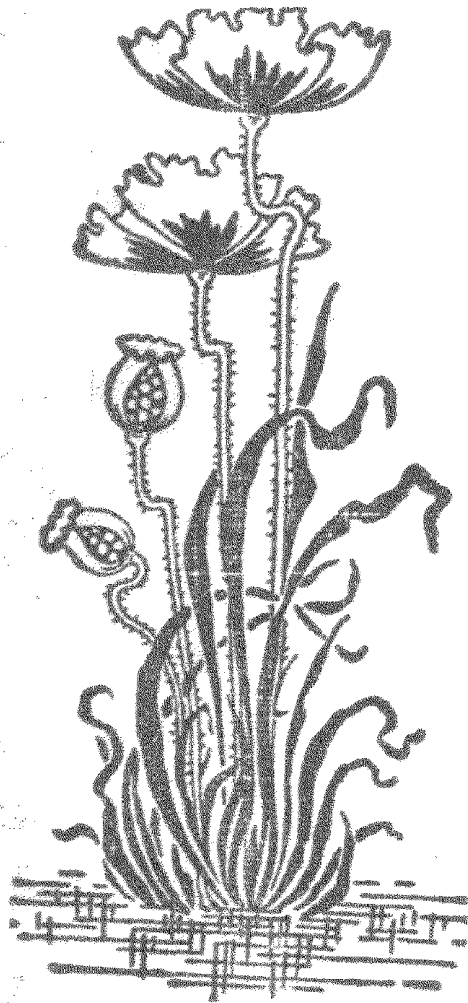


TURKISH Tobacco



A
MANUAL
FOR
PLANTERS, DEALERS,
AND
MANUFACTURERS.



Compiled by
C. L. CONSTANTINIDES

Illustrations and Plans
by D. L. Constantinides.

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Price 10s.

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1912.

Ode on Tobacco.



Sublime Tobacco, which from East to West,
Cheers the tar's labours or the Turkman's rest,
Which on the Moslem's ottoman divides
His hours, and rivals opium and his brides.
Magnificent in Stamboul, but less grand
Tho' not less loved, in Wapping or the Strand.
Divine in hookahs, glorious in a pipe
When tipped with amber, mellow, rich and ripe,
Like other charmers, wooing the caress,
More dazzlingly when daring in full dress,
Yet thy true lovers more admire by far
Thy naked beauties—give me a cigar.

—LORD BYRON.

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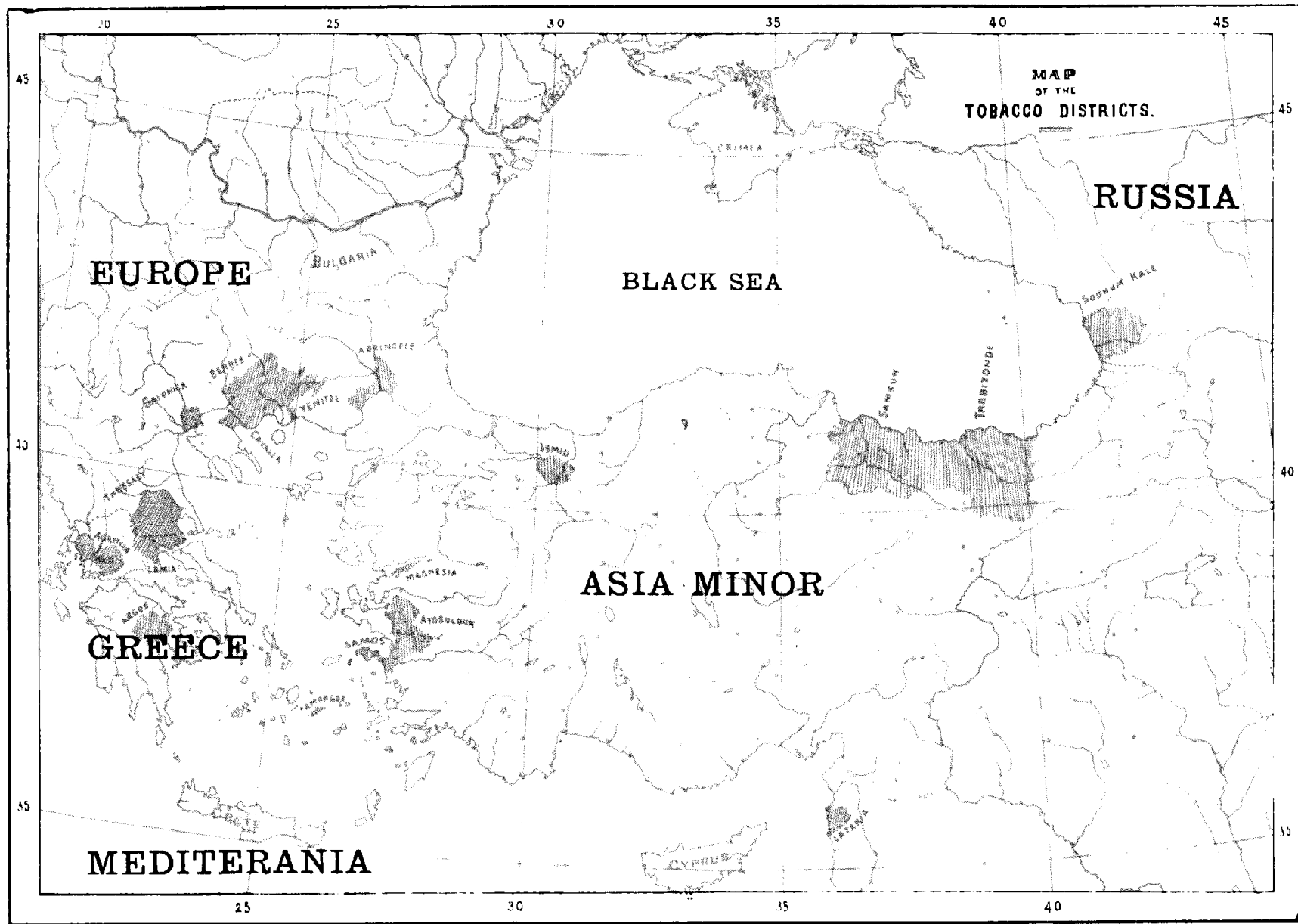
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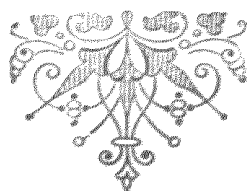
PREFACE

