Shortening the Route from Farm to Consumer

One Way to Do This by Reversing History and Extending the Role of the Farm

By John T. Bartlett

SOME farmers only crop the land, as in grain farming and orcharding; a greater number both crop the land and raise livestock, utilizing the feed produced; a very small number crop the land, turn the crops into livestock products and then process the livestock products for consumption by the consumer. Are economic conditions such in America at present that there is an opportunity for the farm which is a complete factory, turning out a finished consumer product? This is a debatable, but important question.

Certainly such practice cannot become general in all branches of farming at present, since it would involve the milling of grain, the packing of meats, and the cooking and canning of fruits and vegetables on a scale which only a ridiculous minority of our growers could possibly contemplate. Even so, however, the dairy industry and the associations of fruit growers which have sprung up in various parts of the country show a tendency to undertake just this task on a co-operative scale; and here and there we find cases where the individual farmer is going in for a complete handling of his product. One \$300,000 farm enterprise in the Northwest is predicated on a belief that the time is opportune for a type of large farm which performs every step, except retailing, in the production and distribution of such staples as butter, eggs, and all kinds of meats.

This is a property of 2,500 acres, intensively developed for the past ten years. It has a poultry plant which at times has held as many as 4,000 head. The intention is to standardize at 8,000 head. Dairy barn facilities are for 200 head of cows. The hoghouse has a capacity of 2,000 head. These are large-size buildings, as farm structures go, but not especially unusual. The interesting thing is that the farm equipment

goes much further. It includes a \$35,000 packing house, built in 1911 of tile and concrete and with a complete equipment all the way from slaughter room to storage. There is a creamery which has a capacity of 60,000 pounds a year.

Several score years ago both creameries and packing houses were unknown in the twentieth century sense. Butter was formerly wholly made on farms; now it is made in large or small creameries, some owned by coöperating farmers and others by private interests. Before cream is manufactured into butter nowadays it typically travels anywhere from several miles to two or three hundred from the point of production.

The same thing has happened in meats. Beef, pork and mutton were once slaughtered, cut up and cured on the farm where produced. Then came local slaughter houses and finally the great centralized packing plants of the present day. Farmers still do considerable slaughtering for home or neighborhood use, but practically no other. There was a time when the farm was a complete farm factory, and when its functions were not complete until it had prepared the product for the consumer. The whole trend of the times has been away from this condition.

Now, with the development of a higher level of merchandizing ability among farmers will farm enterprises which go back to the old function—with a difference—become extensive? Do economic conditions provide a place for such farms?

The experience to date of the Washington project is not conclusive. The farm has demonstrated one thing, that in its particular case it is not practical to cut out the retailer, building distribution on the parcels post. The original intention was to do this, and an

extensive mail trade was built up, but the plan proved unprofitable. The present arrangement is distribution through the retailer. A retail store in Tacoma specializes in the farm's products; the farm trade-mark is featured, and a lunch counter is made an effective trade-builder. Working along these lines, the management believes its methods are economically sound.

On the other hand, a New England farm near Springfield, Mass., having a smaller output than this one in the Northwest, has established a system of consumer routes. A wagon carries eggs, butter and vegetables in summer and in winter these and such home-made country products as hulled corn, hominy, sausage meat, jellies, pickles. The farm is very careful in selecting a salesman. No ordinary farmhand will do. He must know how to sell, and how to build up good will. He is paid a salary and commission.

Again, one of the largest mixed farms in New Hampshire has for years eliminated all middlemen and marketed direct to the consumer, but here the consumer is a large Boston hotel which owns the farm. Butter, meats, fruits, etc., are produced. It is understood the farm thus operated is profitable. A big chain restaurant with establishments in many eastern cities did the same sort of thing for many years.

In all such methods to shorten the distance between farm and consumer, management is a critical factor. No plan of doing business is "fool-proof." There must be clever, shrewd management behind it to make it a success. The fact that many attempts to market in a new way have failed is indubitably partly attributable to the fact that inexperienced people have launched many such ventures.

Correspondence

The editors are not responsible for statements made in the correspondence column. Anonymous communications cannot be considered, but the names of correspondents will be withheld when so desired.

Some More Newspaper Astronomy

To the Editor of the SCIENTIFIC AMERICAN:

I was much interested in the article you had some weeks ago about the misinformation that was published in the Albuquerque paper. I ran across one yesterday in the *Los Angeles Times* that seems to me even worse, and thought you might appreciate it. It occurs in the "Questions Answered" column of this sheet, and is in reply to an inquirer who wants to know why the moon isn't always round. The oracle tells him:

"The moon is always round, but its changes in appearance are due to the earth's shadow being thrown upon it as the earth passes between the sun and the moon. The size of the shadow varies each night that the moon is visible."

It would seem that this explanation leaves something still to account for. So far as I know the earth is always the same size, and therefore it seems rather extraordinary that its shadow should vary in magnitude. Also, why the reservation about the nights when the moon is visible? Are we to suppose that no moon is merely a total eclipse?

