

# A View From The Governor's Office

By Gov. Raymond P. Shafer

Someone once defined history as "the story of a hungry man in search of food" When you stop and think of it, how true this is. Much of the unrest, turmoil and warfare throughout the world, today as in the past, can be traced to hungry or starving people trying to obtain the necessities of life

Here in Pennsylvania, the pangs of hunger are unknown to most of us There seldom are any crop shortages, despite geographical or topographical limitations on the lands from which we produce our food Indeed, most of the time our farmers, through the miracles of modern, scientific agriculture, are able to produce more food than is needed to feed our own people so that we can export many crops throughout our Nation and the world.

Despite the skill and hard work of farmers and agricultural scientists, however, the day may come when the world's human population will exceed the capacity of the earth to feed it. Some experts are already predicting such a possibility, perhaps within our own lifetimes Already someone dies from starvation every 86 seconds

somewhere in the world That's over 3,500,000 humans per year, most of them children, starving to death in the underdeveloped countries of the world

If these predictions of world-wide starvation come true, where can we turn to produce more food for a hungry world? Suppose every available acre of agricultural land on earth is made to produce, through proper soil conservation methods, crop production techniques, application of artificial fertilizers, its maximum potential in food Will that be enough food to keep up with the population explosion, predicted to reach 3½ billion people by the end of this century? That's two billion more people living on this planet than in 1900 What would happen if the world's tillable land cannot produce enough food to feed three billion people, or if weather conditions, such as drought or flood, wipe our great quantities of food?

How can we produce more food for a hungry world?

One possible source of additional food can be found today right here in Pennsylvania For the past several months,

fish biologists and culturists have been conducting an experiment at our Fish Commission's Benner Spring Research Station near Bellefonte This pilot project has already attracted considerable attention from government officials, scientists, and fish culturists across the Nation

It all started several years ago when several Pennsylvania Fish Commission biologists started hatching trout eggs in glass jars and raising the trout fry in these jars for several weeks before the fish were placed in the standard hatchery ponds outdoors Someone decided it might be interesting to let a few of these tiny fish grow to maturity in the same jar in which they had been hatched from the egg It had never been tried before, but it worked Today, nine of these trout, having a total weight of 8 pounds, are alive and healthy in a jar containing only 5 pounds of water

The amazing conclusion of that small experiment, however, came when these biologists started figuring out the ratio of protein in these fish as compared to the space required to rear them After very detailed computation, they concluded this rather simple experiment, if expanded to larger numbers of fish in larger containers, can produce 1,600,000 pounds of protein per acre

Lancaster Farming, Saturday, March 22, 1969—27

From trout in a glass jar, these imaginative biologists are now raising some 21,000 rainbow trout in a fiberglass silo measuring 17 feet high and 7½ feet in diameter, this silo at Benner Spring has a water capacity of 4,400 gallons It is open at the top so the fish can be fed and there are three portholes in one side so the attendants can keep a close watch on the fish A large pump maintains a constant flow and exchange of water throughout the silo which makes it self-cleaning Wastes produced by the fish are carried off at the bottom as fresh water is continuously being pumped in at the top

Fish living in a silo sounds simple, and it is But think what this can mean to the ancient art of raising fish. It costs far less than constructing the usual fish hatchery with its long concrete lined pools and raceways It takes up far less space; thus, fish hatcheries could be placed near springs or wells in areas where the terrain or room would never permit us to build a standard fish hatchery It produces bigger fish in much less time, since the system is self-cleaning and the fish can utilize all of the food provided to them.

But perhaps the significance of this unique project, the first of its kind ever tried, truly rests on the tremendous quantity of protein produced in such a limited space No crop of land, despite maximum yield, can equal such production of protein in the spring.

The Pennsylvania Fish Commission's "trout silo" may well be the forerunner for fish farming on a world-wide basis It may pave the way to answering the question of how to avoid large scale starvation, especially in those underdeveloped nations where fish is a major staple in the human diet

Every Pennsylvanian can be proud, as I am, that this discovery was made at Benner Spring Biological and engineering skill, coupled with imagination and the courage to break new ground has produced a revolutionary new technique of fish culture — one that is a tribute to our Commonwealth and her Fish Commission — one that may soon have world-wide significance

Early spring planting of some of our crops is very important Growers of spring oats should make an effort to get them planted the last of Mar. or the first week in April; later plantings will not yield as well as southeastern Penna. Alfalfa growers who are planning to make a straight alfalfa seeding without any nurse crop, should also plant as early as possible and by the middle of April These early plantings take advantage of cooler weather and more abundant moisture to get well started before hot weather arrives Fall or winter plowing limited space for these crops will usually make it possible to plant earlier in the spring.

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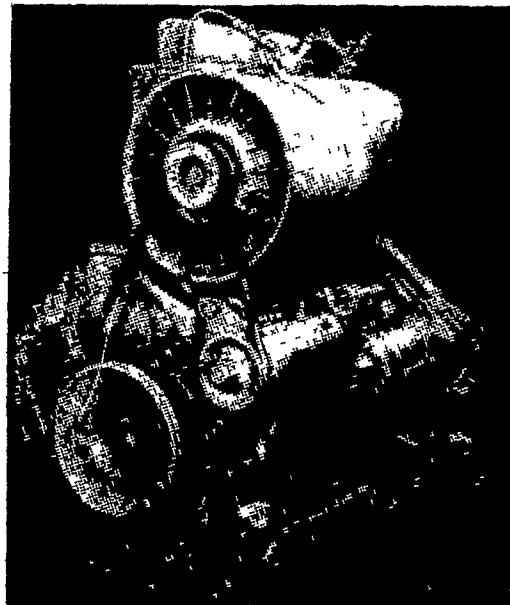
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