



**Possibilities of Bee-Keeping.**  
Fifty years have witnessed wonderful changes in most industries, but none greater than have been made in modern bee culture. In our grandfathers' days bees were kept in straw "skeps," log "gums," and box hives. After toiling through the long summer to lay up a store of sweets, the cold days of autumn saw the bees consigned to the sulphur pit, while their combs of honey were washed up and hung in a muslin bag before the fire to drip. "strained" honey was the result—and sometimes there was a decided flavor of bee-bread and brimstone.

The interior of a beehive was a sealed book until 1852, when the genius of Langstroth, by the invention of the movable comb-hive, broke the seal and allowed man to scan the wonderful pages. This was the first, the revolutionary step of modern bee-culture—the foundation of all subsequent improvements.

To-day bee culture is almost an exact science. There is money in the business and the question is often asked: "What are the profits of beekeeping?" They vary from less than nothing (when the bees must be fed, because the weather is such that no crop has been gathered) to amounts that are fabulous. One colony, and its increase,



Italian Queen Bee. Italian Drone. Stingsless Worker. Italian Worker.

In Texas, stored 1,000 pounds of horse-mint honey in one season. But this is decidedly exceptional. Fifty pounds of comb honey or 100 of extracted would be considered a good average yield. The latter sells, at wholesale, from 4 to 7 cents a pound, and retails at about 10 cents. Comb honey wholesales from 10 to 13 cents a pound, and retails at about 13 cents a pound.

But apiculture does not live to itself alone. It has been proved, beyond the shadow of a doubt, that many crops of fruits, vegetables and grain are greatly improved, both in quantity and quality, by the agency of the bees in bringing about perfect fertilization of the blossoms. Some flowers remain absolutely sterile unless pollen is conveyed to them by some mechanical means from some other blossoms. In the sweet-springtime when the wide-spreading branches of the apple trees are almost hidden by masses of pink and white promises of future fruitfulness, many of us do not realize that all of this beauty, this sweet perfume, the tiny drops of nectar nestling among the petals, are a part of nature's plan for securing the attendance of those marriage-priests—the bees.—Indianapolis News.

**When to Haul Manure.**

Several of the State experiment stations have shown by their tests loss of fertility in barn and stable manure by the old methods of handling it, which suggest the importance of daily or weekly hauling and spreading on the fields. The latest experiments made by the Ohio station prove that when manure was thrown into the open barnyard and permitted to lie there for five months before being hauled to the field it had a value of \$2.40 per ton. When drawn directly to the field as fast as it was made the value was \$3.25 per ton. When the manure was sprinkled with ground phosphate rock as fast as it was made in the stable, thus preventing some loss of ammonia, the value was \$5.18 per ton.

The claim is made that at least one-third of the value of the manure is lost as it is usually put on the land with a fork and that ten loads put on with a manure spreader go as far and do as much good as fifteen loads put on in the old-fashioned, careless way.

**Clean Milk.**

The slightest degree of filth in a milk can will injure the milk, and it is possible to have portions of the former milk contained in the cans to be left over, despite the greatest care. First wash the cans in tepid water, to which a little powdered borax has been added, and then scald them with boiling water, adding borax again. Rinse with clean cold water, and place them where dust cannot reach them. Borax may be used freely with advantage in all water used for milk pans.

**Fertilizing for Fruit.**  
The growing of fruit demands labor at the proper time, and considerable work is done before spring opens. Where growers have combined to keep insects and parasites in check the result has been beneficial. If the labor and cost of fertilizers must be considered it is safe to assert that fruit-growers derive larger profits from raspberries and blackberries than many of them deserve, as it is only when picking and harvesting the crop that the real labor is performed. After such crops are harvested some fields receive but little care and cultivation, and it is seldom that manures or fertilizers are applied, though the strawberry is treated differently. Enterprising fruit-growers maintain that it pays to give blackberry and raspberry canes good cultivation, and to apply fertilizers liberally, as the increased crop of berries and vigorous vines more than pay the expense. During periods of drought the grassy rows of canes must compete for moisture with intruders, and it often happens that a dry period sets in just at the time the berries are ripening, and when moisture is greatly needed. When the soil is clear of grass and weeds, and the surface of the ground loose, the loss from lack of moisture is greatly reduced.