Still, we shouldn't be too hard on him. Doubtless the same member of the *Times* staff attends to the astronomical queries and the advice to the lovelorn, and too great accuracy should not be expected of one who adopts such widely divergent specialties.

Los Angeles.

A. E. T.

Protect the Standing Train

To the Editor of the SCIENTIFIC AMERICAN:

I would respectfully ask, in view of this last terrible accident on the New York Central, if it would not be pertinent to again call attention to the absolutely criminal carelessness of leaving the rear of a standing train unprotected, as well by derail as by signal. A train might run by signals, but never by a well-placed derail.

If not in this case, the particulars of which are not at hand, certainly in most cases, there is time to place a derail in addition to the ordinary signals, and sel-

dom would a derailed train work the havoc to itself that it would by crashing into the rear of a standing train.

GEO. T. PAINE.

Waterville, Me.

Pure Water at Low Cost

To the Editor of the SCIENTIFIC AMERICAN:

Inasmuch as the question of pure water is an important one in every household, and as the supply of pure water is not always available, I will briefly outline a simple means of obtaining the purest of water (distilled) at a minimum of cost and with no other appliances than those found in the average kitchen.

I use an aluminum tea-kettle and a quart glass milk bottle. I have the milk bottle tilted so that its bottom is about six inches above the lid of the kettle, the neck of the bottle passing over the spout of same. Very little heat is required to keep the water in the kettle at a boiling point, and the condensation, drop by drop, will amount to a quart, without interfering in any way with other kitchen work.

Inasmuch as the ordinary means of distillation is complicated and expensive, this simple way in which I obtain absolutely pure water is worth passing on.

Rhineland, Wis.

J. C. TEAL.

The Origin of Coastal Ripple Marks

To the Editor of the SCIENTIFIC AMERICAN:

Permit me to ask the attention of the author of the article on the *Geology of Ripple Marks*, and of your readers, to a theory I have reached during ten years of study of the method of their formation.

It has seemed to me that these markings are usually, if not always, caused by water driven upshore by the ocean waves and the forming of little pools or lakelets in depressions of the sand by the lowering tides. As the tidal ebbing continues the water in the little ponds seeps through the sand, seeking the lowered level of the adjacent water. In doing so the scales of hornblende and quartz are sorted, compacted, and wrinkled by the currents of sinking sea-water into the characteristic contortions and ripples. An admixture of mud in the higher levels results in the larger and more contorted wrinklins.

Atlantic City, N. J.

GEO. M. GOULD.

Life on Mars?

To the Editor of the SCIENTIFIC AMERICAN:

In your issue of March 20th the insistent problem of life on Mars is attacked by a correspondent, C. Fitzhugh Talman, an avatar of Martian habitability.

Mr. Talman writes in fine conservative vein as he seeks to "revert to sanity on the subject." He summarily dismisses the possibility of biological evolution on Mars, stating that "nothing we know of the evolutionary process warrants such an assumption."

I deny the validity of this sweeping assertion, and thereon join issue with Mr. Talman.

Nearly every biologist knows that, glowing in the photospheres of distant suns and buried in the soil of alien planets, there exist the same chemical elements that compose the organic creations on this earth—sodium, nitrogen, calcium, carbon, oxygen, et cetera. When a planet cools to the "terraqueous" epoch, as the late lamented Doctor Percival Lowell termed it, these chemicals are brought into play in the planet's life history.

Mammalian structures, increasingly complex and elaborate, originated in the depths of our hot primordial oceans, later to emerge upon the land areas. In even the "least propitious milieu" they found the means of sustenance and growth, and forthwith proceeded the drama of life on our planet.

True, the latitude within which Nature can adapt her creatures is generous, yet Huxley's protoplasmic life-molecule only functions and survives within limits from 32° Fahrenheit to 107.6° Fahrenheit at the upper extreme. Exposure for brief periods to higher temperatures, such as 150°F. and 160°F. in Death Valley is possible, but generally tends to evaporate the water in the tissues and coagulate the albumen in the bodily fluids.

Now, Doctor Lowell demonstrated from Merriam's survey of the San Francisco peaks in Arizona that the maximum summer temperature during the breeding season to which high mammalian orders were exposed—not the rigors of winter cold—determined the possibility of survival. He furthermore showed that the climate of Mars must resemble that of an elevated plateau in a desert region such as Arizona.

Several years previously Arthur Stentzel, analyzing the problem on mathematical grounds, arrived at a mean annual temperature for the poles of Mars of about +12°F.—far higher than its distance from the sun implies. But as summer comes on, the temperature at the Martian equator rises to the mean annual value of 98.1°F. or ten degrees higher than the earth's. This amply included and justified the upper limit determined on less exact data by Doctor Lowell in his work, "Mars as the Abode of Life" a few years previous.

San Francisco, Cal., U.S.A.

DONALD P. BEARD.