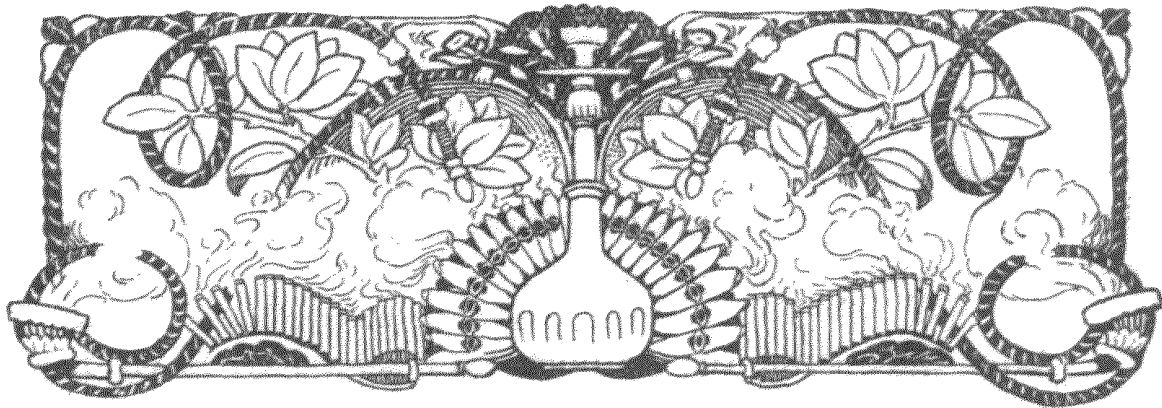
THE object of the present book is to afford a help to the grower, buyer, dealer, and manufacturer of Turkish tobacco, an article in which a great deal of study, observation and experience is required in order to become skilful, or, as it is generally called in trade parlance an "expert." The author, however, does not pretend to teach all this in the inadequate form that such an article of wide extent and variety as Turkish tobacco presents; this book purports simply to help one over his dilemmas by useful hints which a lifelong experience enables the writer to offer.

In order to arrive at a satisfactory state of knowledge it is necessary for one to exercise both diligence and keen observation, indeed a great deal of the latter; he must follow every item of interest connected with his research to the most obscure recesses, and only then will he be able to arrive at a somewhat satisfactory result. In order to illustrate the importance of the minute observation required I will relate two instances wherein I was enabled to judge with success cases of doubt. I called once at a broker's office in the middle of a dispute between him and another broker as to the origin of some oriental tobaccos, the samples of which were lying before them. Being a specialist, I was called upon to decide whether it was Bulgarian or Trebizonde; at first sight I was very much puzzled with the similarity of the leaf, but I was soon enabled to pronounce my verdict, being guided by the ties which, in the case of Trebizonde, are always made of maize; my verdict in the second instance was more wonderful still as I was able to

fix the very village the tobacco was grown in, a very rare accomplishment. The tobacco in question was Cavalla, and my guides were again the ties, which were made of cotton thread; now, as all the villages which produce Cavalla tobacco fasten their bundles with jute ties, in this particular instance I volunteered to name the village, seeing that the tobacco was tied with cotton and knowing well that in that village alone they grow cotton and so make their ties out of their produce instead of buying them. I must confess that without these landmarks it would have been an impossible task.

