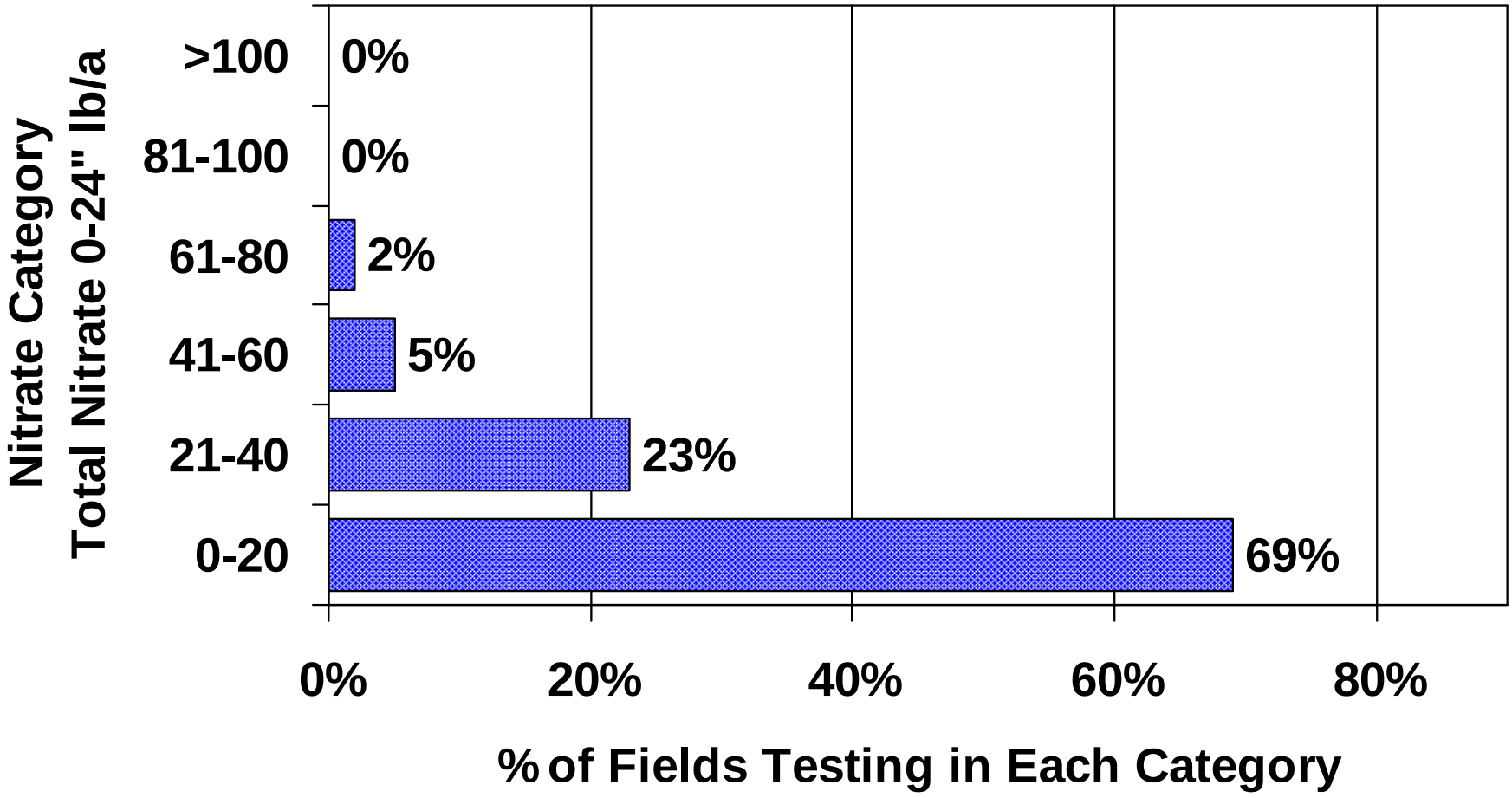
Soil Nitrate Variability Between Fields Following "Dry Beans" 2012



