



Your Living Environment

Vol.1 No. 3

March, 1970

OUR PLUNDERED PALATE!

"Ralph Nader, consumer crusader, said yesterday that from 40 to 100 PER CENT OF ALL CHICKENS RAISED IN THE UNITED STATES ARE CANCEROUS!

"Mr. Nader told delegates to the annual *Southeastern Poultry and Egg Association* a disease identified as avian leukosis has reached 'epidemic proportions' in chicken flocks throughout America. Little time and money is being spent to research the leukosis virus, and almost *nothing is being done to eliminate it*, he said.

"Mr. Nader said while there is no indication the disease can be transferred to man, there is no real proof it cannot either" (*International Herald Tribune*, Jan. 30, 1970). Emphasis ours throughout.

This report and many like it mentioning animal disease, antibiotics, hormone residues, etc. are causing considerable alarm. Many housewives genuinely seeking the best diet for their families wonder if meat eating is worth the risk! One alternative rocketing into public favour is the new **SYNTHETIC FOOD**.

Your Living Environment now brings you a panorama of the synthetic food trend, with its underlying meaning. Here are answers to such questions as ... What are synthetic foods? How are they made? What do they contain? How likely are you to come in contact with them? Do they taste different? Are they acceptable to the public? What is the real reason for their "invention"?

Such questions need an answer. You might also discover that your own natural revulsion to the concept of synthetic food is not half as strong as you thought it was!

If consumers are willing to look closely into modern methods of producing animal protein, they will find all kinds of *repulsive* situations. So first let's examine some of these before actually

moving into synthetics.

Can you imagine, for example — "Thirty-one tons of diseased poultry were condemned in a town in a year. [How many slipped through the net?]

"Twenty-eight percent [the lowest estimate we've seen] of barley beef animals — where your steaks come from — suffer from liver abscesses. How many still reach your table" (*Evening Post*, June 8, 1966)?

Agriculture is described as — "... an industry that has virtually written its own rules."

"In the great rush to provide Britain's stomachs with 150 million chickens and 1,246 million dozen eggs a year, along with barley beef, pale veal and instant pork, few appear to have asked: 'Do we know what we are actually eating'" (*Evening Post*, June 9, 1966)?

The following quote sums up the whole matter —

"... in a world where your chicken meat costs 1/5d a pound to produce and sells at 1/5½d per pound, money means everything" (*Evening Post*, June 13, 1966).

Yes, a real problem exists, but what will degenerate mankind do when they realize they are being fed a diet of sick animals, filled with drugs? They will look for *substitutes* of course!

After all, how many reports on cancerous chickens, liver-abscessed steers and mastitis/brucellosis infected dairy cows can you take before you turn away to a diet of *clean, sweet, hygienically-prepared* SUBSTITUTE protein?

MEATLESS MEAT

In a recent speech to the *Oxford Farming Conference*, Dr. Magnus Pyke, of the *Glenochil Research Station*, Menstrie, Clackmannanshire,

AMBASSADOR COLLEGE, AGRICULTURE DEPARTMENT, RESEARCH NEWS

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gave this quick rundown of the new meatless meat industry:

"The American food combine, General Mills, has *already* overcome all the main difficulties in producing what they called 'a new meat-like ingredient for convenience foods'.

"Protein from any source — soya bean meal popularly used — was extracted with alkali and refined until a bland tasteless solution was obtained. This was dispersed into what the Americans called 'dope' and then extruded into a coagulating bath where the protein dope was converted into fine fibres in the way that nylon fibres were produced.

"By using spinnerettes with different sized holes, fibres of varying coarseness could be produced and by stretching them under varying conditions — the resulting product could be made as tough as wirewool or as a sloppy mush.

"After the fibre has been produced it was passed through a bath of fat and another of flavouring — beef, mutton, chicken, pork, bacon or fish. It was then wound up into hanks, twisted into plaits and cut across the grain. It finished up as slices, rashers, or mince or it could be ground up to make sausages, meat loaf, or rissoles.

"The process has already gone a long way. In 1967 the turnover of a small pilot factory was about two million dollars but a much bigger plant was being built ... by 1975 a production programme of 2000 million dollars was forecast" (*Farmers Weekly*, Jan. 9, 1970).

INSTANT MEAT

"The process allowed the operator to sit at his control panel and by a touch of the appropriate button, produce *pork and veal, heavily smoked ham, cod or salmon, or even tough old pheasant or tender young squab.*

"The product is *not primarily intended for the impoverished populations of under-developed countries; rather it is finding favour in the restaurants and five-star hotels of the West*" (*Ibid*).

Isn't it amazing?! Now consider the ease of future *bacon* production —

"Bacon slices are simulated by randomly laying down spun soy-protein fibres together with an edible binder. Some layers are red coloured to simulate lean meat. Others are colourless to represent fat" (*Food Engineering*, Nov. 1969, pp. 72-75).

PLASTIC BONES

"Most of the artificial products are made from the *soyabean, but wheat, yeast extracts, algae, and even the leaves of trees* are now being investigated. The final product, in some cases, tastes, looks and smells so much like the real thing that even *trained food testers* have been fooled.