The tobacco expert must know his ground the same as a pilot knows the channels and currents, and only then can he be a good expert; he must couple the theory, which I will endeavour to teach him, with the practice which will impress on his mind the necessary knowledge, and that practice can only be acquired, I repeat, by keen observation and untiring diligence.





PART I.

Agricultural.

WHEN and where tobacco was first grown in Turkey is no easy matter to determine. There is an opinion that tobacco was first grown in Persia before America was discovered, and that it was introduced into Turkey from that quarter, but I have found nothing to support this theory.

It appears that in the beginning of the 18th century, the tobacco trade was in the hands of the Dutch, and that their Ambassador asked the Sublime Porte to allow his country to send tobacco to Turkey. It must, therefore, have been at first imported into Turkey from Europe and not grown there; from enquiries made amongst the oldest growers in Turkey, I came to the conclusion that they began to grow it between 1750 and 1780, and it must have had a rapid increase and prosperity as we find it recorded in the beginning of the 19th century, that the Turkish Ambassador at the British Court asked permission from the Government to have the regulations relaxed so as to allow small packages of Turkish tobacco to be imported into English Ports, only large packages being then permitted.

The importation, however, must have been of a very limited extent until the time of the Crimean War, when it became more widely known through the English troops passing through Turkey.

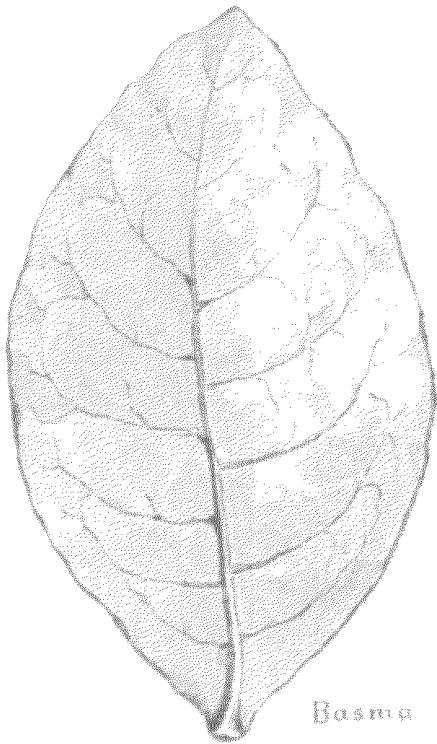
After that time the importation seems to have been regularly increasing until the year 1873, when, for the first time, Chinese tobacco was imported (which seems to have restricted the importation from Turkey to a great extent), and during the last few years it has kept very steady at an average of 12,000 packages per annum, weighing from about 100 to 160 pounds each.

Many years ago a good deal was imported at Liverpool, but lately the trade has centred almost exclusively in London. The entire crop of European and Asiatic Turkey, is estimated at about 25,000,000 okes or 70,000,000 pounds, one half of which, and that of the better sorts, is produced in European Turkey, in the districts of Cavalla and Yenitze, and the other half in Asia Minor, principally in Samsoun and Trebizonde.

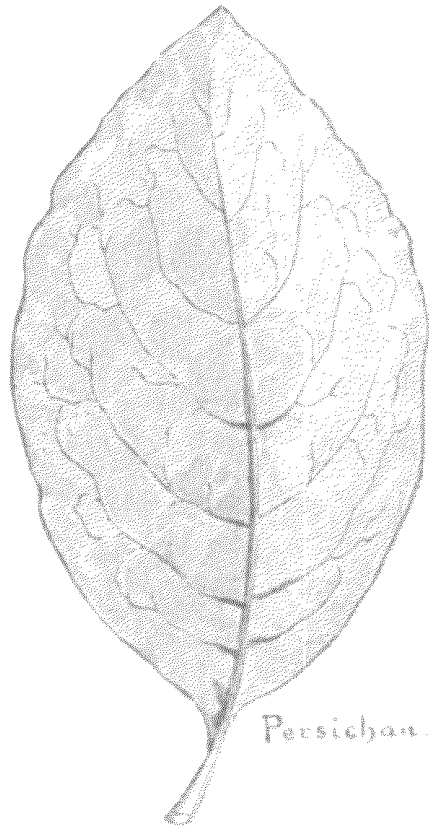
Almost the one half of the production of Europe is taken by the Austrian and Hungarian monopolies; the Asiatic produce is widely distributed throughout many European countries and a large portion is also locally consumed.