Average Soil Nitrate Following "DRY BEANS" 1986-2012

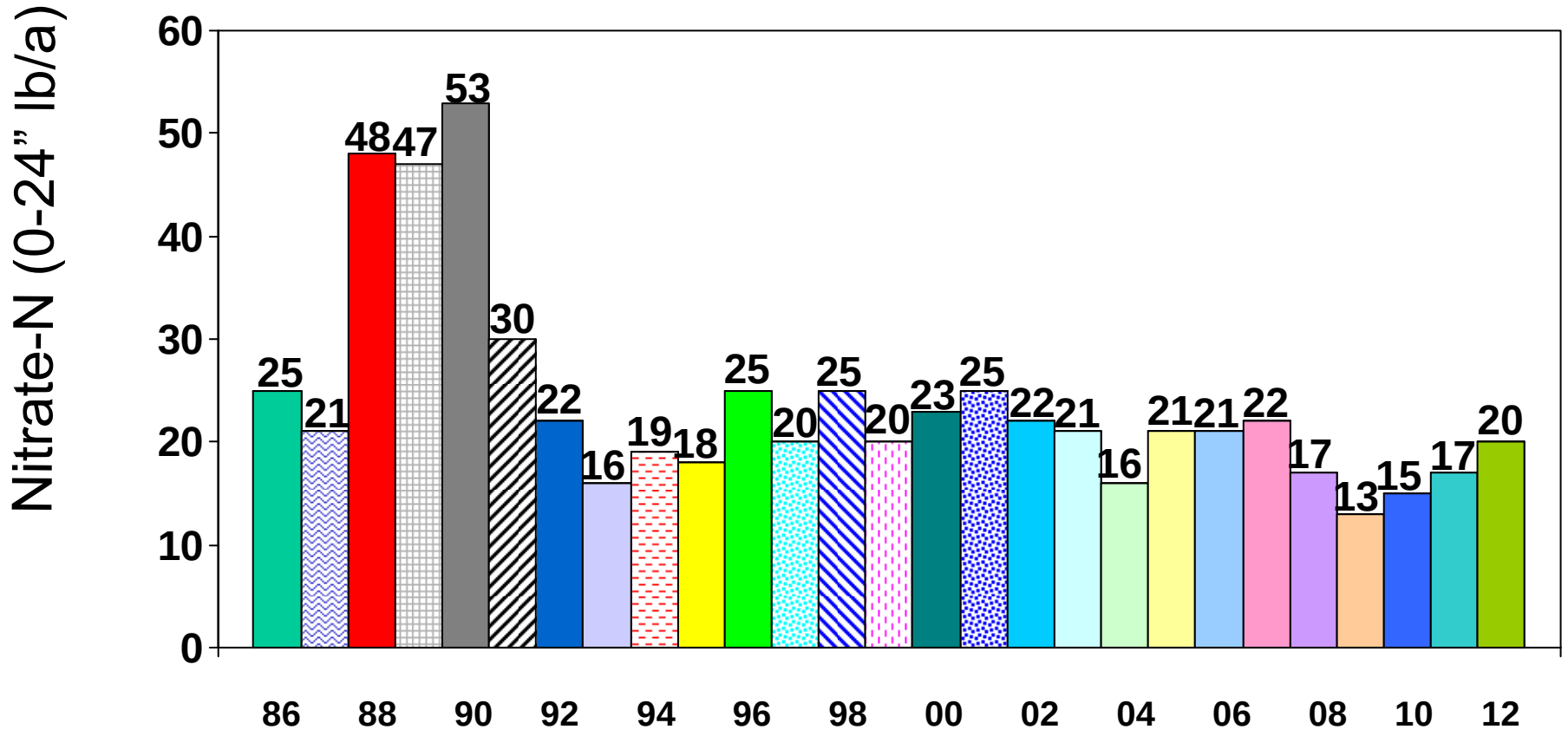


Soil Nitrate Variability Between Fields Following "Sugarbeet" in 2012

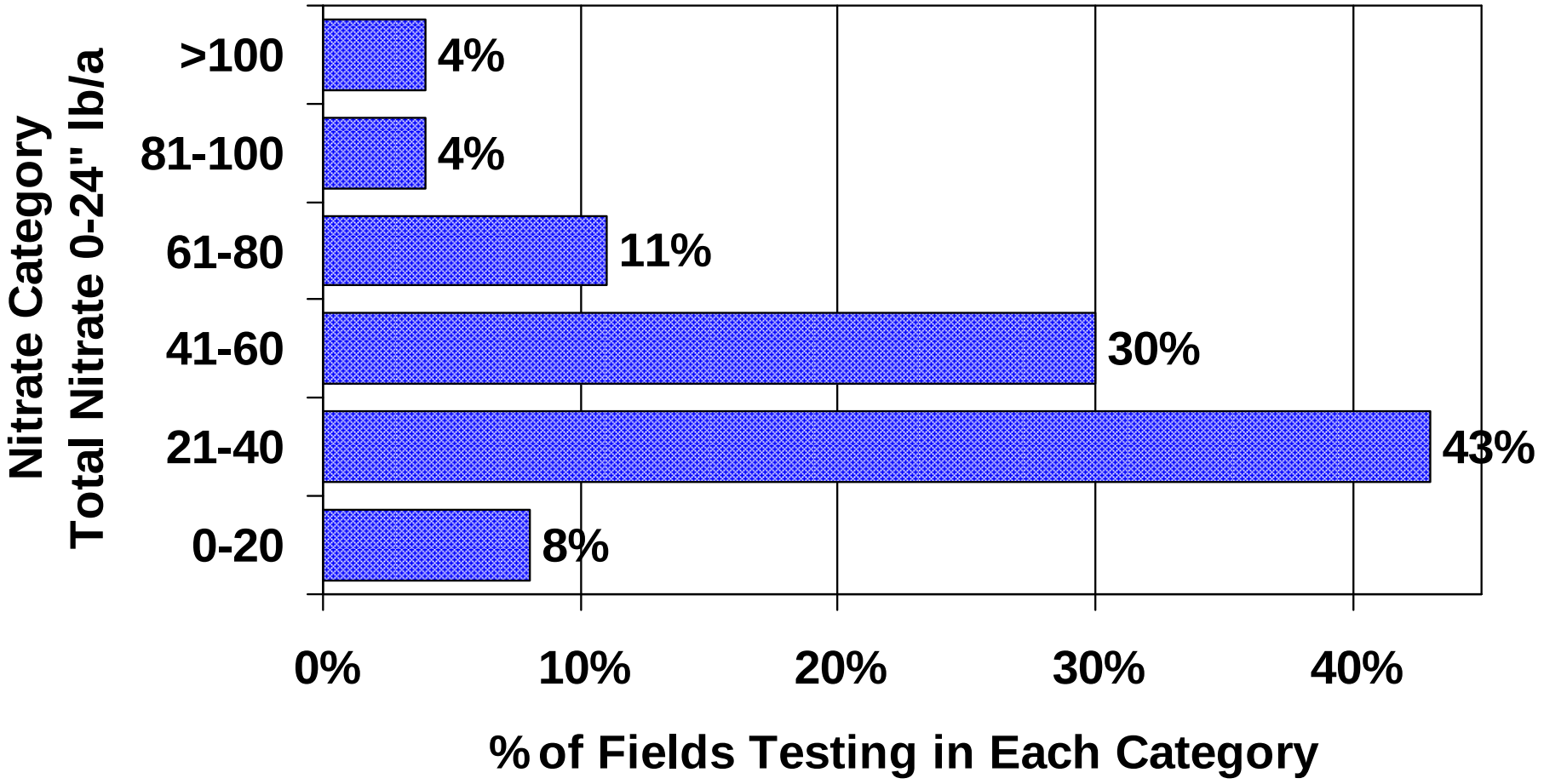


Average Soil Nitrate

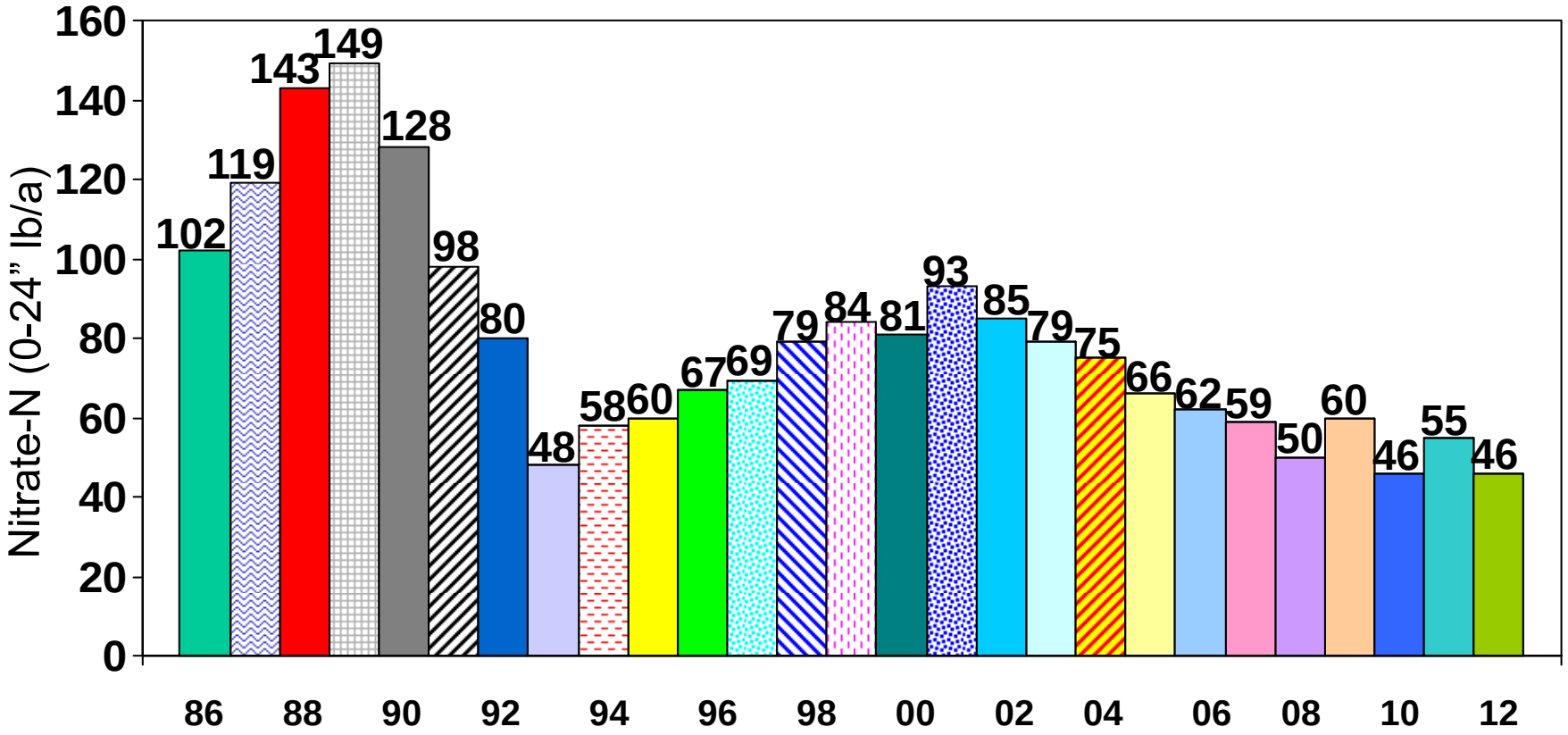
Following "SUGARBEET" 1986- 2012



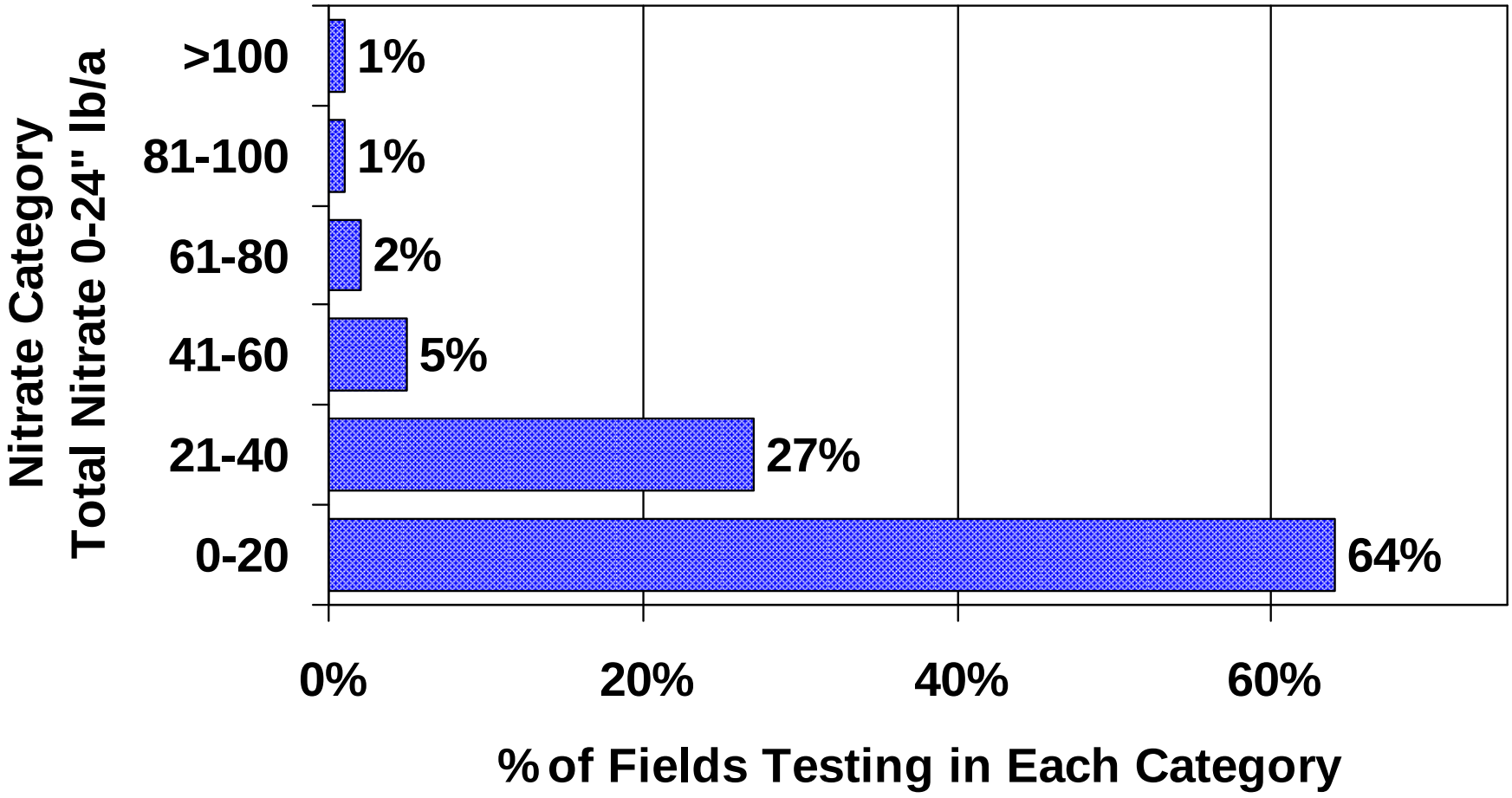
Soil Nitrate Variability Between Fields Following "Fallow" in 2012