**Poultry in Pennsylvania.**

On the basis of personal experience the author of a Pennsylvania bulletin discusses the feeding and care of poultry, artificial incubation, the raising of ducks, turkeys and geese on the farm, poultry diseases, and related questions.

A combination of fruit growing and poultry raising is especially recommended. "Locate your poultry-houses if possible so that the runs will be in an orchard. The fowls will destroy

thousands of harmful insects, thus greatly benefiting the trees and increasing the prospects for fruit, and the fowls will gain great comfort and benefit by the protecting shade of the trees. Plum trees and cherry trees are especially benefited by the presence of the fowls about their roots. Peach trees will grow most rapidly and soonest give an abundant shade."

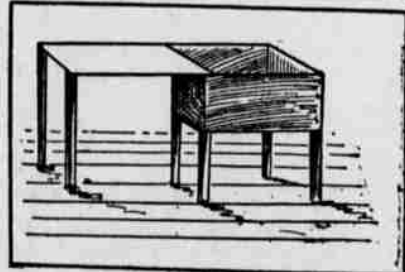
**Russian Farmers Coming.**

A crowd of Russian farmers, the first of this class of immigrants to arrive at Philadelphia in any considerable numbers, reached there recently on the American liner Friesland, from Liverpool. There were many who had fought for their country against Japan and who still wore the military uniforms in which they had been discharged.

There were in all \$50 of these much-sought-after farmhands, nearly all of whom are members of the Greek orthodox church. Most of the immigrants left last night for Illinois, Minnesota, Nebraska and the Dakotas. Though illiterate, they are industrious and thrifty. The leader of the party stated that, owing to the political and economic crisis, 300,000 farmhands will leave Russia this year for the United States, coming principally from the Dniester and Don districts, the richest farming districts of the country.

**Wash Tank and Table.**

A vegetable gardener who prepares a good many vegetables for market by first washing and then drying has



VEGETABLE WASHER.

devised the plan illustrated for removing the soil and then draining. The tank is little more than a water-tight box with a plug in the bottom for drainage. The shelf is attached to the box with a hinge, likewise the legs, so that folding in smaller space is possible.—Prairie Farmer.

**Scales on the Farm.**

Scales should be used in every house and barn. There is more money in knowing than in guessing. The following proverb should be heeded: "Deliver all things by measure and weight." Weigh the stock and grain and hay, as well as fertilizers, so as to deal justly and be fairly dealt with. In selling live stock the weight is usually estimated by the drover or butcher who comes to buy, and long practice on their part gives them a decided advantage over the seller.



**GREAT NEED OF WORLD.**

By Rev. Henry Marsh Warren.  
"Ye shall be witnesses unto Me. — Acts 1:8.

While our Lord was upon earth the disciples were not asked to be witnesses; they were simply to follow their Master, to listen to His marvelous teachings and to observe His wonderful works. "Ye are my witnesses. Hereafter you must stand in my place, take up my work, fight my battles, manifest my love and gather in my jewels." In other words, He then entrusted to His disciples and to His church both the honor of His name and the great work of redeeming the world for God.

A witness for God must live a Christ-like life. It is far easier to stand up and proclaim that Jesus is the light of the world than it is to live exemplifying the saying, "Ye are the light of the world." And by the Christ-like life we mean representing Christ at all times and in all places, not only in the house of God on a Sunday, or in the prayer meeting, but also in the home and in business and social life.

Another way by which we may become faithful witnesses is by direct and zealous labor to help the many unfortunate people about us. I believe the church fails in this respect more than any other. Churches provide well for the comfort of their members, and our preachers are able and consecrated men of God, but individual labor for the individual soul is lacking. It is a wrong idea that personal labor and oral witnessing for God are for ministers only.

One verse in the Bible beautifully describes the life of Christ, viz.: "He went about doing good."

This should characterize the life of His followers. We should "go about doing good."

"But how," some one may ask, "are we to do it?" Let me mention two or three very simple and practical ways by which we may do good and in so doing bring the world to know and follow God, and so prove that we are faithful witnesses.

1. By helping those who need help. There are hundreds and thousands of opportunities in this great city and over the world. What they need is the helping hand. If the church is to give salvation to the masses who are outside and are living lives of sin and sorrow, she must give her attention to ministering to the needy.