I do not pretend to be a botanist so I shall avoid technical terms. There are two kinds of plants grown in Turkey, the Basma and the Basibali—the latter being known in England under the name of Persichan.

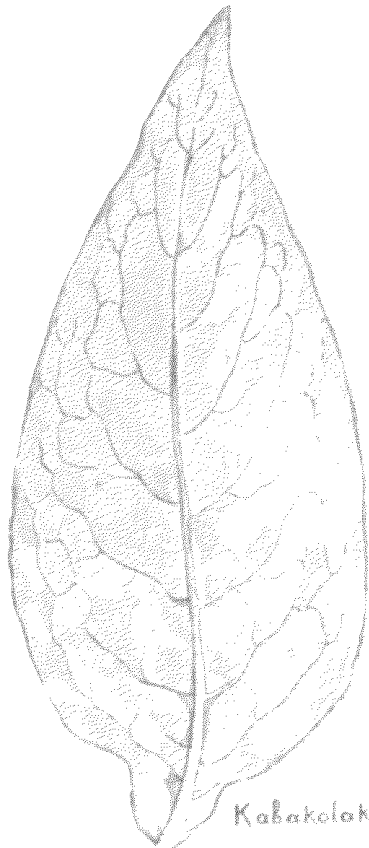
Basma is the smaller plant of the two and the leaves



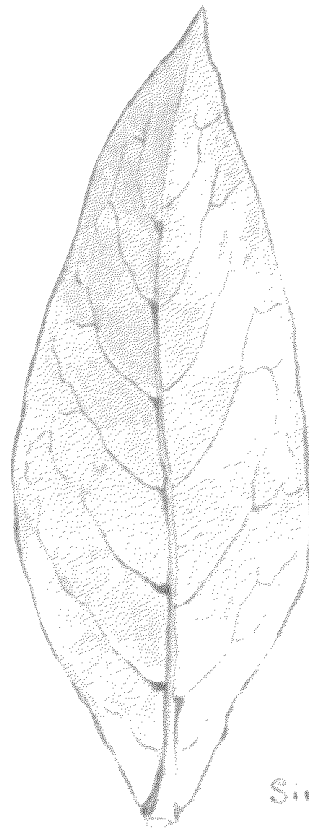
Basma



Persichan.



Kabakolak



Sirdili.

LEAVES

are contiguous to the stalk, that is to say, they grow almost from the very stalk; while the Basibali has a short stem which separates the leaf from the stalk, besides having a much larger and coarser kind of leaf. The accompanying illustrations will give a better idea to the reader. There may be other botanical distinctions, but these are not perceptible from a merchant's point of view. Traders, however, know one sub-division of each kind, viz., the Sirdily, in Basma, which is a narrow and long leaf very much like a lance, or as the Turkish name implies, ox-tongue shape, and the Kabakolak in the Basibali, which is a cross between a Basma and a Basibali, possessing a small appendage on either side of the stem which unites it to the stalk, resembling the feathers which cover some birds' feet. We also append illustrations of these descriptions.

The tobacco seed is very fine, one thimbleful being enough for a square yard, and twelve square yards of seedlings are enough for one acre. In planting, the fine seed is mixed with sand or ashes in the proportion of one part of the former to ten parts of the latter, and sown in specially prepared beds in February, the mould being abundantly manured with the dung of sheep or goats, and the soil being finely pulverised. The beds are about two feet wide and ten to fifteen yards long, being separated by deep gutters to keep them dry and to enable the growers to work between the rows; they are protected on frosty nights by a loose cover of brushwood. The young plants usually take a long time to make their appearance on the surface, but that depends on the warmth of the air; sometimes they are through and ready for transplanting by the middle of April, and at other times not before the end of May.

They are then in appearance like lettuces. The young seedlings should not all be planted out at once, but at intervals of from ten to fifteen days, so as to enable the grower to gather the leaves at ease. When the Spring months are cold, the lateness of planting is very detrimental to the grower, as it delays the gathering and drying until the autumn, thereby causing him great anxiety and often irreparable loss; in my opinion, if growers would adopt the plan of raising their seed in glass frames, it would enable them to transplant much earlier, and not run the risk of late crops.

In Macedonia, frosts are rare after March and planting could be carried on with impunity in April; in Asia Minor and Greece, where the climate is warmer, they get their crop much earlier and it very seldom gets country damaged, i.e., heated.