Average Soil Nitrate Following "FALLOW" 1986-2012

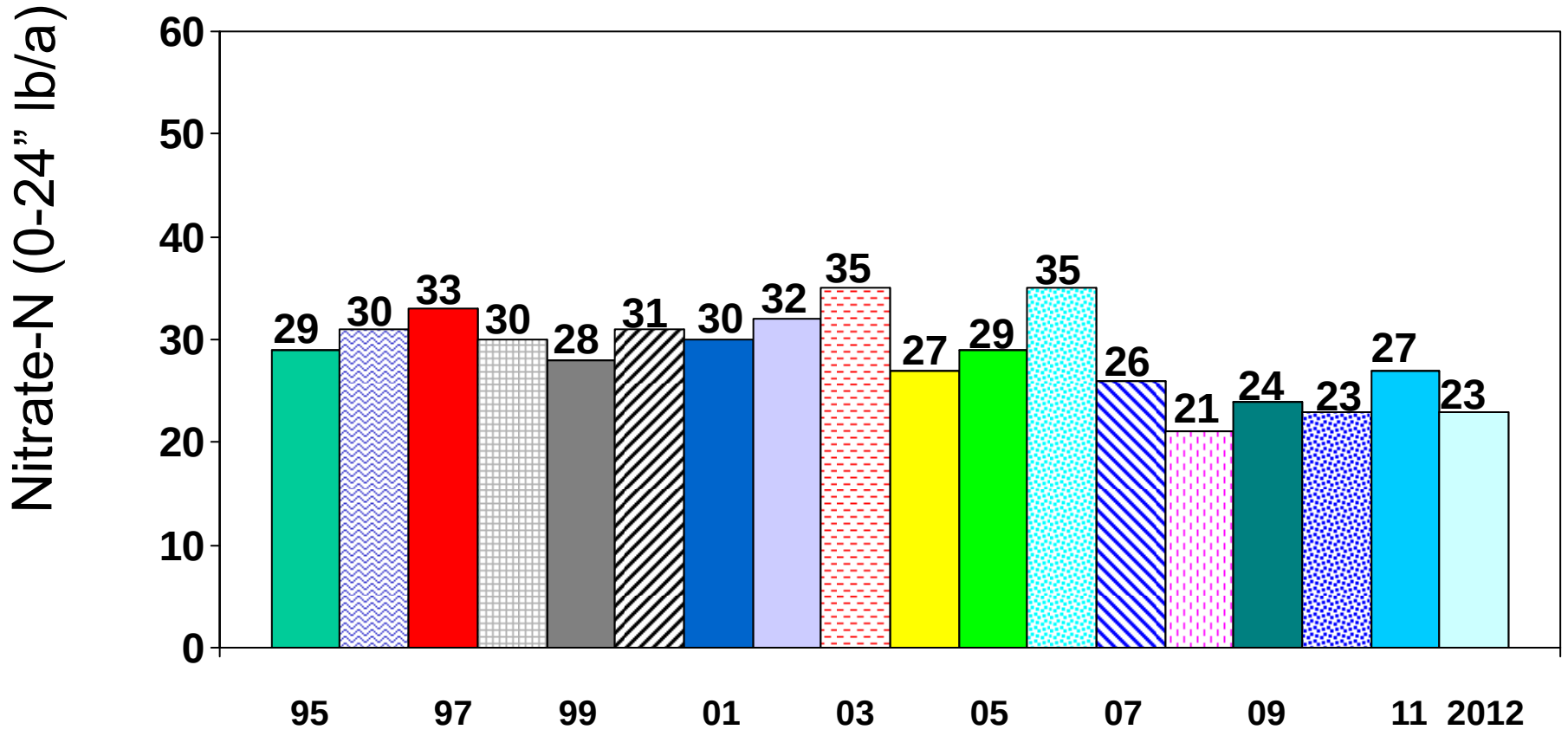


Soil Nitrate Variability Between Fields Following "Soybeans" in 2012

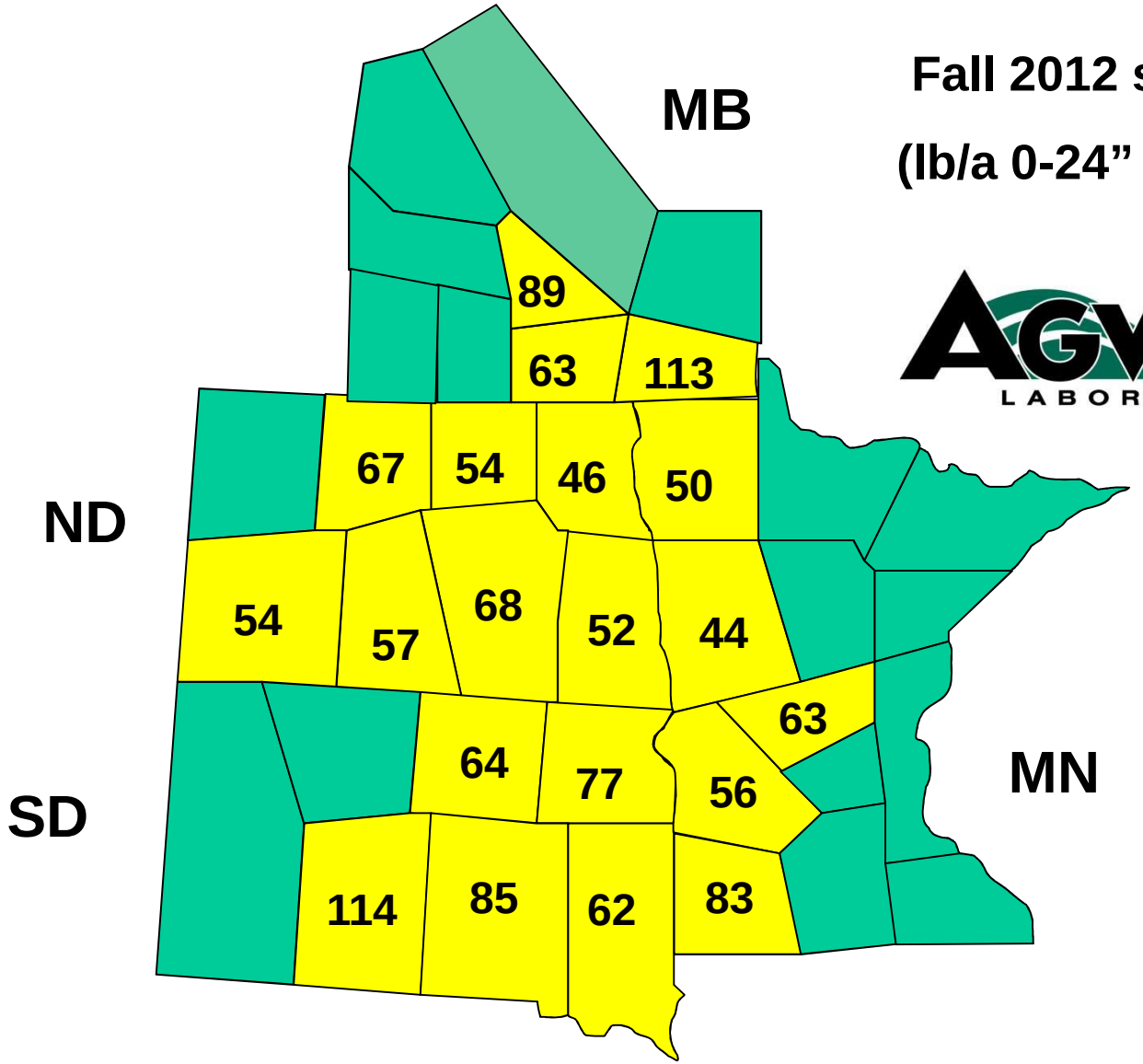


Average Soil Nitrate

Following "Soybeans" 1995- 2012



Average Soil Nitrate following Corn in 2012