"So far, the list of available meat substitutes includes ham, sausage, frankfurters, fried chicken, turkey, steaks, meat loaf and gravy mix" (*Farmers Weekly*, Aug. 12, 1969).

THE DEMISE OF THE COW

Not only is meat being synthesized, so is that other vital source of animal protein — *milk!*

"Britain's first *stockless dairy unit* ... has gone commercial. Sales of *machine-made* milk increased by 30 per cent last year and export markets included, of all places, New Zealand and Holland.

"The Company ... started producing synthetic milk in 1964 and tested it on the London Market.

"Now output for the liquid market is equivalent to nearly 600 gallons a week of *natural* milk, and the product is used in a range of manufactured products including chocolate, fudge and pease pudding.

"A *synthetic cream* is almost at the production stage and the company is also considering a *synthetic cheese.*

"The diluted product contains approximately 3.25 per cent vegetable protein, the same percentage of vegetable fat and just under 2 per cent sugar.

"Dr. Franklin (who developed the synthetic milk process), is experimenting with a wide range of vegetable materials, with particular emphasis on waste from food crops.

The process we have developed can produce 'milk' from a very wide range of vegetable matter. We have even made acceptable 'milk' from *bracken*" (*Farmers Weekly*, Feb. 14, 1969).

THE END OF COWS' MILK!!

How strong is this challenge from *synthetic milk*? More than we might expect. Michael Leybourn, Deputy editor of Britain's leading farm magazine, shocked producers of cows' milk a few weeks ago —

"I would forecast that there will be little liquid milk sold in Britain in ten years' time," he said.

"He gave the *milk-from-the-cow* industry in Britain a maximum of another twenty years, though this might be erring on the *generous side*" (*Farmers Weekly*, Jan. 9, 1970).

He continued by telling the dairymen, (straight to their face, if you please) that they need to *get rid of their cows* and start producing grass for the synthetic industry before big commercial interests move in and do it for them! That must have sounded like heresy to dairymen — cutting your own throat is tough advice for anyone to take, even if someone else is threatening to do it for you!!

However this letter to The Editor makes it a chocolate-coated pill for the farmer to swallow —

“Sir, — It may be a short-sighted policy by ... British Dairy Farmers to buck the growth of vegetable *plantmilks* and for that matter the side-by-side growth of *textured-vegetable protein* (TVP).

“No farmer produces milk for the fun of getting the milk cheque — it is mostly a matter of survival and a gruelling year for most. With the wider use of vegetable proteins a more agreeable life is in the offering. Practically any kind of plant material can be utilised, from beet-tops and potato haulms to wheat and beans. The forward-looking farmer should be looking for ways of jumping on the new bandwagon, not seeking ways of up-ending it.

“Among the advantages of producing plant-milks and vegetable proteins are: ... Complete freedom from the disease hazards which are inseparable from milk and meat [the very point that is going to turn *millions* toward synthetic foods]; no vet bills, no destruction of herds, no Argentine problem [Foot and Mouth disease]. No milking schedules. No early morning deliveries, already becoming a major problem. Tins of plantmilk and protein will keep for months.

“The health benefit would be enormous, as these new foods can be *adjusted* with cheap vitamin and mineral supplements to meet any dietetic need. The *milk* can be exactly like a human mother's milk for babies, [Will it? That's what the *Chemical Fertilizer Industry* says about its synthetic food for plants too].

“... Food scientists have realized that to pass a nutrient through the stomach of a cow is an uneconomic process, for as little as 5 per cent may come back from cattle in the form of food. The return from pigs and poultry is perhaps up to 15 per cent, but even if it were 50 per cent it would still be 50 per cent *wasteful*.

“The cow economy is on its way out. The RABDF [Royal Assoc. of British Dairy Farmers] is assuming the same stupid posture as those who opposed the weaving mill and steam engine. It is not helping but hindering our food producers” (Geoffrey L. Rudd, *Farmers Weekly*, Feb. 13, 1970).

THE VEGETARIAN WALK-OVER!

On the surface, the case for *synthetic* food sounds good, but the implications of such a trend are diabolical!! Do you want to be a vegetarian in a nation turned vegetarian? Mr. Rudd, the author of the above is one — in fact he is the General Secretary of *The Vegetarian Society*.

On the other hand, to the anti-vegetarian, synthetic animal protein of vegetable origin is being made to appear to be a fantastic breakthrough! Man's hopes are being raised that he

will now be able to move down the biotic pyramid and thus *escape* the human penalty of having to eat his own disease-ridden factory-farm-animals!

This is not only typical escapist reasoning, it is also an absolute *fallacy*!! Instead of getting *away* from his whole slew of problems man would be simply moving *nearer* to the *source*! There are *four* links in the basic food-chain:

If we drop *animals* out of the human food chain, that means *man* must move sideways, in the direction of *plants* and *soil*. But we need reminding that any such *food-revolution* will come unstuck! Why? Because *depleted soil* and *diseased plants* are the most basic causes of the sick animals which we are now advised to drop from our diet!