Transplanting begins when the seedlings are ready, usually on St. George's Day (May 7th). The fields are previously ploughed and pulverised by rollers, and large flocks of goats which the villagers keep in common for that purpose, are allowed to sleep on the fields during the night to manure them. The growers believe that, in the month of April, the urine of the goats fertilizes the soil better on account of the goats feeding on the tender spouts of the wild shrubs which constitute their food; if they were to sleep on the fields in the month of May, then the tobacco would become bitter in taste.

The plants are set in regular rows about a foot and a quarter apart in either direction. I think that if they were to adopt the plan in vogue in other countries, of planting

two rows close together and allowing a wide space between the next two rows, it would not only be easier for them to gather without damaging the leaves, but would keep the plants better protected from strong winds, and probably prevent the *basara* malady in wet seasons.

Planting is, as a rule, completed by the end of May, and after the plants have grown a foot, and the first rain after planting comes, the earth is loosened by an axe round their roots ; after that they are allowed to grow until they get their blossom, and if the plants are strong and healthy the top is not removed, but if they are weak and thin then they are topped in order to strengthen them.

The Basma plants grow from a height of from two to three feet and the leaves from two to ten inches in length.

There are as a rule eight rows of three leaves (excluding the bunch on the top), which come to maturity, and each row has a separate name, as indicated in the accompanying sketch.

1. **Dip**, very thin and weak ; it should be thrown away though many growers collect it but it always goes to the refuse.
2. **Orta**, also weak and green.
3. **Anna** or **Manna**, the largest leaf in the plant, the thickest in substance and strongest in flavour.
4. **Second Anna**, a little smaller and best matured.

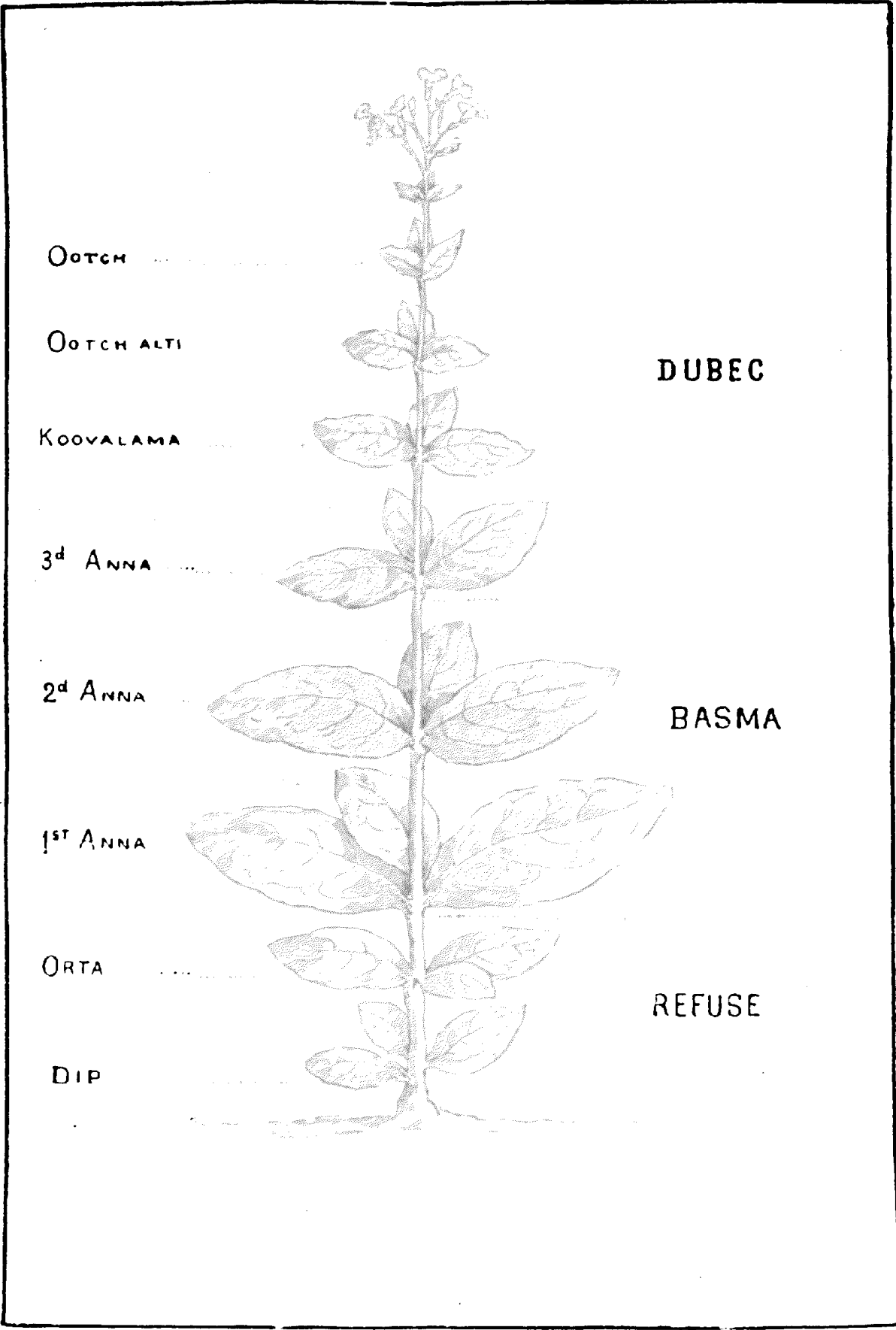
The above rows are packed in bales, and are known in the English market as Basma ; the following rows constitute the Dubec.