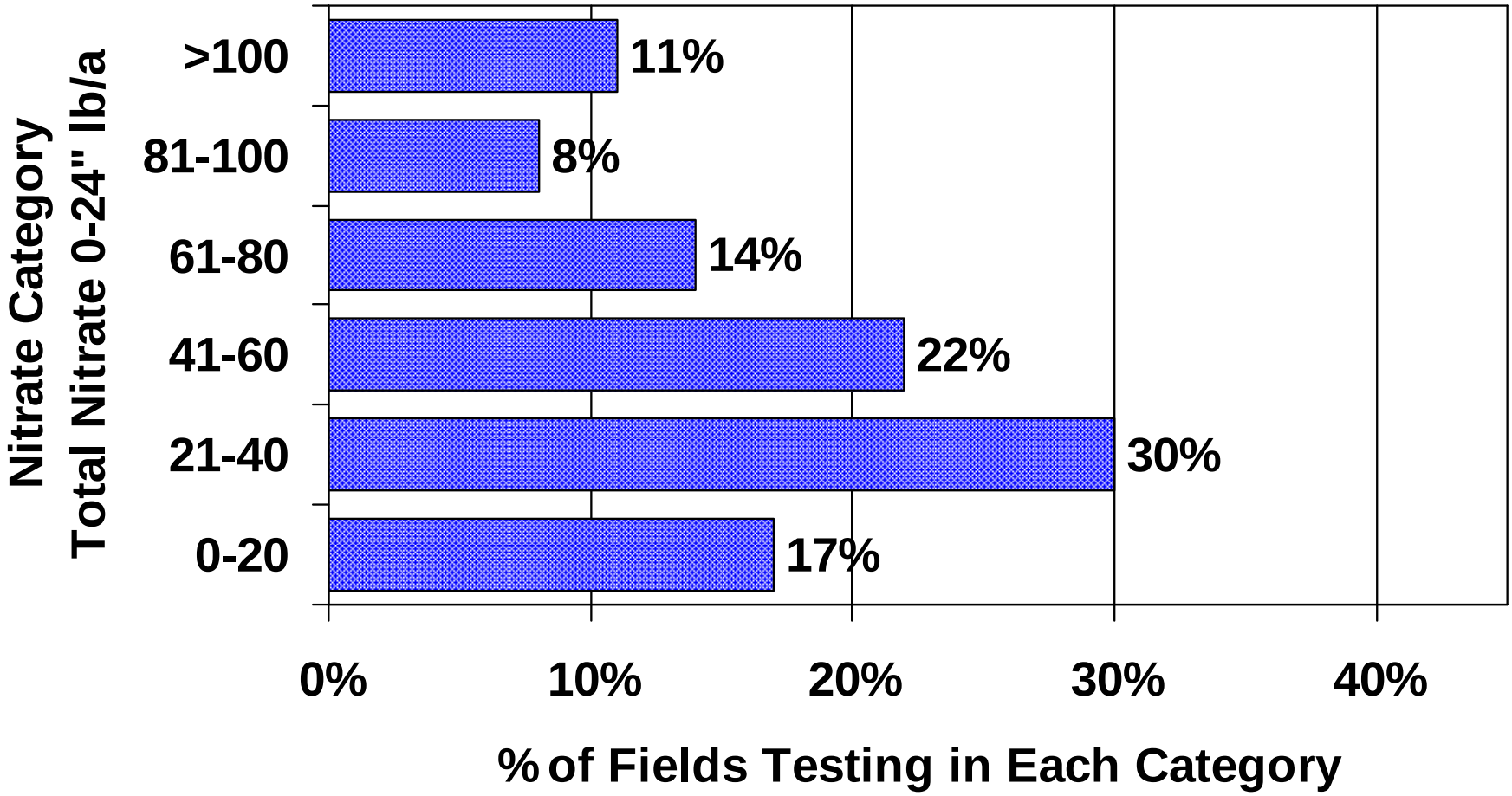


Fall 2012 samples

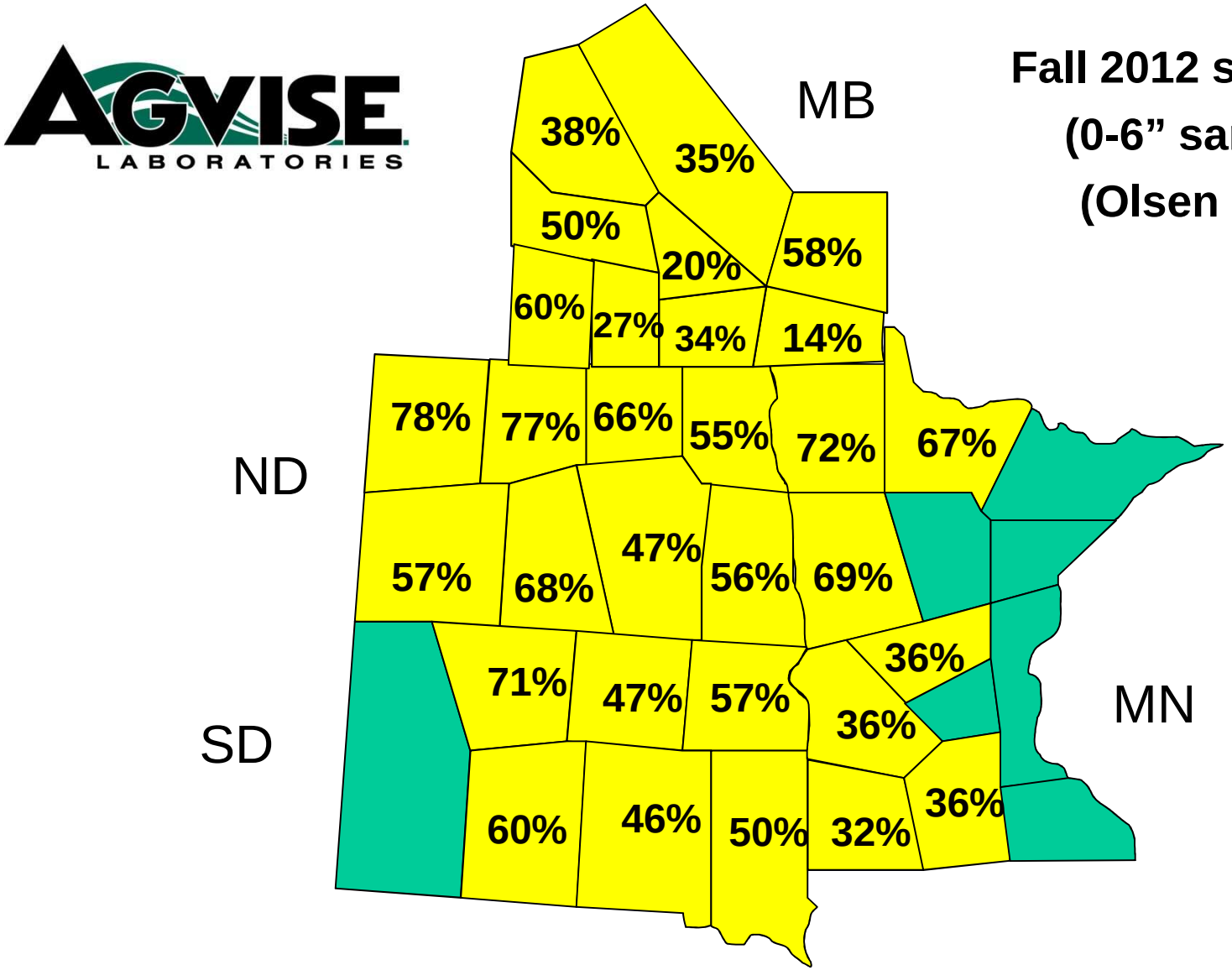
(lb/a 0-24” samples)

AGVISE LABORATORIES

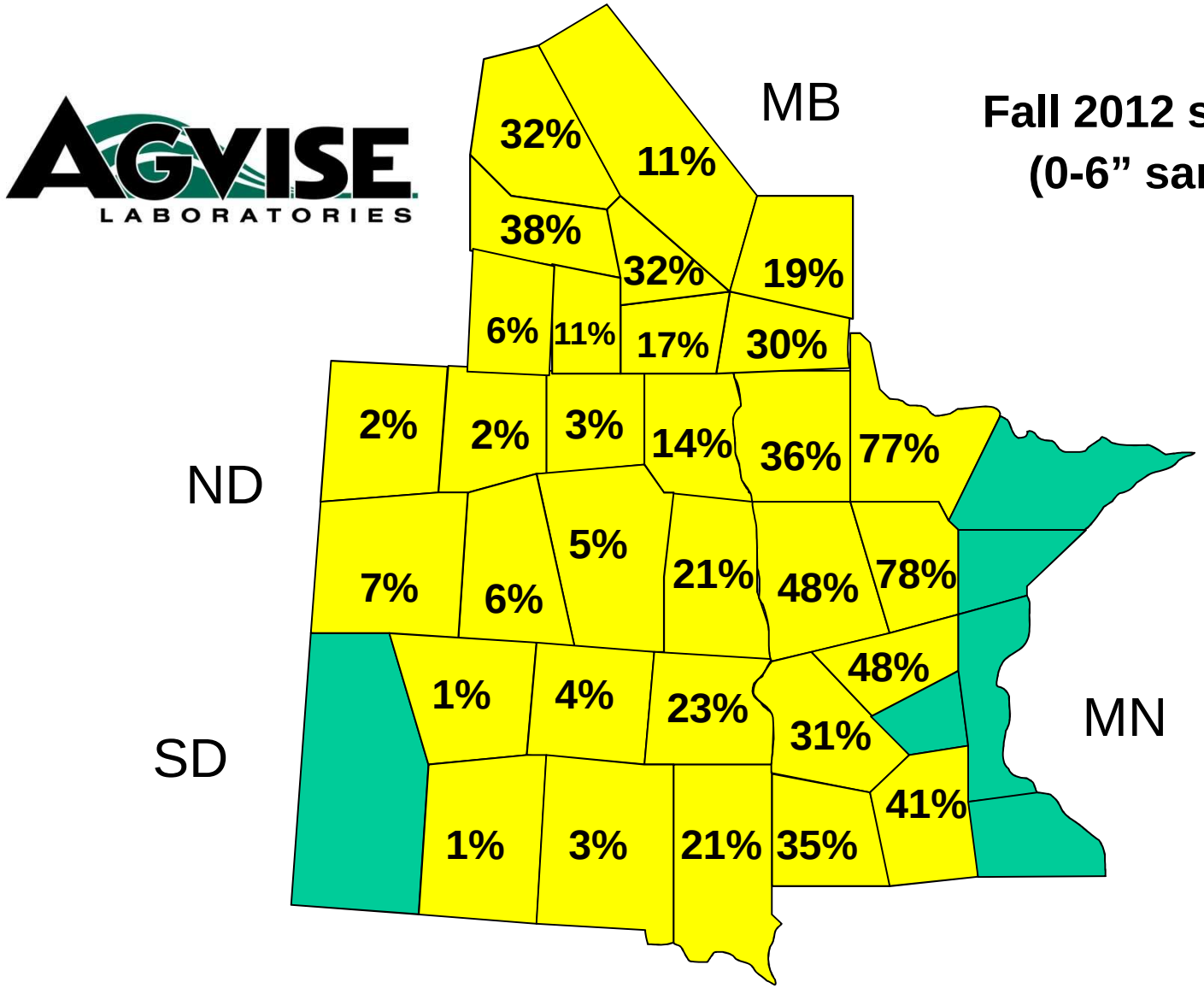
Soil Nitrate Variability Between Fields Following "Corn" in 2012



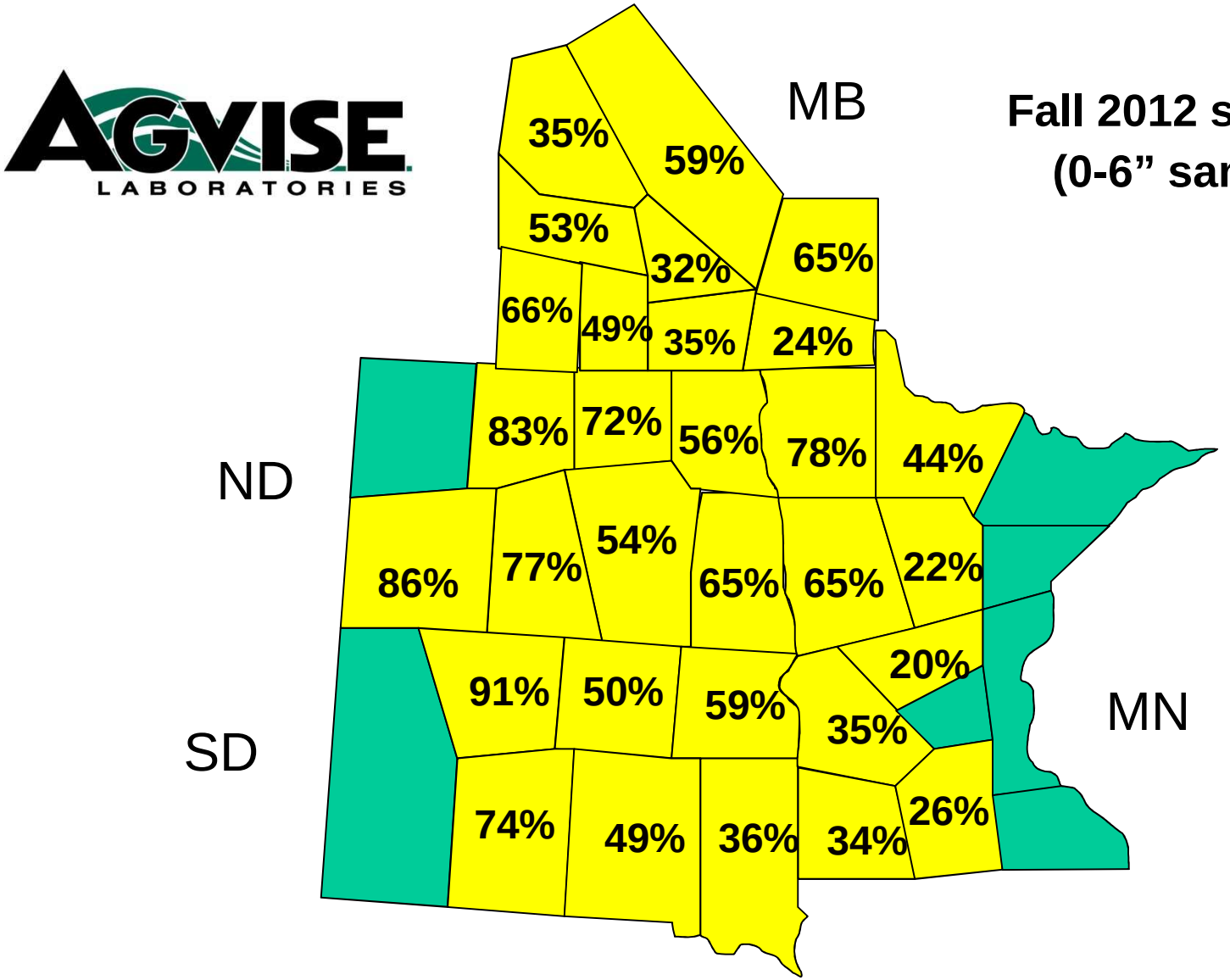
% Soil Samples with Phosphorus less than 10 ppm



