

## Producing Tree.

FRANCIS DICKIE.

fir has long been the people of the Pacific produces most excellent have been made two of oles in the world, and mighty cargo carriers. most sanguine individual ast ever dreamed that could add to its merits producing sugar—ous tree seems indeed was so ridiculous that any white man's mind. it is true. For cen- in certain regions have a white sugar of the that contains a variety trisaccharide in greater any other plant to-day. But though the white ntly learned of it, and markable phenomenon, of it long before he ed it for food probably years. The bears, too, roke down branches to enough, in view of its ise of the early mis- or later suveyors, erved this phenomenon. mpiler of this article on has been made in, British Columbia, and lot of them. The fol- given are at last made ult of the research and professor John Davidson, Botanist in charge of British Columbia, who, es Teit, a man with a the interior and intid- with the Indians and elled into the interior of, and made the first al study of the Douglas from his investigations why this sugar was pro- of his work is here- for the first time out- scientific treatises, and anguage understandable a to one not botanically sugar-producing fir is the hottest part of the of British Columbia be- 0 to 51 and longitude is also reported in the of the State of Washing- panying photo of a fir idea of how the sugar ar masses, ranging from inch to two inches in small white flakes. The gly sweet to the taste, e a very high grade of a al sugar. On first being mouth, it forms mo- y paste. This, however, rely dissolves.

or after much research y and covering a wide y in the dry belt in the n Columbia, found that northern and eastern chief bearers of sugar. rn and western slopes, yield sugar. Neither dense fir forests of the The explanation of the proved to be a pheno- depending on certain soil conditions and ext trees on the eastern and were fairly well apart, so rtion of their leaves re- ch greater quantity and an did the closely-stand- ense forests of the coast. a better air circulation ot just the right amount he sun. It is part of the the workings of nature ed to a plentiful supply r on their leaves carbo- rarily these are at night nt to supply storage and lls. In the dry belt, ormal amount of carbo- ates on the leaves. At he soil, warmed by the e root activity so much pressure was greatly e roots' work was ough the night, in this e nights are warm and short. As a result of ed root-pressure and spiration, the leaves be- ch water. This water leaf tips in drops con-

taining a certain portion of sugar, result- ing from the reconversion of starch into sugar. As the water emerges into the hot, dry night air existing in this dry-belt region it was quickly evaporated, leaving the sugar in drops at the leaf tips, where they hung singly, or fell to form the masses as shown in the photograph, and smaller white flakes.

But the sugar, by reason of it depend- ing so very largely on certain atmos- pheric conditions for its production, is not a crop that can be relied on to yield a yearly harvest, for in the hot season the occurrence of a few dull days, or days of rain, enables the trees to use up much of the excess sugar or store it as starch as a food reserve. The cooling of the air also checks the activity of the sugar-forming cells in the leaves, and the cooling soil affects the roots, lowering the pressure.

Thus to-day the Indians accept the sugar yield as something to take ad- vantage of in the good years, but as something which they cannot look for- ward to with any degree of assurance, though they do get a good deal on the average. Analysis made both at the chemistry laboratory, Ottawa, Canada, and Washington, D.C., show the sugar to have a high degree of constancy of com- position. The fact that it yields a pure variety of the rare trisaccharide, formerly only obtained from a shrub in Persia and Turkestan, and that the fir sugar contains more than fifty per cent. of this in its make-up, much more than any other plant hitherto known to man, is of great interest. And though the sugar will never prove of use to the white man as a food supply, it may in all probability prove to be valuable in chemistry and the mixing of medicines.

## When the Teacher Came to Tea.

BY CRAWF-C. SLACK.

They had hired a brand new Teacher, and Balinda said to me, "If you'll try and have some manners I will ask her in to tea." She allowed I once had manners and a very pleasing way, But lately, when her visitors came, I started to get gay, She said if I would promise, at the table not to swear, Take off my greasy over-alls, wash up and comb my hair, Put on a tie and collar, and not look a perfect fright, She would have our daughter Mary ask the Teacher in some night.

Since Balinda took to voting, it was very plain to see, She'd adopted reconstruction and was starting in on me, But to nip domestic friction why I bowed to her request, And I said I'd look the swellest and act the very best, That is, if she would promise, that she wouldn't start and greet, The teacher with excuses 'bout the stuff she'd have to eat, That she wouldn't foam and fury, and say everything was bad, That "sich" awful luck at cooking she was sure she never had.

Furthermore, I made her promise she would try and have a heart And not keep the Teacher lying 'bout our Mary being smart, That when Mary played the organ, that she wouldn't up and say, That she never had a lesson but learned herself to play, That she wouldn't say that Johnnie, who was ready with his jokes, Took his ready wit and manners from her father and her folks, She agreed that she would vary from the average woman's way, That about domestic matters she'd have nothing for to say.