5. **Third Anna**, is a medium and very fine leaf for flavour.
6. **Kuvalama**, an intermediate leaf between the small and large leaves and in years of drought is missing.
7. **Utz Alty**, the topmost but one, and
8. **Utz**, the highest and smallest.

These last two are most substantial and best of the plant ; they possess the greatest amount of aroma but in late crops the topmost (Utz) does not always mature, and remains green or dark in colour and therefore not of good appearance, nevertheless it has its merits.

Above these there is a cluster of tiny leaves under the blossom, which never come to maturity ; sometimes, however, especially after rains, the plant throws out second shoots or suckers, which if gathered are of dark colour, and burn badly, but possess plenty of aroma. Avaricious growers often collect these and pack them with the rest, but an expert can easily detect them through the dullness of their colour and their thickness. They are called Sonn or Güze and should be rejected.

Growers in Turkey believe that a good crop should mature 100 days after it is planted. They begin gathering about the end of July, leaf by leaf, starting from the bottom as each one matures. The mature leaves are yellow at the tips and should be torn off at once, because if they are allowed to remain on the plant they deteriorate and lose the brightness of their colour when dry ; if on the other hand they are gathered before maturity they remain greenish after drying.



OOTCH

OOTCH ALTI

KOOVALAMA

3^d ANNA

2^d ANNA

1st ANNA

ORTA

DIP

DUBEC

BASMA

REFUSE

PLANT

A good crop should all be gathered before the end of August or at all events the middle of September, but if the planting is delayed through the cold spring winds preventing the seedlings growing, then the gathering goes on till the end of October, and the sun loses its power to thoroughly dry, or the earth gets cooled by the autumnal rains, and prevents the entire elimination of the sap from the leaves.

