Quantum Crops works within the Quantum Mechanical view of Light as particle and wave.

The article below, reflects understanding before Quantum Physical characterization was made its what we call The CLASSICAL VIEW.

Understanding how Quantum Crops leverages Quantum Mechanics to redefine Photosynthesis, into Photon-Synthesis.

Wherein This NOVA Program can be your base line for understanding how Quantum Crops leverages Quantum mechanics to redefine photosynthesis, into Photon – Synthesis.

As a highly educated scientist of a century ago, Samuel Pierpont Langley was a good writer. He wrote about the astronomy of his time, about his measurements of solar energy and stellar energy, and about his experiments with airplanes. Although his style may strike us a “Victorian”, many of the things he thought about are still relevant to us today. This page provides some excerpts from a book about The New Astronomy of his day, when no one understood how the Sun got its energy or how hot its surface was, or even what it was made of.

Radiant Energy and Other Kinds of Energy

“Did the reader ever consider that next to the mystery of gravitation, which draws all things on the earth’s surface down, comes that mystery – not seen to be one because so familiar – of the occult force in the sunbeams which lifts things up? The incomprehensible energy of the sunbeam brought the carbon out of the air, put it together in the weed or the plant, and lifted each tree-trunk above the soil. The soil did not lift it, any more than the soil in Broadway lifted the spire of Trinity. Men brought stones there in wagons to build the church, and the sun brought the materials in its own way, and built up alike the slender shaft that sustains the grass blade and the column of the pine. If the tree or the spire fell, it would require a certain amount of work of men or horses or engines to set it up again. So much actual work, at least, the sun did in the original building; and if we consider the number of trees in the forest, we see that this alone is something great. But besides this, the sun locked up in each tree a store of energy thousands of times greater than that which was spent in merely lifting the trunk from the ground as we may see by unlocking it again, when we burn the tree under the boiler of an engine; for it will develop a power equal to the lifting of thousands of its kind, if we choose to employ it in this way. This is so true, that the tree may fall, and turns to coal in the soil, and still keep this energy imprisoned in it, – keep it for millions of years, till the black lump under the furnace gives out, in the whirling spindles of the factory or the turning wheel of the steamboat, the energy gathered in the sunshine of the primeval world.”

“Now,” it may be asked, “have these things any connection with weather changes, and is it of any practical advantage to know if they have?”

“Would it be, it may be answered, of any practical interest to a merchant in bread-stuffs to have private information of a reliable character that crops the world over would be fine in 1888 and fail in 1894? The exclusive possession of such knowledge might plainly bring “wealth beyond the dreams of avarice” to the user; or, to ascend from the lower ground of personal interest to the higher aims of philanthropy and science, could we predict the harvests, we should be armed with a knowledge that might provide against coming years of famine, and make life distinctly happier and easier to hundreds of millions of toilers on the earth’s surface.”
Color Light and Radiant Energy

“When we see a rose-leaf, we see with it what we call a color, and we are apt to think it is in the rose. But the color is in us, for it is a sensation which something coming from the sun excites in the eye; so that if the rose-leaf were still there, there would be no color unless there were an eye to receive and a brain to interpret the sensation. Every color that is lovely in the rainbow or the flower, every hue that is vivid in a ribbon or sombre in the grave harmonies of some old Persian rug, the metallic luster of the humming bird or the sober imperial yellow of precious china, – all these have no existence as color apart from the seeing eye, and all have their fount and origin in the sun itself.

“Color” and “light,” then, are not, properly speaking, externa things, but names given to the sensations caused by an uncomprehended something, radiated from the sun, when this falls on our eyes. If this very same something falls on our face, it produces another kind of sensation, which we call “heat,” or if it falls on a thermometer it makes it rise; while if it rests long on the face it will produce yet another effect, “chemical action,” for it will tan the cheek, producing a chemical change there; or it will do the like work more promptly if it meet a photographic plate. If we bear in mind that it is the identically same thing (whatever that is) which produces all these diverse effects, we see, some of us perhaps for the first time, that “color,” “heat,” “radiant heat,” “actinism,” etc., are only names given to the diverse effects of some thing, not things themselves; so that, for instance, all the splendor of color in the visible world exists only in the eye that sees it. The reader must not suppose that he is here being asked to entertain any metaphysical subtlety. We are considering a fact almost universally accepted within the last few years by physicists, who now generally admit the existence of a something coming from the sun, which is not itself light, heat, or chemical action, but of which these are effects. When we give this unknown thing a name, we call it “radiant energy.”

How it crosses the void of space we cannot be properly said to know, but all the phenomena lead us to think it is in the form of motion in some medium, – somewhat (to use an imperfect analogy) like the transmission through the air of the vibrations which will cause sound when they reach an ear. This, at any rate, is certain, that there is an action of some sort incessantly going, on between us and the sun, which enables us to experience the effects of light and heat. We assume it to be a particular mode of vibration; but whatever it is, it is repeated with incomprehensible rapidity. Experiments recently made by the writer show that the slower heat vibrations which reach us from the sun succeed each other nearly 100,000,000,000,000 times in a single second, while those which make us see, have long been known to be more rapid still. These pass outward from the sun in every direction, in ever-widening spheres; and in them so far as we know, lies the potency of life for the planet upon whose surface they fall.”

Converting Radiant Energy to Food

Radiant Energy, Mechanical Energy & Chemical Energy

“The most active rays in building up plant-life are said to be the yellow and orange, though Nature’s fondness for green everywhere is probably justified by some special utility. At any rate, the action of these solar rays is to decompose the products of combustion, to set free the oxygen, and to fix the carbon in the plant. Perhaps these words do not convey a definite meaning to the reader, but it is to be hoped they will, for the statement they imply is wonderful enough. Swift’s philosopher at Laputa, who had a project for extracting sunbeams out of cucumbers, was wiser than his author knew; for cucumbers, like other vegetables, are now found to be really in large part put together by sunbeams, and sunbeams, or what is scarcely distinguishable from such, could with our present scientific knowledge be extracted from cucumbers again, only the process
would be too expensive to pay. The sunbeam, however, does what our wisest chemistry cannot
do: it takes the burned out ashes and makes them anew into green wood; it takes the close and
breathed out air, and makes it sweet and fit to breathe by means of the plant, whose food is the
same as our poison. With the aid of sunlight a lily would thrive on the deadly atmosphere of the
“black hole of Calcutta; ” for this bane to us, we repeat, is vital air to the plant, which breathes it in
through all its pores, bringing it into contact with the chlorophyll, its green blood, which is to it
what the red blood is to us; doing almost everything, however, by means of the sun ray, for if this
be lacking, the oxygen is no longer set free or the carbon retained, and the plant dies. This too
brief statement must answer instead of a fuller description of how the sun’s energy builds up the
vegetable world.

But the ox, the sheep, and the lamb feed on the vegetable, and we in turn on them (and on
vegetables too); so that, though we might eat our own meals in darkness and still live, the meals
themselves are provided literally at the sun’s expense, virtue having gone out of him to furnish
each morsel we put in our mouths. But while he thus prepares the material for our own bodies,
and while it is plain that without him we could not exist any more than the plant, the processes by
which he acts grow more intricate and more obscure in our own higher organism, so that science
as yet only half guesses how the sun makes us. But the making is done in some way by the sun,
and so almost exclusively is every process of life.”