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Proceedings of the Madras Government, Revenue Department, 21st Aug 1870.

No. 182. Read the following letter from India, Department of Agriculture and Horticulture, to the Secretary, Simla, 10th August 1871, No. 1.

I AM directed to forward, for any notice the Council may deem it worthy of, a copy drawn up by Mr. Robinson, founded chiefly on Tobacco-cultivation.

2. It is possible that in some parts a brief paper in the vernacular, not, of course, but unofficially, might prove useful.

the Secretary to the Government of Revenue, and Commerce, (Agriculture and Horticulture,) to the Government of Madras, dated 10th August 1871, No. 1.

that His Excellency the Governor in Council has directed that a short paper on tobacco-cultivation, drawn up by Mr. Robinson, founded chiefly on Dr. Forbes-Watson's Manual of Tobacco-cultivation, should be printed and distributed in the country the circulation of this paper under the authority of Government, might prove useful.

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ENCLOSURE
TOBACCO-CULTIVATION, BEING A BRIEF REPORT ON

No. 1.
ABSTRACT OF DR. FORBES-WATSON'S TOBACCO.

"The introduction of a system of cultivation, requires so much care that it can only be attempted on experimental farms."—DR. FORBES-WATSON.

(Supposing the area of ground on which to be sown to be one acre).—Enclose with a wall (brick) about one foot high and one foot wide.

The seed-bed.

by two feet of strong stable-manure. When this bed is prepared, dig out the soil enclosed by the wall, and sow the seeds.

To sow the seed more carefully mix it with

Sowing the seed.

but with so small a grain as tobacco, it is impossible to be exact), and cover with an inch of good mould.

After sowing water the seed-bed with a fine-reed watering pot. The sowing bed should be provided with a reed-mat covering, which after watering should be stretched across from wall to wall. This covering should be taken off (to allow the steam from the manure to escape and to admit fresh air) for two hours every morning and evening.

After-care for the seed.

Three days after the first sowing the bed should be watered again. (N. B.—Water in the early mornings).

In about a week the plants should appear, and when they seem to crowd, should be pricked out, leaving distances of one inch each way round each plant, thus :—

Pricking out.

(N. B.—The spare plants should be preserved for use when the plants have developed four or five leaves, any one of which is an inch broad, they may be transplanted. The seed-bed should be watered in order to make the pulling up of the plants easier, and when pulled up the plants should be removed as quickly as possible to the site prepared for them.

Planting out.

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preparation of tobacco, possessing first-rate qualities, requires so much care that it can only be attempted on experimental farms.

experiment is about to be tried to be an end-a-half high a space five feet broad by fifty-five feet long. Dig out the soil enclosed by the wall, and sow the seeds.

the wood-ash, and scatter the whole equally over the surface of the prepared ground (the depth of two feet, replacing the soil removed to be exact), and cover with an inch of good mould.

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This site (supposed to be an acre in extent) should be level ground and exposed: a fence should be round it to protect it from jackals, etc. The soil should have been ploughed deep twice before the plants were put in and afterwards harrowed and rolled carefully.

The tobacco field.

It should have a fine light soil with a firm
The soil.

The soil.

Tobacco an alternate crop.

(N.B.—Sun-flower would alternate with well.)
The plants should be kept in the ground.

Well.)

The plan of the field, pathway being left for the coolies between (not every row) but every two rows. A broader path- way (five or six feet broad) should intersect the plantation at right angles, forming at the point of intersection a convenient space for heaping the leaves.

The plan of the field.

When the plants have been set out well (N. B.—the watering pots used should have very finely perforated roses) and if any plants die, fill up the gaps with spare plants from the seed-bed.

Watering.

After a day or two hoeing should commence. The hand is the best instrument, and the work

"Hoing."

If the plant threatens to be very leafy, it has five superfluous leaves leaving about fifteen to a plant.

Pruning.

(N.B.—For fancy smoking tobaccos, the flowers need not be removed.)
There is after this very little necessity for further care. The plants, however, should be most carefully

After-care of the plants.

freely at intervals of a week, and to prevent the earth losing its humidity too suddenly, straw might be spread over it if the heat of the sun, peculiarly great.

The leaves are of three qualities,—the lower, middle, and upper, and the first to ripen are the

Picking the leaves.

soon as yellow leaves begin to appear among the lower leaves, they must be picked. In about eight days the middle leaf will show signs of ripeness, and should be gathered, and in about eight days more the remainder may be gathered. It can, however, be easily known that the leaves are ripe when they detach from the leaf-stalk with ease. They should be detached with the hand, the leaf being pulled upward.