2. By sympathizing with those who need sympathy. Jesus was a man of sorrows and acquainted with grief. He had a heart of great sympathy and never failed to express it when occasion afforded. The world's great heart to-day longs for expressions of Christian sympathy. Oh, the opportunities we have of doing good in the way of sympathy with those who need it. If we will put ourselves or our money at His disposal, God will open some portal through which we may enter and tune the heart-strings of some discordant life to play the music of heaven.

And then we may do good by encouraging those who need encouragement. A few years ago a big hotel was burning and a young woman in one of the upper stories would have perished but for the cheers of encouragement that went up from the crowd of lookers-on. When the brave fireman landed his prize safely he said: "You have no idea how near I came returning without her. It was the cries of encouragement that nerved me for the task."

God only knows how many faltering, trembling weak souls there are to-day who need just such a cheer. How many times the clouds hang over us, with no pillar of fire to guide. How many times we stand by the waters of the Red Sea, where the angry waves roll and break, and there seems no way of escape. Oh, that some strong hand were then outstretched to save us, and a kind, gentle voice to encourage and comfort us.

There are so many who could be saved from great mistakes and from falling if the right thing were said and done in the right way and at the right time. God help us to be on the alert for such opportunities of doing good.

**WHAT IS VIRTUE?**

By Henry F. Cope.  
"Adding on your part all diligence, in your faith supply virtue and in your virtue knowledge."—II. Peter 1:5.  
Who is the virtuous person? What is the virtuous life? Is he the bearer of no more than spotless life? Is virtue the leaving undone of vice? Is it negation and denial? Then is the polished marble more virtuous than the fairest saint. You cannot be measured by the things you leave undone.  
Is virtue, then, the clamorous erec-

tion of some standard of living and the duly advertised attainment thereto? Is it even the secret, modest effort of conformity to a fixed code or rule of daily living—the doing of certain things in certain ways at certain times? Is the virtuous life the one that follows precisely the prescribed rules and schedules of conduct?

The last is the notion most generally entertained. Yet how fallacious it is. It is the secret of priggishness; the standard attained, we have the sin of self-satisfaction. It converts the man into a blind machine; your mechanical moralist is no more virtuous than any other machine. He lacks life and freedom of choice. Virtue is, first of all, vital; it cannot be found with the eyes shut nor with the will atrophied.

Virtue is strength; it is moral and spiritual health. It is not in doing or leaving undone; it is not in feeling either good or bad; it is not in sentiments or doctrines, either false or true. It is that perfect ordering, adjusting, and outflowing of the whole inner life which in its more material and evident aspects we call health and strength. The doing, feeling and thinking flow from this right inner, determining tone.

The morally healthy man will love the things that are good and pure; he will loathe the base and defiling. Only a depraved appetite turns to the garbage can when there is a well spread table waiting. Did we but understand it we would despise and fear still more that vicious inner appetite that turns the whole life toward things corrupt and rotten when there awaits on every hand in this fair world so much that is beautiful and wholesome.

Have you ever thought how largely health and strength depend on tastes and appetites? Who can be healthy with a perverted craving to which he yields? Such tastes depend on training and cultivation. So it is with virtue; strength of the soul, health of the heart lies on the road of the choice of things that are best, is acquired by the deliberate and constant choosing of things that are right, pure, elevating.

Virtue, then, rests on faith, not blind belief in certain dogmatic statements, but the upward look, the noble aspiration, the high-mindedness that lifts up the heart. It takes this spirit, this faith, this confidence in things unseen to enable us to choose the best to cultivate the taste for the true food of life. Otherwise the heart that was meant to feed on the invisible bread snatches the evident husks of earth and it dies.

There is no virtue without this faith in high ideals, in things not seen. A man may be just, he may be honest and upright for policy, because it pays, but he cannot find virtue as a matter of policy. It is not in the market to be bought. It is acquired only as we set the heart on character, as we learn to love the good and true for its own sake.

This healthfulness of soul comes also through struggle. Vice is made to serve virtue as we strive against it. Using moral muscles, we find and harden them. He who flees temptation, who shrinks from the soul searching crises of life, misses the best that life has to give. In the gymnasium of temptation and trials the full strength of character is won. That does not mean that one must seek out vice; it means we must meet every foe to his face.

Count him virtuous whose face is set toward the light; who lives on a grade that leads up; who is strong to serve his fellows, to make a better world, to face and fight all things that spoil and mar; who lives not for meat or money, but for manhood, for truth and beauty. For virtue is that habit of the soul, that health that comes from steadily seeking things good and true, that strength that comes from struggle and service; it is the inner life victorious over the outer temptation.