Then I said it was a bargain, I would be a model man, So she started in to tidy up the house and cook and plan, She got a dress made over, and asked me how it hung, If it didn't make her figure look more maiden like and young? I said it was a dandy and also a perfect fit, But to be directly honest, I didn't fancy it,

It was frilled and tucked and pleated, with some tassels hanging 'round It was wanting at the shoulders and more wanting near the ground.

With Balinda's plans completed, and the prospects looking bright, Why the Teacher looking flashy, came home with Sis one night, The table it looked gaudy, there was fruit and cakes galore, And a lot of China dishes which I never saw before. Wife was all dolled up and powdered, she was looking like a belle; I had on my go-to-meetin's which Balinda said looked swell, I had polished up my manners and when we set down to tea, A more stylish-looking couple you will very seldom see.

As we talked of books and authors and the late election news, I discovered that the Teacher had some narrow party views, I see she was a stalwart of a deep-dyed party clan, And learned she was a daughter of a chap who also ran, But things were running smoothly until she up and said, "That the country would be ruined with the hay-seeds at the head." And she said, "They wasn't capable of handling the reins," Than told me plain and flatly that they didn't have the brains.

Here my manners all went winging, for I sure was boiling mad, And I hit back at the Teacher, giving her the best I had, Then I said, "You Kid persuader, do you for a moment think, That the brains of this great country are employed at slinging ink? Don't you ever get to thinking that the men behind the plow, Ain't got brains enough to legislate or even to learn how, If you do," said I "my lady, you're a consummated fool, And mentally unfitted for to teach a public school."

Then there was a verbal warfare for Balinda flew at me, And the Teacher got so nervous that she over-turned her tea, Right into her lap and napkin, and the tea was boiling hot, And I didn't care particular if it scalded her or not, Here our Mary burst out crying, and as she started for the door, Her chair caught in the tablecloth and dragged things to the floor, The Teacher made her exit, and a hurried one at that, Didn't stop to get her wardrobe, didn't even get her hat.

As I think the matter over I'm convinced no common man, Though assisted by a woman can make perfect any plan, We may scheme and plan with wisdom, yet our best is insecure, Though the bud may give us promise yet the rose may not mature, Though the dawn may bring us laughter yet with all as mid-day nears, May arise dark clouds of anguish turning twilight into tears, Though we use our best endeavors, strive to battle stealthy fate, Joys sometimes are drenched by sorrows, love sometimes is turned to hate.

She, Too?—William J. Burns, the noted detective, said in a Scranton lecture: "To a well-trained detective every incident is pregnant with significance—yes, every incident is as full of meaning as—well, I am reminded of a story: "A young man sat in a parlor alone. To him a beautiful girl entered. Thereupon the young man arose, took six cigars from his upper waistcoat-pocket, laid them carefully on the piano, and then advanced toward the girl passionately, his arms outstretched. "But the girl drew back. "You have loved before," she said."—Los Angeles Times.

Useless Words.—"I see it is now proposed to have the word 'obey' stricken from the marriage ceremony." "Yes, in the interest of economy. I've always held that in so far as that word was concerned the minister might just as well have saved his breath."

## Co-operation on the Farm.

ED. TOR "THE FARMER'S ADVOCATE":

Ever since the days of the prodigal son; and perhaps earlier still in the history of the human family, the question of keeping the boy on the farm has been ever an unsolved problem. True, there have been many remedies advanced and splendid suggestions tendered. You'll find such in the issue of "The Farmer's Advocate" dated April 10th, 1919, but invariably these suggestions prove but a remedy rather than a cure, and perhaps after all a remedy is as near as we will ever get to solving of the problem.

Commenting on the various letters I have reviewed in the "Advocate" on this subject, I think one or two of your contributors have touched the keynote of the trouble that "all work and no play" is driving our boys and girls to the larger towns and cities. There are some men, (and women) in this country who never were boys or girls. You have met them so have I. Did you ever let your mind run back in imagination along their path- way of life? If you did you will remember "kids" who wouldn't play ball at school, who tattle-taled, who abused the littler ones, who tried to toadie the teacher, and who were in short, universally dis- liked and shunned by the rest of the school. To-day we see them tight fisted, slave-driving, fun-hating cranks whose household tremble in their presence or flee from the life of toil and bondage.

I remember one of these fellows who used to be a good customer of mine and how that every time he came to the store, especially in the evening, the boys lost no opportunity to play some little trick that would arouse their victim's ire, for thereby were they fully repaid. Upon one of these occasions when the boys had loaded his wagon box with an old tie post and a couple of dry-goods boxes he came into the store in a rage, demanding that I should go out and see the insult I was allowing the boys to inflict upon a good customer. Of course, I went out as soon as the opportunity came, but failed to see anything but the result of some over energy of some very energetic boys. "Look at that!" he exclaimed, "are you going to allow those Jack-an- apes to carry on like this with their devilment every time one's back is turned?" "Why don't you put a stop to it? Don't you know they'll drive away your business? People won't come here to be aggravated an' pestered by those imps of the old Nick. Why don't you take the law to 'em?" In spite of myself I smiled at his vehemence. "I couldn't do it," I replied, "because when I was a boy I was as bad as they are." "Likely worse," he snorted as he fumbled at the tie-ropes.