Care must be taken to have labour available to gather each harvest in at its own time, for over-ripeness is fatal to proper curing.

The only thing to be remembered in curing tobacco is that care must be taken not to allow

Curing the leaves. †

then it is in danger of rotting. The rules on this head which hold good in Europe are, however, useless in India. The curing-houses again may be of any shape, provided only that ventilation is thorough, and that sun-light and damp are equally avoided.

When the leaves have been picked they (to wilt, that is to fade, wither. B though quite dead, do not lose their flexibility.

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The leaves are then strung (on string or sticks) in the curing-house : after this they are exposed to the sun : they are then tied in bundles and heaped to induce fermentation. The details of the curing processes cannot be learnt from works on European tobacco-cultivation, but may be acquired easily by the study of the *temperature* of this country during every hour of the day and every day of the year, and by a clear knowledge of what is required to be produced. Again, the arrangement of the leaves in the curing-houses so as to economize space, utilize ventilation, etc., etc., gives scope for the ingenuity of each cultivator and cannot be learnt by rules.

One point, however, to remember is that the leaves must not stick together when strung. When the leaves are dry without being

Sorting the leaves.

they are said to be cured, and are ready for sorting.

The sorting of the leaves depends of course on the local market for which the tobacco has been raised, but a safe rule is to keep for cigars, that can be kept for cigars, and to use the remainder for tobacco. Snuff, which requires the finest leaves of all, would not in India repay the manufacture. For natives of this country, tobacco must be strong: for the European market, it must be aromatic: for any market, it must burn easily. It is evident, therefore, that very much depends upon the manure used, as the matters drawn from the ground must materially determine the strength and combustibility of the

The importance of choice of manure and watering.

plenty of moisture produce a strong and rank
Sunshine, dry warmth, and a light soil give
from this evident that next to the manure ex
the moisture, and if the manufacture is for t

The great difficulty in curing tobacco

The midrib : how to dispose of it.

then the leaf would be split into two, but of greater part of the midrib projects. The operator, after a half hour's practice. Then, holding it between his finger and thumb at the stem end, he would make an incision in the midrib at an end. He would then take hold of this with an equable force pull off the midrib downward, very fine, and there was a danger of the leaf falling from the finger and thumb. By this, the concave or i-

The great care necessary not to handle the leaves
narrow depression running down the centre
The operators (who might easily be children)
leaf or to make a rent in it.

Indeed, throughout all the operations of stringing and midrib-scooping, every operator near the stalk-end and against tearing it. Operators according to results.

The sun-flower (*Helianthus*) might be

The sun-flower.

able stringing rods (if string itself is not used)

disposal of the midrib which persists in either drying stiff or not drying at all. But why could it not be removed? Not entirely, for the back of the leaf, where the convex and though a delicate one, would become easy to tear would take a leaf in his left hand, holding it about half an inch from the end (the stalk of the thumb nail of the right hand and turn up the index and thumb of the right hand, and with the index the point of the leaf. As soon as it became torn, he would nip the midrib off with his thumb. The flat surface of the midrib would be left on the upper side of the leaf, while on the back of the leaf the only sign of the midrib would be a small mark where the troublesome midrib had been. The author was particularly warned *not to handle the*

ing out, planting, hoeing, thinning, sorting, and should be warned against touching the leaf except when it can be guaranteed by grading the wages of the laborer. 1st, for the shade tobacco, 2nd, for the larger and heavier tobaccos required; 3rd, for the admirably strong stems supply; 4th, as they would (if

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their leaves were ploughed into the ground, we almost the the exact vegetable mould which is required by tobacco.

The 17th May 1871.

P. ROBINSON.

No. 183. ORDER THEREON. 1st August 1871, No. 1,416.

Miscellaneous.

ORDERED to be communicated to
the Board of Revenue and to
Mr. Broughton.

(Extract.)

(Signed) A. DEC. SCOTT, Captain, R. E.,
Under-Secy., P.W.D.,
for Secy to Govt.

Nov 1871.

DEPARTMENT OF AGRICULTURE
REVENUE, AND COMMERCE.

N^o 26
[Agriculture and Horticulture.]

To

No. *81.*

Dated *10 Aug 71*
19 Aug 71

N^o 456.

*Order to be carried to
the 1871. Rev. and to
Mr. Bronghton.*

24 Aug 71
*For the Board of Agriculture
of Pennsylvania.*

FORWARDS, for any notice that may be deemed
worthy, copy of a short paper on Tobacco Cul-
tivation drawn up by Mr. Robinson.

17 Oct 71
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No 182-183

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