

**Chicken Coop News**  
Update on the poultry industry  
By Herb Jordan  
Penn State Extension Poultry Specialist

**The nature of poultry manure**

Eleven samples of poultry manure were taken from farms throughout Pennsylvania and chemically tested in an Atomic Absorption Spectrophotometer. The following elements were discovered quantitatively as ranges among samples and average of all eleven samples were calculated.

Total nitrogen ranged from 2.3 to 9.9 percent and averaged 5.35 percent on a dry weight basis. Organic nitrogen ranged from 2 to 8 percent with an average of 4 percent. Ammonia nitrogen ranged from .02 to 3.3 percent and averaged 1.28 percent of all samples. All these results are reported on a dry weight basis; therefore, fresh manure would have about one fourth as much nutrient or element as listed here. Fresh manure is 75 percent moisture and 25 percent dry matter.

Phosphorus ranged from 1.1 to 3.2 percent with an average of 2.21 percent on a dry weight basis. Potassium (K) ranged from 1.3 to 3.10 percent and averaged 2.32 percent. Alkalinity of pH ranged from 6.3 to 8.6 with an average pH of 7.7 as a neutral to alkaline mixture.

Other elements were as follows: Iron (Fe) ranged from 473 ppm to 3,400 ppm and averaged 1,477 parts per million. Note parts per million can be converted to percent by moving decimal point 4 places to the left.

Sodium (Na) ranged from 500 ppm to 7,900 ppm and averaged 4,300 ppm — this would be a range of .05 percent to .79 percent an average of .43 percent for sodium. Too much sodium or salt is not recommended for soils where crops are to be grown. This salinity may be tested in the soil.

Magnesium ranged from 4,300 ppm to 10,400 ppm and averaged 7,200 ppm or a range of .43 percent to 1.04 percent and an average of .72 percent for magnesium on a dry weight basis.

Calcium (mostly as calcium carbonate) ranged from 28,000 ppm to 162,000 ppm with an average of 73,000 ppm or a range of 2.8 to 16.2 percent and an average of 7.3 percent calcium on a dry weight basis. Note this is a high rate of calcium to be applying to soil as limestone.

Lead (Pb) ranged from 2 to 30.7 ppm with an average of 18.2 ppm, while copper ranged from 17 to 549 ppm with an average of 94.8 ppm.

Cadmium readings were variable using a Graphite Furnace which showed a range of .1 to .8 ppm and an average of .41 ppm.

Aluminum ranged widely from 395 ppm to 2,833 ppm on a dry weight basis and aluminum averaged 1,007 ppm on a dry weight basis.

Manganese ranged from 258 ppm to 925 ppm and averaged 427 ppm manganese for all samples.

Zinc ranges from 116 ppm to 623 ppm with an average of 357 ppm of all samples.

Nickel ranged from 6.2 ppm to 129 ppm and averaged 31.6 ppm on a dry weight basis in all samples of manure.

Chromium ranged from 6.7 ppm to 27.8 ppm in all eleven samples and averaged 13.2 ppm on a dry weight basis.

Moisture in all eleven samples ranged from 6 percent to 74 percent, while dry matter in manure ranged from 26 to 94 percent.

These analyses tell us that manure should not be applied above 2 ton of dry matter to soils where crops are to be grown. Soil

**Scranton addresses Pa. agricultures future**

BY BETH HEMMINGER  
Staff Correspondent

"We're Growing Better", the theme of the 1982 Farm Show describes the present and future goals of the agricultural industry in Pennsylvania, according to Lieutenant Governor William W. Scranton, Ill.

Lt. Governor Scranton spoke before an audience of 500 state and local officials. Pennsylvania agricultural royalty and agricultural community leaders at the 1982 Farm Show Dinner held Saturday evening at the Penn Harris Motor Inn.

Scranton stated that during the last century, Pennsylvania has exported more people than goods to other states. "We have also lost millions of valuable farmland and tons of top soil during that time," he said. He added, "As Governor Pinchot once said, the loss of precious farmland and soil is a criminal loss."

But, said Scranton, the tide has turned. "Agriculture is 'Growing Better' in the state and it is important to Pennsylvania's economic vitality and future. No longer will the state be thought of

where manure is used annually should be tested.

Poultry manure should be turned into the soil with a plow or disc soon after it is spread.