HOW “INEFFICIENT” ARE ANIMALS?

The relative inefficiency of *animals* vs. *plants* in food production, has often been stated as the MAIN reason for dropping animal protein from man's diet. We are told such a small percentage of plant matter reaches the dinner table when it comes via animal products, that human survival in an expanding world demands that we drop the animal link from the food chain.

Now let us pinpoint the weakness in this argument. One writer quoted earlier, stated that even if 50% of plant matter was converted to animal products, the 50% would still be *wasted*!

Right there is the crucial point — that percentage of “*wasted*” plant matter! WHAT HAPPENS TO IT? That is the fundamental question the food expert and the vegetarian never ask.

Under a correct system of land management this “*waste*” goes right back into the soil! Today that means nothing to most people. Under-valuing farmyard manure is a point where even farmers go wrong, especially in modern agricultural practice. The percentage of organic matter (and it is far more than 50%) that animals return direct to the soil is NOT “*wasted*”. It is in fact the very *life-blood* of soil productivity!

Where man has ignored this law, we now have deserts to prove he was wrong. Where he is bringing in chemical substitutes for *organic matter*, NATURAL soil productivity is falling to desert levels! That is proven by man's fear to discontinue artificial fertilizers once he gets started.

This means that true productivity from soil actually depends upon the *re-cycling* of plant nutrients via so-called “*waste*” plant matter. However, plant residues can't be expected to offset

the *minerals* and *protein nitrogen* sent off the farm annually in the form of food. Most of these nutrients *never* get back into the soil which produced them, so without some *external inputs* the system would slowly grind to a halt! In the organic system these "*external inputs*" come in the form of *nitrogen* from the atmosphere, (via legumes) and *minerals* from inorganic soil particles (via organic decomposition). Then, true productivity originates in the soil and every square yard must ultimately produce its own fertility! Soil can do this under the organic system, especially with man's co-operation. Under this system Nitrogen and mineral inputs are free, but man must return a large part of his production to the soil in order to get these *inputs* and continuing high productivity.

Only an ANIMAL-based agriculture is ideally suited to the provision of large quantities of organic matter from previous production. It now becomes clear that the "*inefficiency*" for which ruminants are condemned is in reality the fulcrum or pivotal point of man's food supply!

Under God's system of balanced and diversified natural agriculture, we DON'T have to choose between *cereal* and *animal* production. It is not a matter of which is the most "*efficient*". One makes the other *possible* and *logical*!

Intelligent use of pasture-raised animals gives a SURPLUS of soil fertility (through their so-called "*inefficiency*"). This can and should logically be channelled off in the form of *crop* production. Notice that under the really efficient system, it is *animals* that make *crops* possible, NOT external inputs of *chemical fertilizers*!

MEASURING FOOD PRODUCTION

If under the organic system we take the available nutrients in any soil and divide them into *units*, (nitrogen e.g.) "*efficiency*" will then not depend on *production per acre*, but on something more basic. It will depend on the rate of re-cycling organic matter as plant food, or to put it another way, *the rate of turnover of nutrient units* in the soil. This is a true measure of "*efficiency*". It also determines "*production per acre*" and is at the same time a guarantee of *food quality*!

Anyone in the business world can understand the economic implications of the word "*turnover*".

Apply it to *units of soil nutrients* in food production and you have the answer to the *animal-inefficiency* argument, as follows:

Chemically fertilized cereal grain is one of man's principal crops. It usually gives just one crop per year and the nutrients contained in it make a complete cycle only *once* during its *production* and *consumption*! As the crop has to feed the consumer through the following year it means that these nutrients can be re-cycled on average only once every 18 months.

Contrast that recycling rate with those nutrient units allegedly "*wasted*" via the digestive tract of the ruminant.

Under good rainfall conditions *ruminants* will re-cycle the great bulk of plant nutrients, (90 %) via a fertile soil at least SEVEN times for every ONE cycle under *grain* production!

"*Re-cycling of nutrients*" and "*rate of turnover*" are subjects incompatible with *chemical* agriculture, (because the latter depends on *external* inputs) so they never come up for discussion.

In today's chemical agriculture, "*production per acre*" measures only *quantity*! And that is no measure of TRUE *efficiency* in food production. (How can "*quantity*" be a yardstick for *success* when costs like soil damage and nutritional deficiencies are ignored)? *Producers and Consumers* — BEWARE!

"*Per acre production*" may be a convenient measure for Accountants, Economists and Bankers in an industrialized society, but Agriculture is not JUST an "*industry*". It is a WAY OF LIFE! And it perpetuates itself *only* through sound environmental management! Not until the late '60's was *industry* finally manacled to the rear of the Environmental Bandwagon! Only now is industry painfully experiencing its first ecological thought.

The standards of industrially-based chemical agriculture just don't fit God's LAWS of soil management. The solution is to change "*Industry*". No one has enough power to do it right now, so instead "*Agriculture*" is being modified to fit the industrial concept!

So we see animal-based agriculture threatened from without — by the *fertilizer* and *synthetic food* industries and from within by the *factory farming* industry. But DON'T abandon protein production!