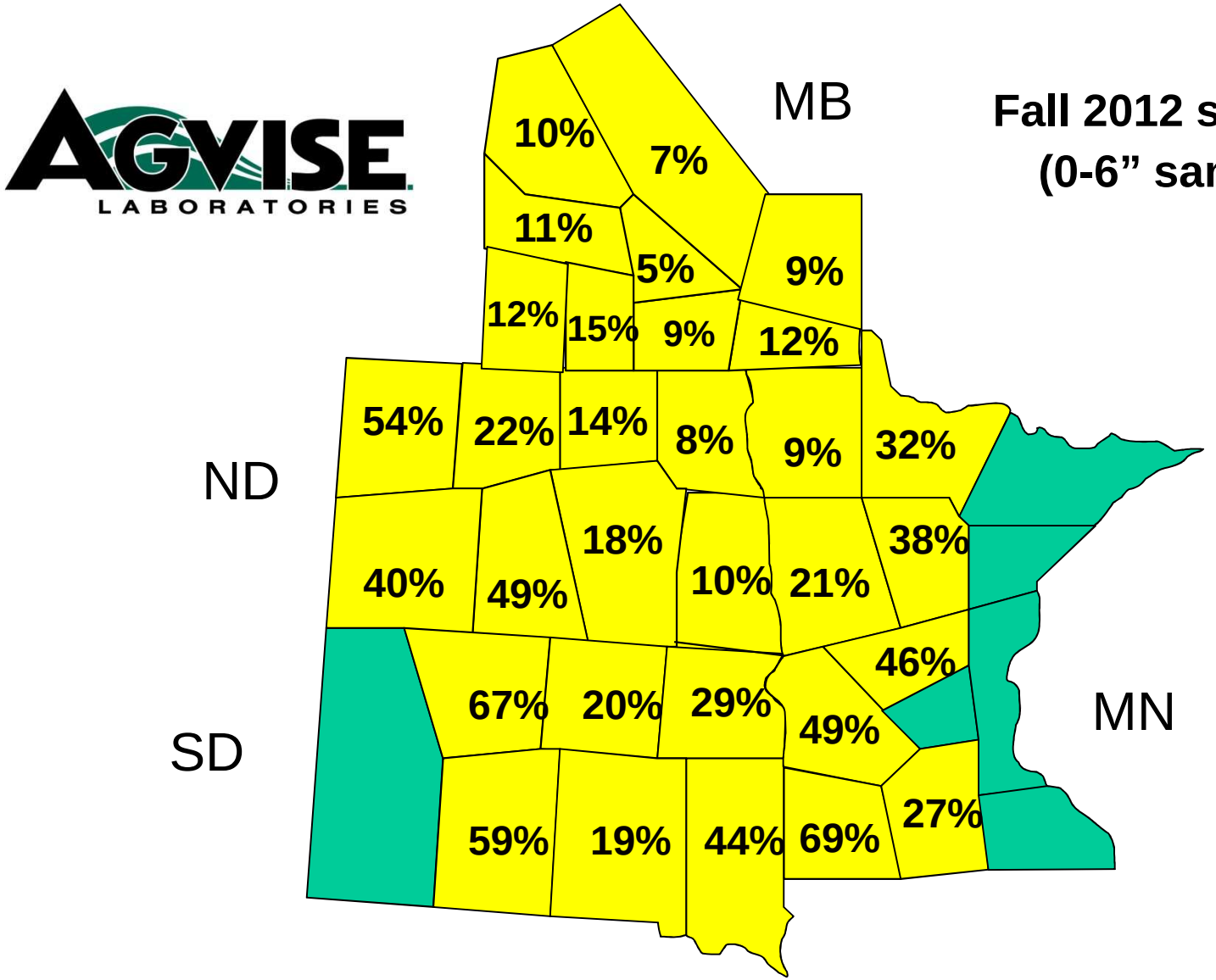
% Soil Samples with Potassium less than 150 ppm