But I didn't lose that man's trade or the boys' either. The point I want to score is that too many of us forget that we were once boys and that boys and girls to-day are the same as those of our day; mischievous, fun loving, care free and light hearted, and as some one once said, the father or mother who tries to bottle up this surplus energy is living very near a live bomb which is very apt to explode some day, and not only wake up the parents' ideas but also land the boy or girl far away into the city.

The Hon. Dr. Tolmie, speaking at the directors' luncheon in connection with the Winter Fair at Guelph, recently declared that the boys and girls were leaving the farm to-day for the city because there they had shorter hours, more money and a better time. As a remedy he advocated fewer working hours, co- operation between father and son and better education.

That co-operation is an essential sadly lacking on most farms I heartily agree. Too often the father assumes the role of "boss," while the boy is ordered around as "the hired man." A little more of "equality" would certainly help some. But, as to Mr. Tolmie's suggestions regarding shorter hours and a better education for the boy I have my doubts. That "education" is needed I fully agree, but not "text-book stuff." It's dad that needs to learn that the "hum-drum" age is forever past, that the farm boy or girl is as deserving of fun and frolic as their city cousins, and that their ambitions aspire to more than the temporary owner- ship of the runt pig or the pet lamb. As for shorter hours? Well, I'm sorry Mr. Tolmie didn't outline a plan, for there's a lot of us would like to cut out

four or five hours and get into the "eight- hour" system. But it cannot be done. Not if things are to be kept going right. To the man on the farm every season brings its preparations, every week its plans, and every day its work, and woe to the farmer who once gets behind. It's always a case of "make hay while the sun shines" on the farm, no matter if it is haying time or getting the fall plowing done.

I remember hearing two old neighbors talking at our threshing when I was a boy. The one had four boys, and he himself was big enough to do two men's work but they were always behind, their hay was always getting wet, their corn frozen, and little fall plowing was ever done. The other man, a little old Welch- man, slow as a snail, generally was ready for what came next and always ready for winter. "Tom," said his big neighbor, "how is it you always have your work up? My boys and me can do more in a day than you do in a week." Thomas finished picking the thistle out of his thumb and closed his jack knife with a snap.

"You's fellows works be fits an' starts, but I's always at it."

It was just another case of "the hare and the tortoise," and that is why the hare would make a poor farmer, or short hours be unapplicable to farm work.

We've had enough of the shorter hours system, they're fighting and wrang- ling over that across Canada under the name of Bolshevism, and to-day the only calm, unperturbed profession is that of farming, where the clamor for shorter hours is seldom heard, and each day's reward is:—

"Something attempted, something done, That has earned a night's repose."

And so I say keep up with the work, and in planning ahead "don't bite off more than can be chewed." If this is done there will be time for the annual picnics, time for the fall fairs, time for baseball, basket ball and all good clean fun going, and remember fathers and mothers, fun is the fountain of youth.

Did you ever take a fish out of the water and watch it as it gasped and floundered? There's many a boy and girl on some of our back concession farms gasping like that for a bit of fun and as soon as they are big and strong enough, mind you, they'll flop out of your clutches into the towns and cities where they can frisk in their native element.

Of course, as I previously said, there are some boys that shun recreation and sport just as there are birds that hate light and sunshine. Some of these have matured and are the dads of many of the boys that have gone away to town. Invariably these dads from boyhood up- were a "financial success," for such men are, I have noticed, pretty fair at money grabbing.

Every boy and girl, we know, has his or her own ambitions and aspirations, and it would be a sin and folly to wreck their "castles in the air." If they have built them with their foundations laid "within a city wall" encourage and help them to build upon a rock and assist to make the structure a reality, for only thereby will they find the fullest of life's success. How many of our "big men" and "wo- men" that are helping to make a greater Canada to-day had such dreams years ago as they drove the cows up the old zig- zag lane or splashed the dasher up and down in the old churn? Would it not have been a deplorable loss to have kept these people hoeing corn or washing dishes?

But, too, there are "born farmers," and these we want to keep on the farm. Like the others, give them a chance. Make them feel they are one of the company, and don't forget to give them a share of the "dividends," and make them see that they are to become a "director" as soon as they can handle the job.

Co-operation to-day has become the pass-word of the farmer, but it will not suffice to "carry on" alone, from the buying and selling standpoint. It's got to be adopted on the farm, around the barn, around the house and mixed into both work and play, and when this is done, then, and only then shall the problem of keeping the boys and girls on the farms be forever solved.

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