Nitrogen in poultry manure is available to crops at the optimum rate if applied to soil 30 to 60 days before planting.

Phosphorus is no longer high in poultry manure; it now averages 2 percent instead of 3 percent and a dry weight basis.

Potassium may build up in soil where poultry manure is used repeatedly so soil tests at an agronomy testing lab are essential planning a program of manure-use for crops.

as a state of industry and manufacturing, but in the 21st Century it will be a state rich in agriculture."

Pennsylvania like the rest of the United States is entering a new economic era, one with high energy costs, high interest rates and a growing importance of transportation. "The people of Pennsylvania are facing this new era with a new approach — developing the state's resources to their fullest," said Scranton.

The Lt. Governor remarked, "If Pennsylvania was broken off from the rest of the world, floating in mid-ocean, the state and its people would survive because of its numerous resources. Pennsylvania is a state rich in agriculture." Like no other state, he said, our state is agriculturally diversified, producing meats, milk, fruits and vegetables, fuels, wool and the list goes on and on.

"We can and will be a self-sufficient state in the 21st post-industrial century," said Scranton.

No longer can 70 percent of the goods purchased by the Commonwealth's consumers be exported from other states and countries, he said. "To become a self-sufficient state the officials and agricultural leaders must

place an emphasis on marketing our quality products."

Scranton said he feels the first step in marketability is making the products valuable in the market place. He said, "Pennsylvania has valuable products to offer, now it is time to promote the goods to the Northeast, the Midwest, the West, the Nation and World."

If the state develops and uses all of its resources, he said, it will once again be an economically strong state where people will want to live and work. The agricultural community presently employs hundreds of thousands of people and makes billions of dollars a year, but these thousands and billions can double if all the agricultural resources are developed and marketed, he noted.

Scranton stated, "Statistics already show a decrease in the loss of farm land, and there is a definite reverse in agricultural trends — people are staying on the farms and more small farms are being developed."

"It is a beginning and a very important beginning."

"The 1982 Farm Show can show the citizens of Pennsylvania and the nation what Pennsylvania agricultural can do for the state and its people because 'We're Growing Better,'" he concluded.

**FmHA lowers interest rate on facility, water, waste loans**

WASHINGTON, D.C. — Beginning Jan. 1, the U.S. Department of Agriculture lowered the interest rate it charges for community facility and water and waste disposal loans from 12.25 percent to 11.375 percent.

Charles W. Shuman, administrator for Farmers Home Administration, the USDA rural credit agency that handles the

loans, said the new rate reflects a general decline in interest rates.

Shuman said community facility and water and waste disposal rates are calculated quarterly, based on the current average cost of municipal bonds. The old rate had been in effect since Oct. 1.

Other FmHA loan rates are not affected by this change.

**Two Great Alfalfas**

**524** Yields, winter-hardiness and Bacterial Wilt tolerance are excellent.

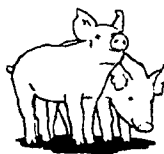
**531** High tolerance to anthracnose. Very fast recovery after harvest.

Ask your Pioneer salesman about the alfalfa variety that's right for your farm.



The Limitation of Warranty and remedy appearing on the label is part of the terms of sale. Pioneer is a brand name; numbers identify varieties. \*Registered trademark of Pioneer Hi-Bred International, Inc., Des Moines, Iowa, U.S.A.

**We'll do more than promise a faster start. ...We'll prove it.**



**Proof—2,204 Farms\***

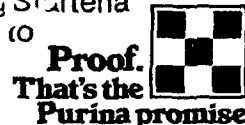
High Octane® Baby Pig Chow®  
High Octane® Pig Startena® brand rations

Starting	Ending
59,034	No. Head 58,616
19#	Average Weight 45#
Days on Feed	29.5
Average Gain	26#
Average Daily Gain	.88#
Pounds Feed/Pound Gain	1.83#

(\*Tests run from November 1979 through September 1981)

You deserve more than promises when you select your starter rations. You deserve proof that they will perform.

We've got that proof. Proof that High Octane Baby Pig Chow and High Octane Pig Startena are your best value when it comes to getting pigs off to a fast start. Let us prove it to you. Call us today.



S. Vintage Road, Paradise, PA  
717-442-4183

Ask us about Free Goods during January & February