% Soil Samples with Zinc less than 1.0 ppm

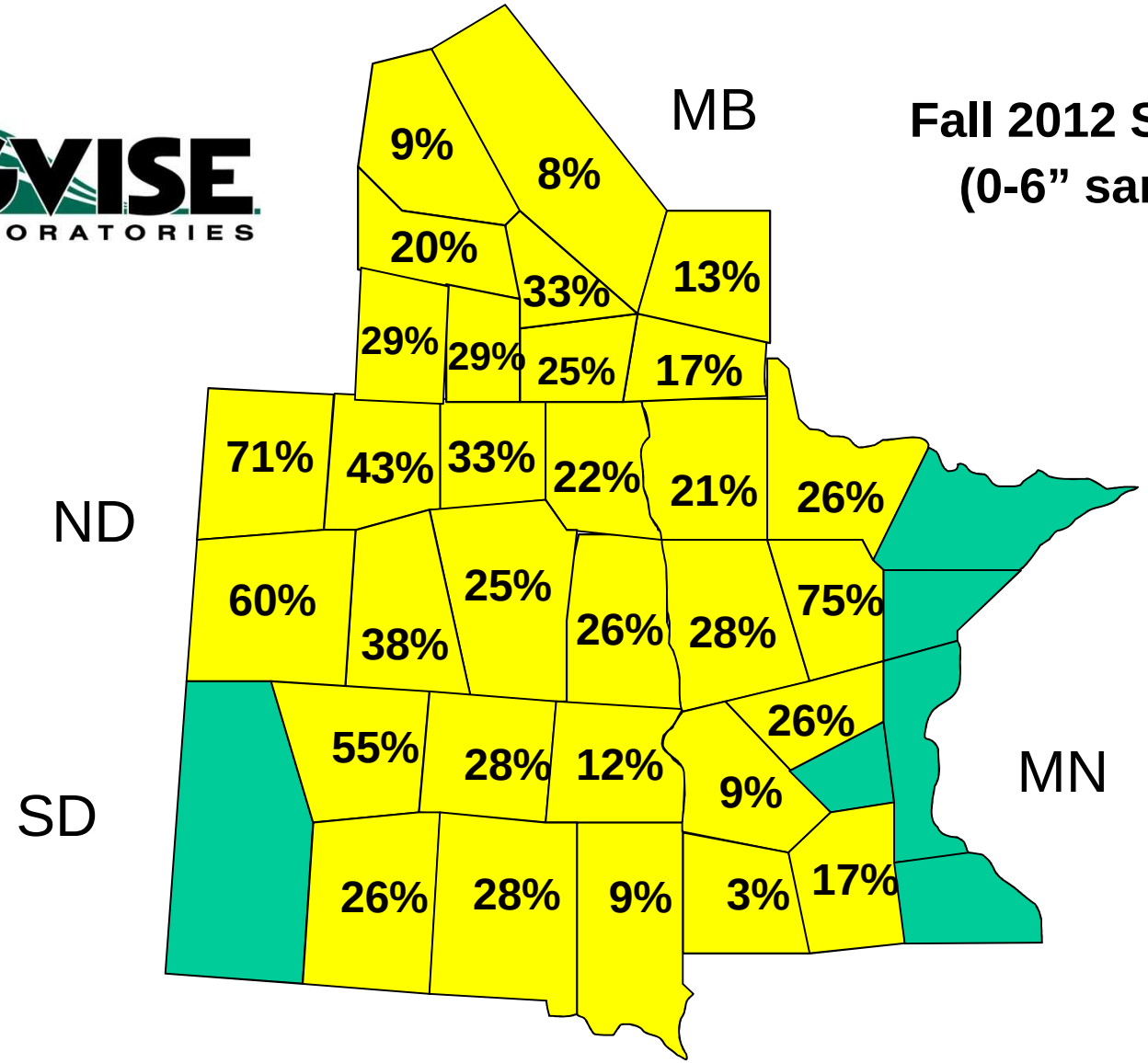


% Soil Samples with Sulfur less than 15 lb/a



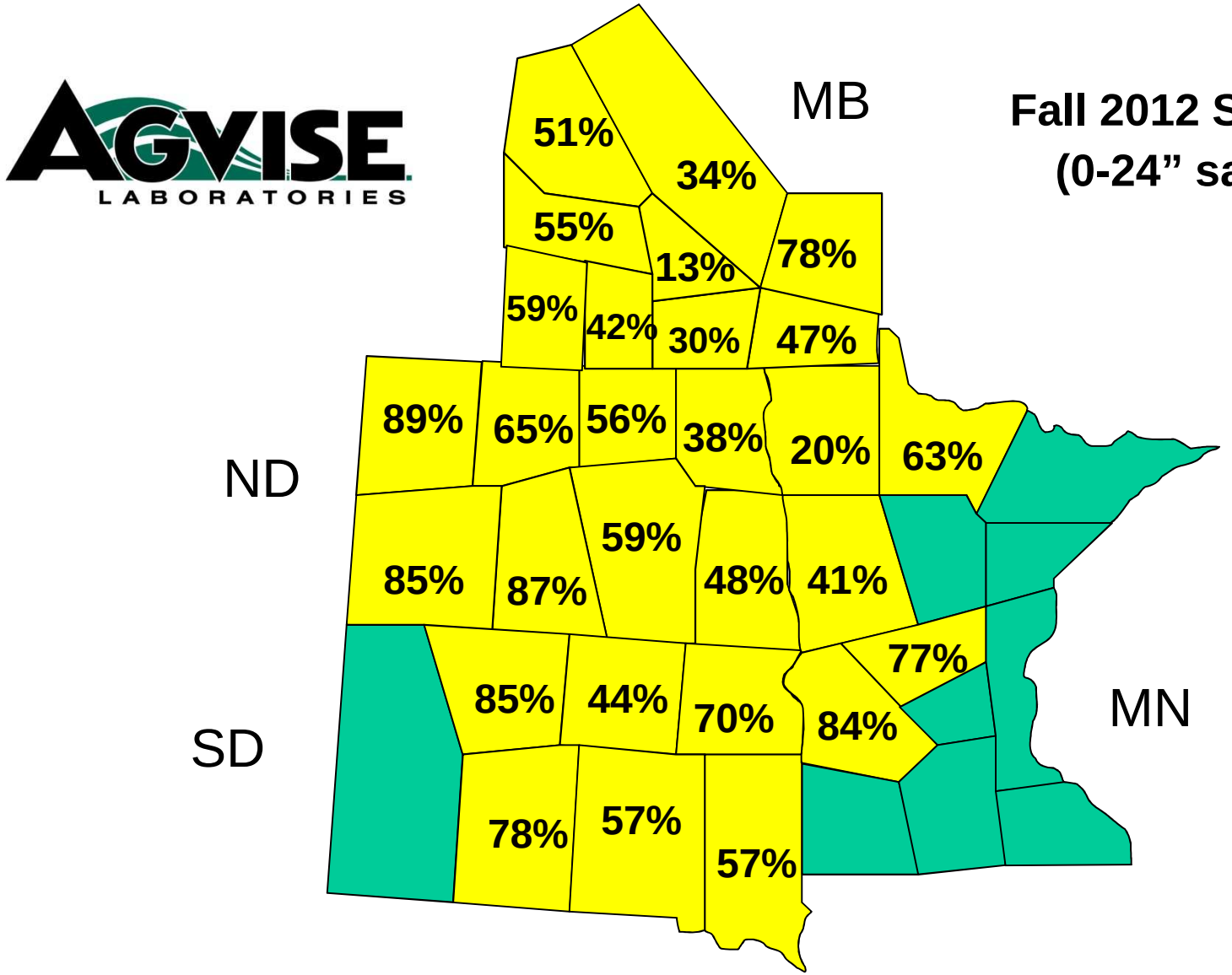
% Soil Samples with %OM less than 3.0%

AGVISE LABORATORIES

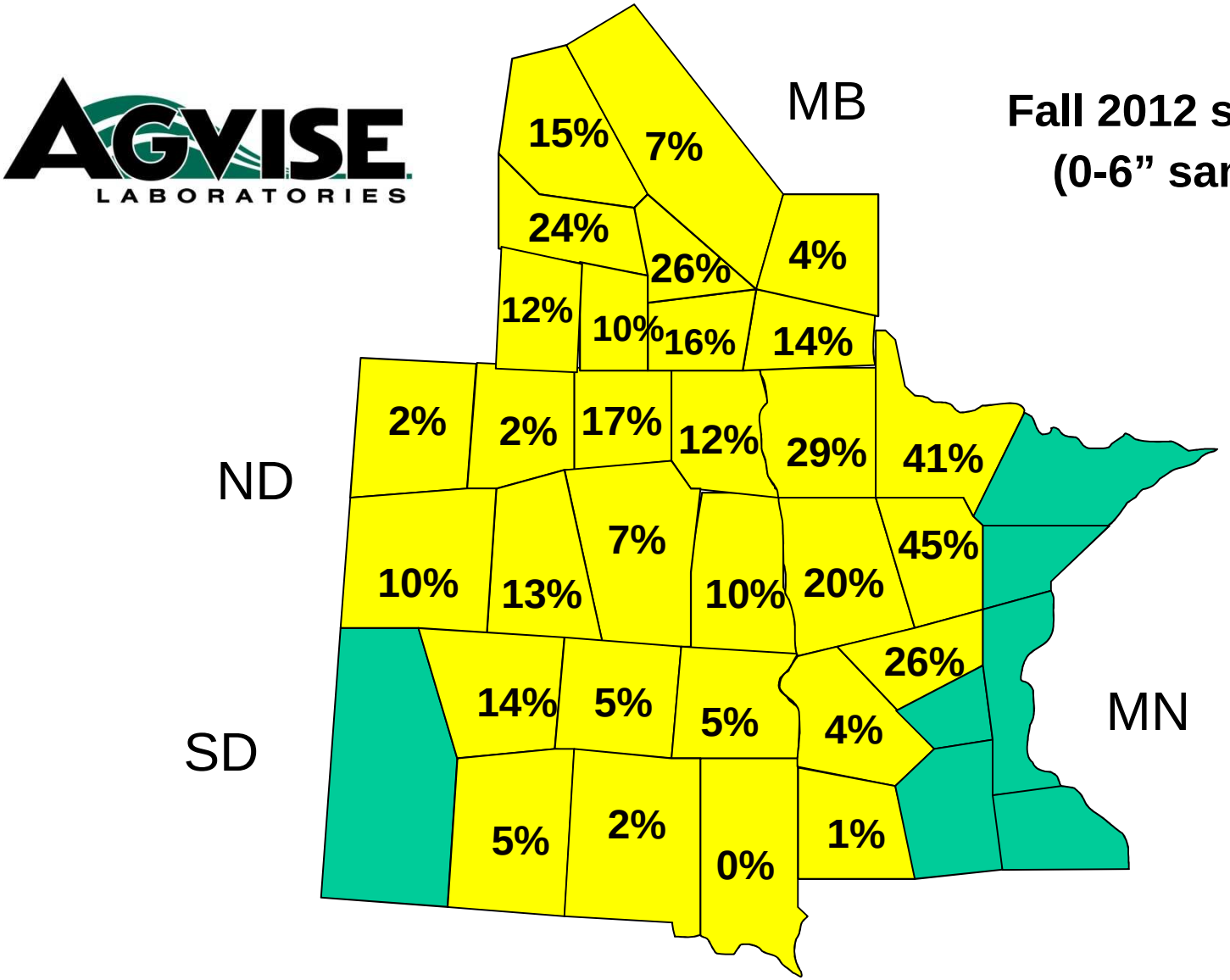


Fall 2012 Samples
(0-6” samples)

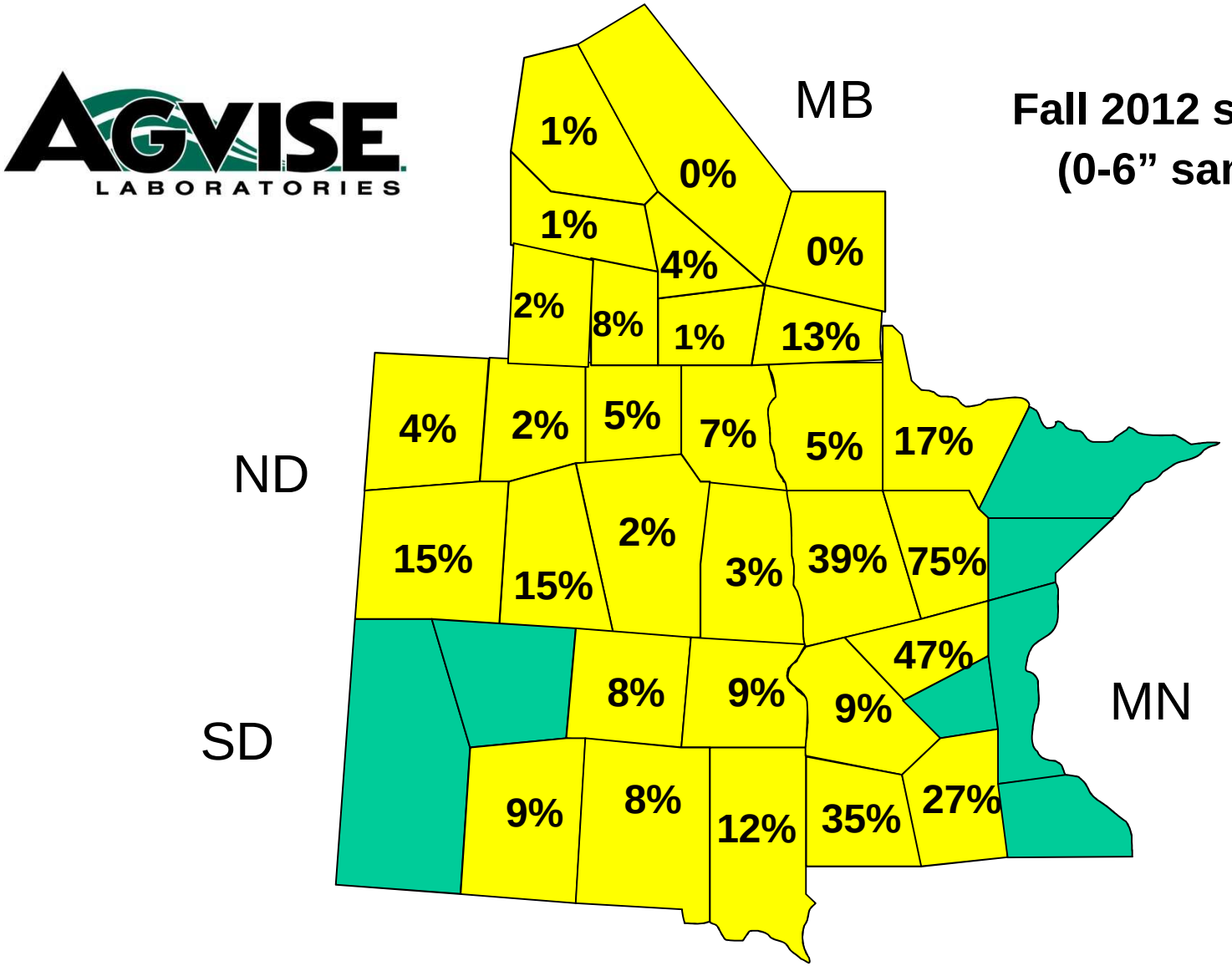
% Soil Samples with Chloride less than 40 lb/a