**Short Meter Sermons.**

Kindness is a seed that never finds a barren soil.

Virtue for profit will become vice for more profit.

The best friendship is that which brings out the best in us.

What we call destiny often is only a matter of determination.

If you would lose all force think always of your own feelings.

The true man fears the power of sin more than its punishment.

Mending your ways is the best way of mourning over them.

If you cannot hate hypocrites and evil you are not likely to love virtue.

Many a man who is proud of being wicked is really only weak in the head.

It will not give you wings to have your name on the fly leaf of the Bible.

An abnormal sense of your own rights soon will hide your neighbor's righteousness.

You can never meet the needs of a thirsty world by packing water on both shoulders.

It is a good deal easier to preach things heroic and divine than it is to practice things ordinarily human and decent.



Among the peculiar products of Manchuria, which are becoming better known to the outside world since the opening of that country, is "wild silk," produced by an insect named *Antheraea pernyi*, which lives upon the Mongolian oak leaves in southeastern Manchuria. The annual production for a few years past is estimated at 15,000,000 cocoons. In Shantung this silk is manufactured into pongee.

In human history a great river has sometimes formed a dividing line between peoples possessing quite different characteristics. Dr. W. M. Lyons, Jr., has discovered a similar phenomenon affecting squirrels in Borneo. He found eight different forms of squirrels inhabiting the northern and western parts of the great island, and observed that a large river proved an effectual barrier in separating two distinct races.

Dip a thick piece of white absorbent (blotting) paper into a solution of 100 parts of oxalic acid in 400 parts of alcohol; keep the paper in the liquid until it is thoroughly saturated, and then dry by suspending in the air. Aniline ink spots cannot be removed by this paper. Since, however, ink containing iron is much more commonly used than aniline ink, this paper will be found indispensable for the office when once introduced.

Engineers are harnessing many of the waters of the world to the use of man. A great project is under way to catch the floods which rush down the Western Ghats, near Bombay, and to use the water power in cotton mills and other factories. The valleys are of rocky formation, and, with dams at the lower ends, can be made into tight reservoirs. Three valleys will be closed in by dams respectively half a mile, a mile and a mile and a half long.

The automobile omnibus has brought about a great change in inter-village communication in western France. Until very recently there was no such communication except by horse-drawn vehicles, trolley lines existing only in the larger cities. Now a movement is rapidly spreading for the introduction of autobuses, running from town to town, and these vehicles are proving to be very popular, and a great extension of the system is anticipated, the population being dense.

In the desert of Islay, near La Joya, Peru, there are thousands of crescent-shaped sand dunes, formed by the winds, and slowly advancing across the level surface. Professor Solon I. Bailey, the astronomer, measured one dune, the points of whose crescents were 160 feet apart, while the length round the convex side was 477 feet. The width at the widest part of the crescent was more than 100 feet. The weight of the sand composing the dune was estimated at 8,000 tons, yet it moved 125 feet in a year. All the dunes have the same form, and all have their convex side toward the prevailing south winds.

**Huge Forests of Islands.**

There are many millions of cubic feet in the forests of the Philippines that should be cut in order to properly thin out the dense growth; for instance, where there are three or four trees growing on a space required for one, that one so freed would put on more wood each year than the four together. The question as to whether 300 or 3,000 trees should remain on an acre is where the real value of scientific forestry is shown. Then, too, there are many more millions of cubic feet which reach maturity and pass off to decay, never thrilling to the woodman's ax.

There are, however, very few companies in the Philippines properly equipped to handle large logs, and without master mechanics, expert gang bosses—in fact, all the skilled labor required—and without a full stock of the best supply material, it would be hazardous to move the large logs which must be cut and brought to market if the forests are to be properly exploited. A good price is paid in Hong Kong for every stick of timber from the Philippines, and the American lumbermen with modern methods can solve the problem, and in so doing they will not only help to educate the adaptable Filipino as to practical things, but will insure him cash wages, something unusual in Spanish days.

**Campaign B's and V's.**

"Is it true," asked the interviewer, "that you have the political bee in your hat?"

"No," said the prominent man sagely; "but I have the campaign V in my pocket."

For the prominent man knew well that the fond hopes of his friends were as nothing to the fund dopes of his party.—Judge.

If a boy earns ten cents, he wants it; he isn't willing to trust the best man alive.