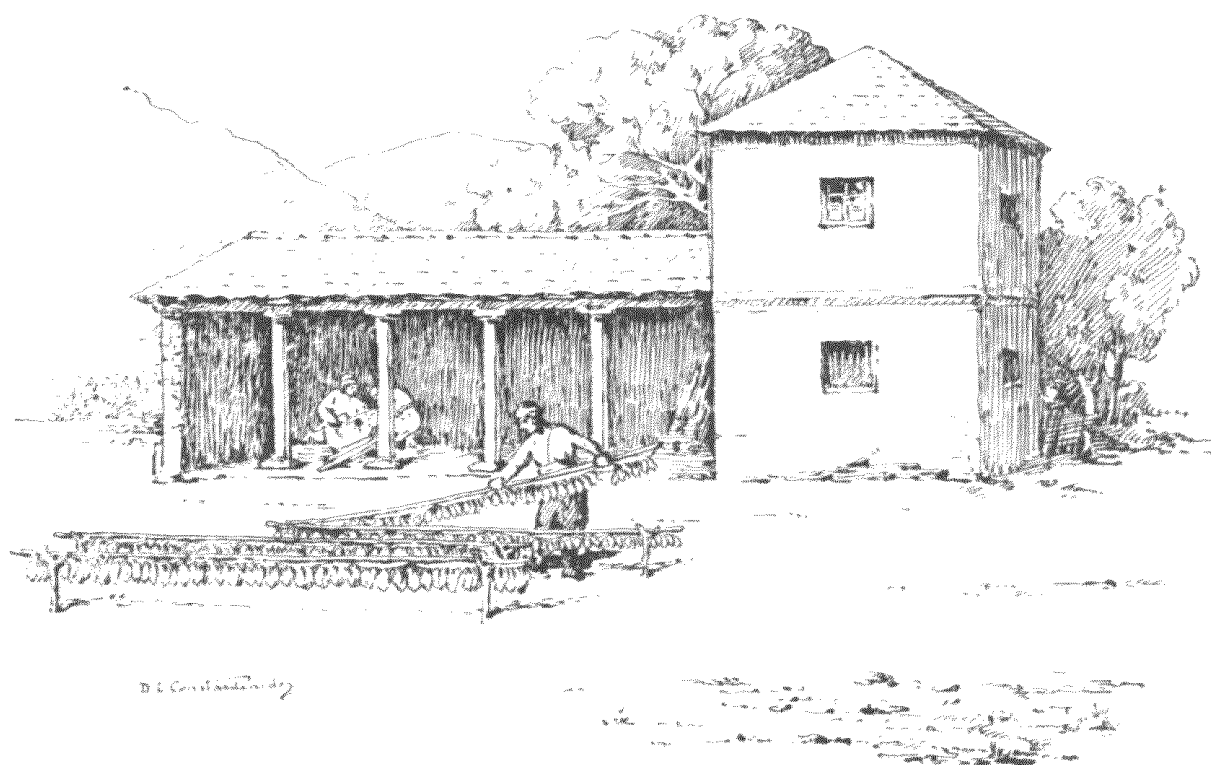
Such crops are never good. The leaves are gathered early in the morning and in the evening twilight; then they are pierced, strung, and stretched on a pole about four yards long; they are then hung up to wither, in a shady place, for two or three days, and after that they are exposed to the rays of the sun against the walls, where they remain until they get thoroughly dry. Then they are removed from the poles, and in the shape of wreaths are hung under the roof of a shed to get the benefit of the variation of heat and cold, for it seems that the more the dry leaves are exposed to the variations of the weather, the better they become. When thus hung they are as dry as bones, and if they are lightly pressed they break to scraps; but when the moist southerly winds and mists of November come on, the leaves begin to soften, and the grower gathering all his family round his hearth, begins to unroll and stretch them leaf by leaf, pressing them all flat in little bundles called *pastaals*, keeping each size of leaf apart; these he packs in double rows point to point against the wall, with planks of wood on the top and weights to keep them down flat. This process takes about three months, and when it is all completed the merchant comes and inspects before buying.

The growers are, as a rule, small farmers working alone with their wives and children, just undertaking to raise as much as they can manage, viz., from two to three acres. An acre of tobacco field produces only about 500 lbs. of fine, or 1,000 lbs. medium sorts, or 1,500 to 2,000 lbs. of coarse big leaves such as Persichan and Cavalla, according to the magnitude of the leaves ; these latter plants grow to a height of six or seven feet. We annex a plan of a Turkish farm house.

The farmers are mostly poor, and two-thirds of them fall into the hands of middlemen or moneylenders, who advance them money on the mortgage of their crops.

The legal interest in Turkey is 9 per cent., but in addition to that they charge a commission ; formerly, it was the custom for the merchant to advance them money and to take their crop at a price to be agreed upon, the grower being favourable to that contract, as thus they secured a certain buyer for their produce, however disadvantageous that might be, but of late years when there is so much competition through an ever-increasing consumption, the growers prefer to borrow money at interest and commission, and to be free to sell to the highest bidder.

The soil is rich red loam, a mixture of clay and sand ; there is a very large area of available land uncultivated, but the population is small and not increasing under the heavy burden of taxation and other drawbacks ; and it takes too many years to become efficient in cultivating such a delicate plant as the best Turkish tobacco, requiring any amount of labour, watching, and always being on the alert from year's end to year's end ; besides, these growers are brought up to it from early childhood and it is not every man who is able to embark into cultivating an article which requires great experience, intelligence and skill.



FARMHOUSE.

PART II.

Commercial.

TOBACCO culture in Turkey is controlled by a Regie or monopoly which was granted by the Sultan in 1883 to a joint stock company for 29 years on payment of £540,000 per annum for the internal consumption, and £156,000 for the export duties to the Turkish dependencies. The export trade to other countries is free under treaties.

Before a cultivator starts planting, he must obtain a written permit to do so, stating the acreage he intends to plant. One month after the fields are planted the Regie inspectors call to ascertain the extent of his planting, and as soon as the gathering ends, they call again and estimate his produce. If the grower wishes to obtain a loan, the Regie is obliged to advance him £13 per acre without any interest.

Buying tobacco is a very tedious process in Turkey, it requires a great deal of eloquence, patience and perseverance on account of the annoying practice of wide bargaining;

the seller asks you twice or thrice as much as he will ultimately accept, and you have to get him down to your price by degrees with a lot of idle talk ; if you were to offer him at once what you have made up your mind to give him, you would never be able to strike a bargain : you must offer 40 per cent. or 50 per cent. less and as he comes down you must go up.