% Soil Samples with Copper less than 0.5 ppm

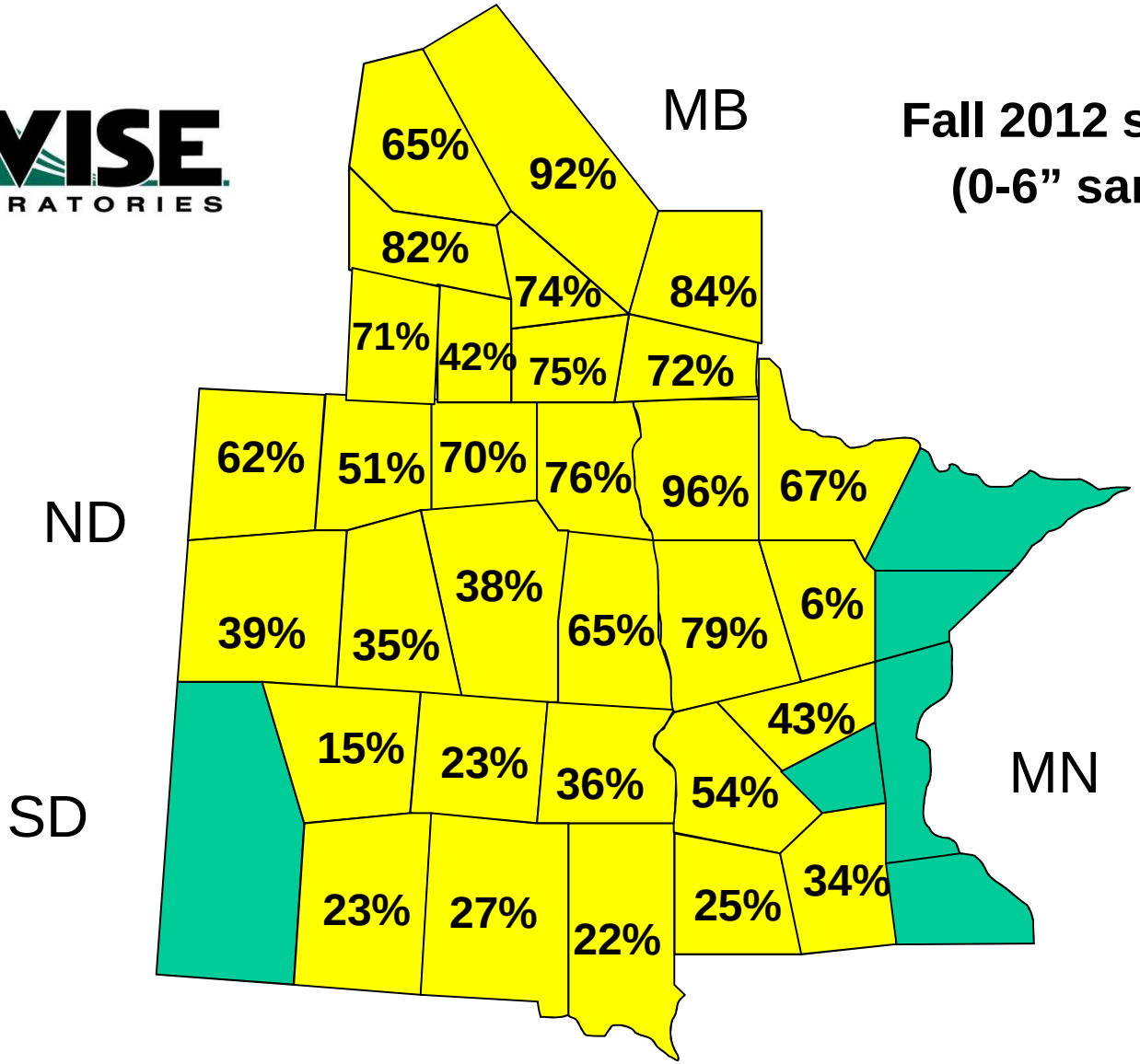


% Soil Samples with Boron less than 0.4 ppm



% Soil Samples with Soil pH greater than 7.3

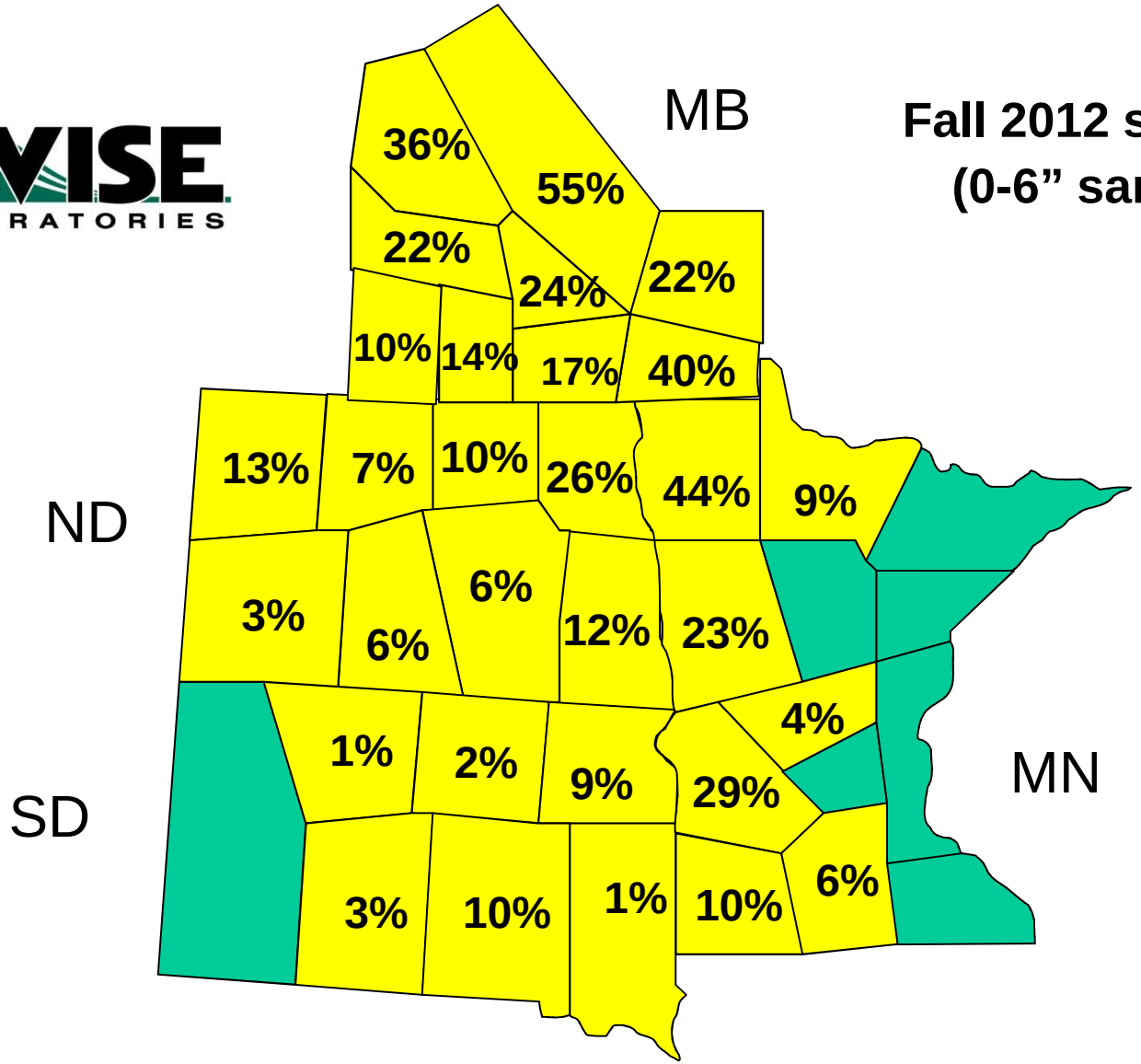
AGVISE LABORATORIES



Fall 2012 samples
(0-6” samples)

