



CHARTER

# Mid-Atlantic Newsletter



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Golf Course Superintendent through Education and Merit

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## August Meeting

The August meeting will be held at the Gunpowder Country Club in Laurel, Maryland. Our host will be Bob Milligan. Bob, as you know, is the owner of Gunpowder and does everything there from signing the checks to mowing the greens. This will be the third year in a row that we have had the picnic there, and anyone who has attended before knows how great Bob and our social committee can throw a picnic.

As in past years, the picnic will be a "self-help" picnic. We need some volunteers to bring the following items: potato salad or macaroni salad, vegetable dishes, beans or a dessert. Whatever you choose to bring, it must be enough to serve 10-15 people.

*Program for the Day:* Golf and Swimming - Anytime  
Picnic - 2:00 p.m.  
Crabs and Corn - 5:00 p.m.

*Directions to the Club:* I-95 to Beltsville exit Md. 212 towards Beltsville. Go ¼ mile to Gunpowder Road. Turn left to Club - 3 miles on left.

If there are any questions on what to bring, please call:  
Washington - Paul Barefoot (202) 291-2095  
Baltimore - Ken Braun (301) 653-1365  
Eastern Shore - Ben Stagg (301) 822-4479



BOB MILLIGAN

## Future Shock — Are You Preparing for 1984?

*(Continued from last month's issue)*

The world's food and population problems are inevitably intertwined. In 1970, the world population was increasing at the rate of 69 million/year while in 1975 this annual rate actually decreased to 64 million. The average number of children born per United States woman in 1957 was 3.77, while in 1974 this rate decreased to 1.86. Even in the face of these favorable population statistics, the fact remains that population growth is still occurring at a rate which is outstripping man's productive capacity. Reserve stocks of grain have decreased from 105 days of world grain consumption in 1961 to a perilously low 31 days in 1976.

The world cereal grains rate of production has decreased from 1.91 metric tons per hectare in 1972 to 1.84 metric tons per hectare in the 1975-76 season. This

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## PRESIDENT'S MESSAGE

Fellow Members,

The summer of "77" will go down as one of the worst that turf managers in the Mid-Atlantic area have had to contend with in many years. Record temperatures coupled with minimal amounts of rainfall have given even the seasoned superintendents many a sleepless night. Turf diseases running rampant make for uneasy days. There's just no rest for the weary.

Our annual picnic is set for Bob Milligan's Gunpowder Country Club in Laurel on August 9th. So bring your wife and kids or your sweetheart, and enjoy a family day. It'll make summer a little shorter, and we can all swap war stories about the summer of "77".

Yours for finer turf for better golf after Labor Day.

Bill Emerson

## Future Shock

(continued from page 1)

decrease in productivity is ascribed to several factors ranging from the cost of fertilizer to the fact that surplus acreage brought into production in 1975 did not have the native fertility of soil previously being utilized. This disturbing decrease in cereal grain yield becomes even more notable when it is estimated that we will need a 330% increase in cereal grain production by 2135 to provide man with the same protein diet he is getting in 1975. The farmer of 1970 utilizes the equivalent of 160.5 hp of energy to produce an acre of grain. This is in contrast with the farmer of 1870 who utilized the equivalent of 45 hp to produce an acre of grain. The efficiency and grain yields of the 1970 farmer have increased when compared with that of the 1870 farmer, however, they have not increased in proportion to the expenditure of energy.

It is not out of the realm of reason that somewhere in the future it may be necessary to prescribe exactly what crops can be grown in an attempt to conserve energy. Realizing that some crops such as rice and potatoes are relatively energy inefficient in terms of kilocalories protein derived per unit of kilocalorie energy input. Wheat, oats and sorghum have considerably lower ratios of energy input to energy harvested on a kilocalorie energy input per kilocalorie protein harvested basis. Rice, potatoes, and U.S. grown corn have kilocalorie

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## Future Shock

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energy to kilocalorie protein ratios of 10.0, 4.2 and 3.6 respectively while wheat, oats and sorghum have ratios of 3.4, 2.7, and 0.2 respectively. It is possible that future crop production may be determined more by energy input per unit of energy output ratio than by current methods.

When one considers that man's beef, dairy, pork, fish and fowl requirements utilize the equivalent of approximately 38 barrels of oil per year as opposed to man's consumption of non-meat products which utilize

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## Future Shock

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the equivalent of 14.1 barrels of oil, it becomes obvious that in the face of limiting energy availability it is likely that the diet of the average American will tend to switch from high energy intensive meat products to lower intensive grain products.

It is an accepted fact that the arable land available today cannot feed the world's 4 billion people at the same rate the people of the United States eat. Surplus food stocks have become perilously low and it is possible that in bad years this will mean increasingly frequent and large spread famine in the world. It seems very likely that the need to justify turf fertilization will periodically arise. There will be increasing pressure to lower rates of nitrogen fertilization on turfgrass. The short lived fertilizer crisis of 1974 was frightening, however, the fertilizer industry responded to the demand very rapidly by producing 11 new nitrogen plants in 1975 and increasing their capacity to produce nitrogen 700,000 tons per year. The rate of nitrogen use has increased approximately 8% per year in recent years, however, the 15 million tons of nitrogen to be produced in the United States in 1977 appears to be adequate for the expected market. Barring a natural gas crisis, nitrogen availability is expected to meet demand at least through 1980. It is estimated that the recoverable reserves of phosphorus could last us anywhere from 45 to 450 years, depending on the economic return derived from recovering the

phosphorus. The phosphorus use rate appears to be increasing at approximately 4.5% per year.

Seventy-five percent of the potassium utilized by the United States comes from Canada, and it is estimated, considering current use rates, that in the Province of Saskatchewan there is equivalent of 2,000 years of potassium available. The availability and cost of this material will be highly dependent upon the strength of our relationship with Canada.

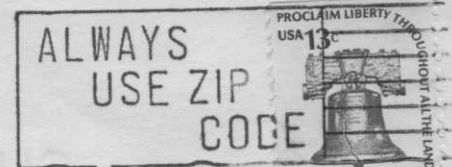
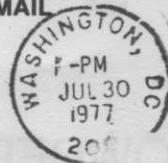
One of the most recent changes being imposed upon the turfgrass industry has been brought about by the increased price of natural gas and its necessity in the production of nitrogen. There is not expected to be any serious shortage of nitrogen, phosphorus or potassium through 1980, however, there is expected to be a considerable switch to urea as the nitrogen source in mixed fertilizer because of the economics of producing urea as compared to ammonium nitrate. ■

The conclusion of this article will be in the September issue of this newsletter.

## Mid-Atlantic Newsletter

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