% Soil Samples with Carbonate greater than 5.0%

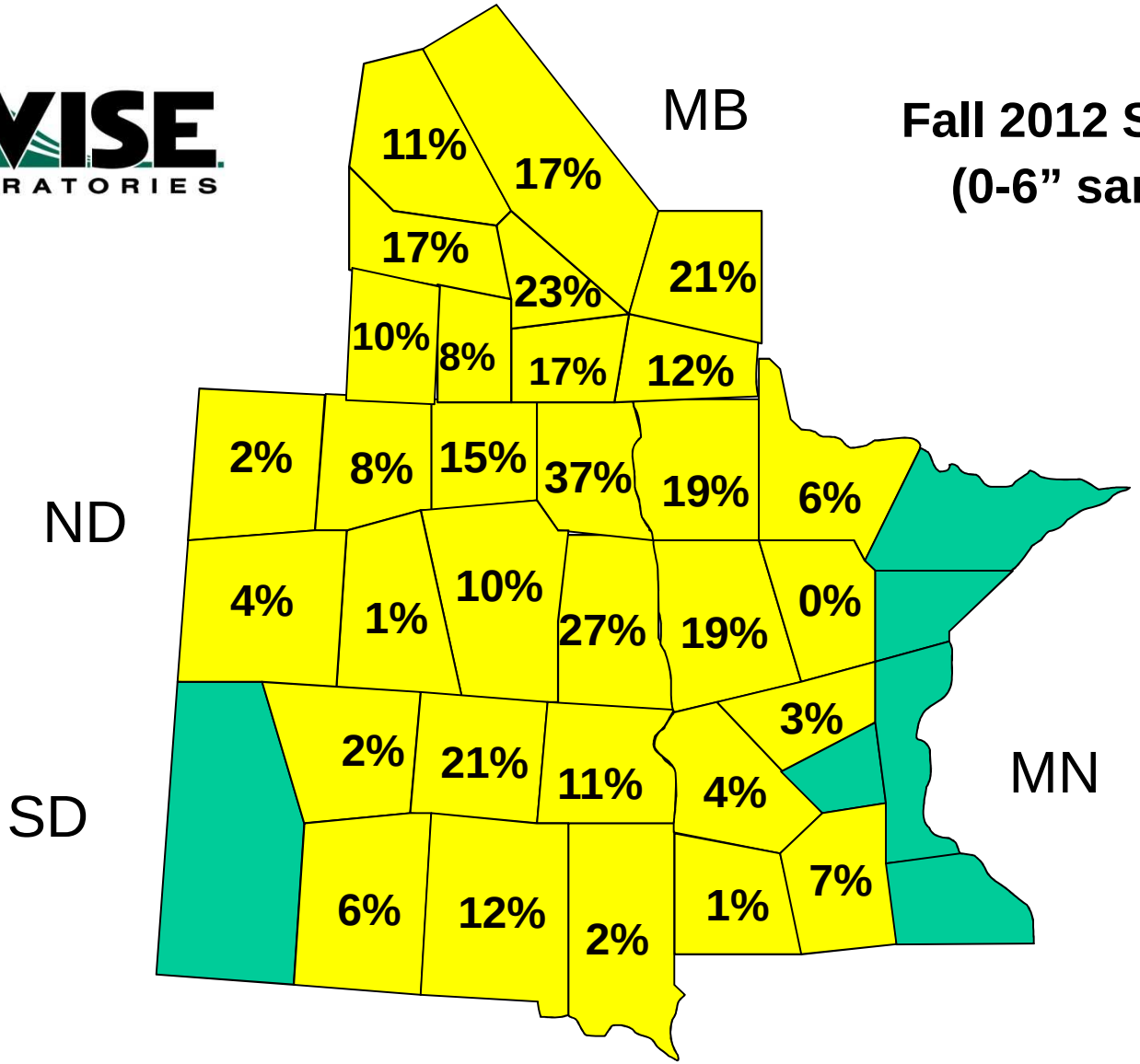
AGVISE LABORATORIES



Fall 2012 samples
(0-6” samples)

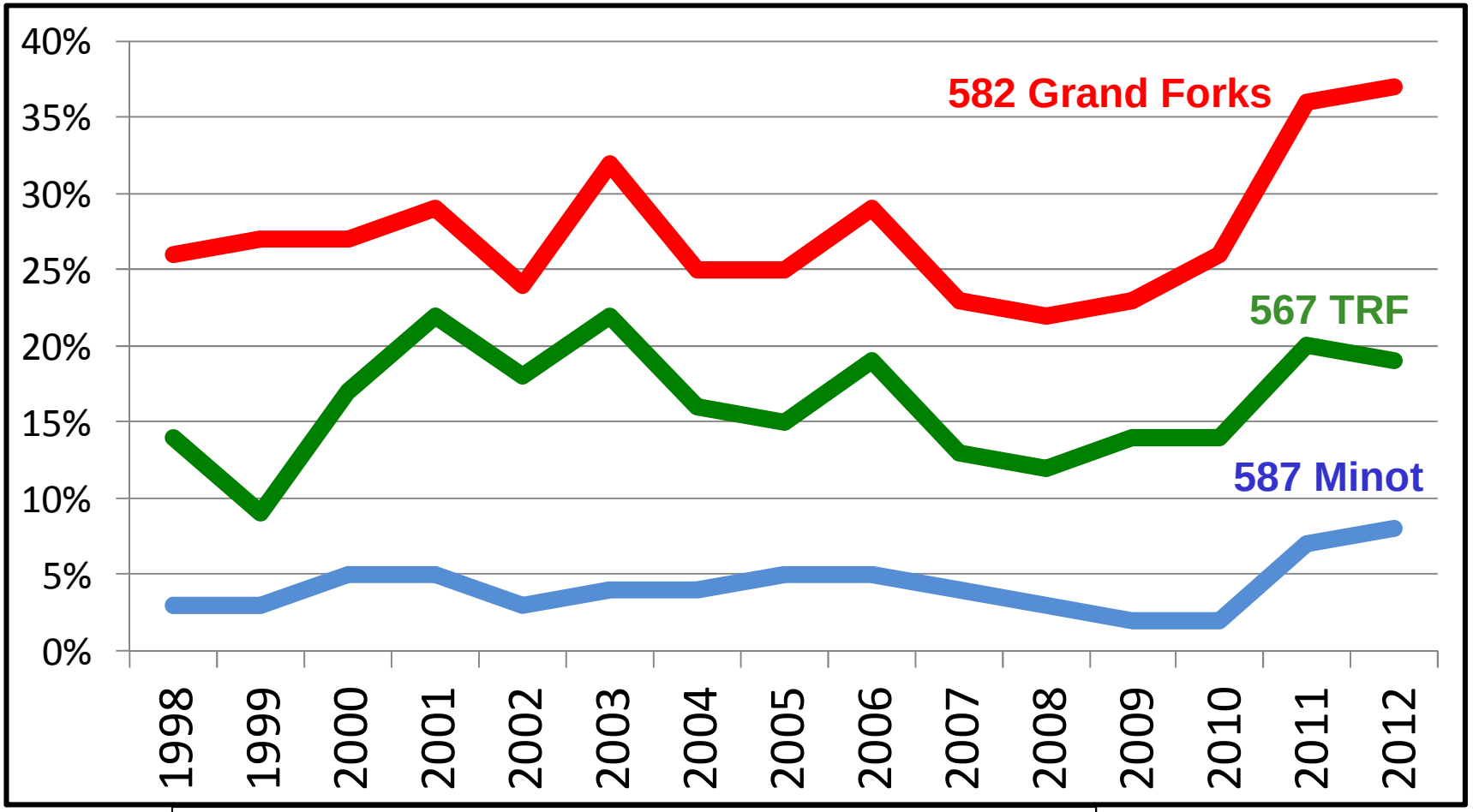
% Soil Samples with Salts greater than 1.0

AGVISE LABORATORIES



Fall 2012 Samples
(0-6” samples)

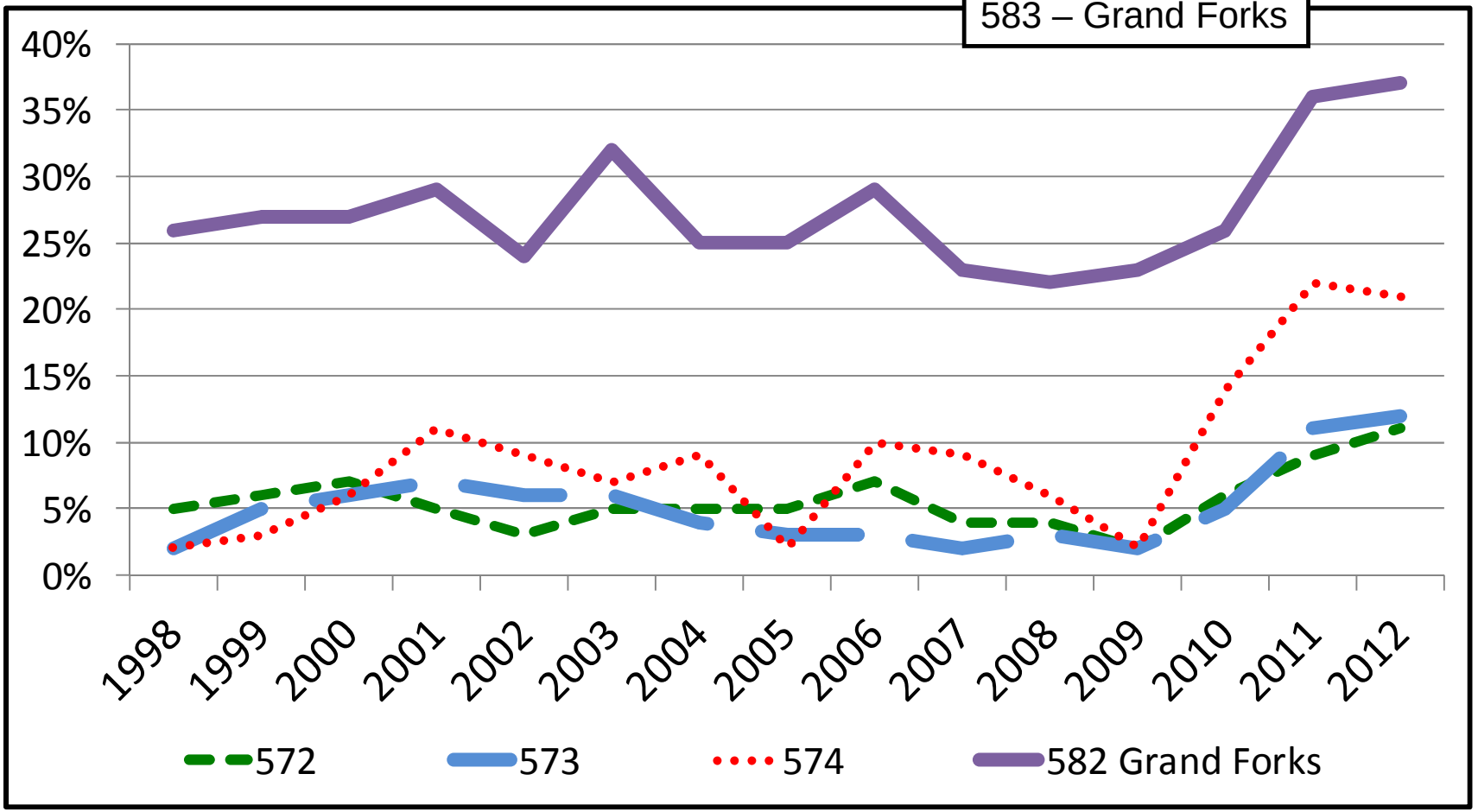
North Dakota & NW Minnesota % Samples Testing with Salts greater than 1.0



1:1 salt method – expressed as mmhos/cm

South Dakota - % Samples Testing with Salts greater than 1.0

572 – Watertown
573 – Huron
574 – Aberdeen
583 – Grand Forks



1:1 salt method – expressed as mmhos/cm

The Salt Problem may be Worse than this?

- Composite samples
  - Avoid areas that don't represent most of the field
    - Saline areas
    - Sandy ridges
- Many salty fields don't get tested
- Zone sampling
  - The salty zones often do not get tested or fertilized