Now you may imagine what a vexatious proceeding that is to one accustomed to European dealings, moreover, neither the seller nor buyer can arrange a programme beforehand ; if you badly want the goods you are bound to pay more than you intended if he remains obdurate ; and this has to be done in public, surrounded by nearly all the villagers. It is a sight that must be seen to be properly understood ; you have your friends and he, his partizans, they all talk together trying to persuade you, or him, to do what neither of you intend doing ; the orthodox way is to clasp hands together and if either party, exhausting all arguments, breaks away, he is pushed back and joined again by the assisting spectators.

It is a thing that I have been through many times and I must say that I consider it the most troublesome business I have to undertake, so awfully trying is it to one's patience. We often have to employ orators to do the talking, and if you happen to be the first buyer in the village, I pity you. To give you an illustration I may mention that on one occasion, after talking for two hours, we had to adjourn for a meal in the seller's house, who, by the way, is generally an extremely hospitable person, and when the repast was over we managed to arrive at a price which was 20 per cent. more than I intended to give and 20 per cent. less than the seller intended to take.

Under such circumstances the progress you make is very slow, and for the last few years, when, owing to the competition, all districts are bought up within a few days after the break, it has been necessary to employ all your staff on the job, as it is impossible for one man to be everywhere at the same time. It is the most critical period of the year's work, and one requires all his wits not be outdone.

I consider it a time of frenzy, and it is the greatest relief when it is over ; but you often discover afterwards either that you have paid too much or you have not been able to buy enough to fulfil your orders ; add to this the difficulty that the goods you are shown are brought to you in a mass unclassified and often not completely packed, and you have to make your mental calculations as to what percentage you will get out of them, often resulting in disappointment when you get them into your warehouse and start to manipulate. At best it is a toss-up business.

In fixing prices you have to be ruled by the different customs prevailing in each district ; some districts pack and sell all their produce pell-mell ; the majority, however, divide the refuse or commonest leaves and sell them separately. We shall endeavour to explain that, when we describe further on the particular produce of each district.

After the bargain is completed it is usual, in order to legalize the same, to pay a deposit, however small, to the seller, then you have to get the goods weighed by a public official, and next to apply to the Regie for an order to remove the goods to town ; this has to be endorsed by the village elder or *muktar*, who is responsible for the dime and taxes ; after that the buyer must pay all the outstanding

rates and taxes owing by the grower. On obtaining the seals of all the officials you hand the goods to the carriers, who take them in carts when the roads permit, or pack them on animals if otherwise, and deposit them in the central Regie warehouses in the town where you intend to manipulate them. The Regie will reweigh the goods in order to see that there has been no abstraction while they were in transit, then they allow you to remove them to your warehouse, which is duly numbered and registered in their books and on which a padlock is placed every night, and removed every morning at daybreak ; they debit you with the weight and hold you responsible for any deficiency, after allowing for natural dryness through evaporation. Should a grower be unable to sell his goods before August of the following year, he must remove his produce to the warehouse of the Regie in the nearest town and sell it from there ; this, however, very rarely occurs now.

Buying time is very erratic, it generally takes place after the flattening and packing of the leaves, but sometimes in times of excitement and in order to obtain an early footing, and to secure a good crop, one begins buying while the leaves, or at all events part of them, are still hanging ; that requires a great deal of vigilance, and necessarily one must be on the spot waiting patiently for months, sometimes with nothing else to do.

In order to manipulate the goods you have bought you must first have a warehouse of sufficient capacity ; such warehouses are constructed very substantially of thick stone walls and are heavily timbered ; they consist as a rule of three stories, viz., a ground floor which is always cool and damp, a mezzanine floor for storage when fermenting, and



SORTER AND PICKERS,

a top floor which is very well lighted, for sorting and packing ; next you must have a good foreman ; these are as a rule permanent hands and must possess influence amongst the working classes.

The other permanent employees required are a clerk and paymaster, and one or more stevedores.

The manipulating staff are daily workmen, and they consist of sorters and packers who can do both and are paid according to their merit, high wages being earned as a rule.

Each one has two pickers who gather the leaves thrown out by the sorters and bundle them up to be used in the inferior kinds of goods. The sorters, who are very skilled, take the tobacco from the bales, leaf by leaf, and divide it into qualities and sizes under the guidance of the foreman who is always superintending the work ; they also take into account the condition and colour and any peculiarities the tobacco may possess, in order to produce a uniform package ; they first make them up in spiral rounds with the points inwards and stalks outwards as per illustration. In sorting tobacco in Macedonia, the practice is to divide it into seven classes, viz.:—

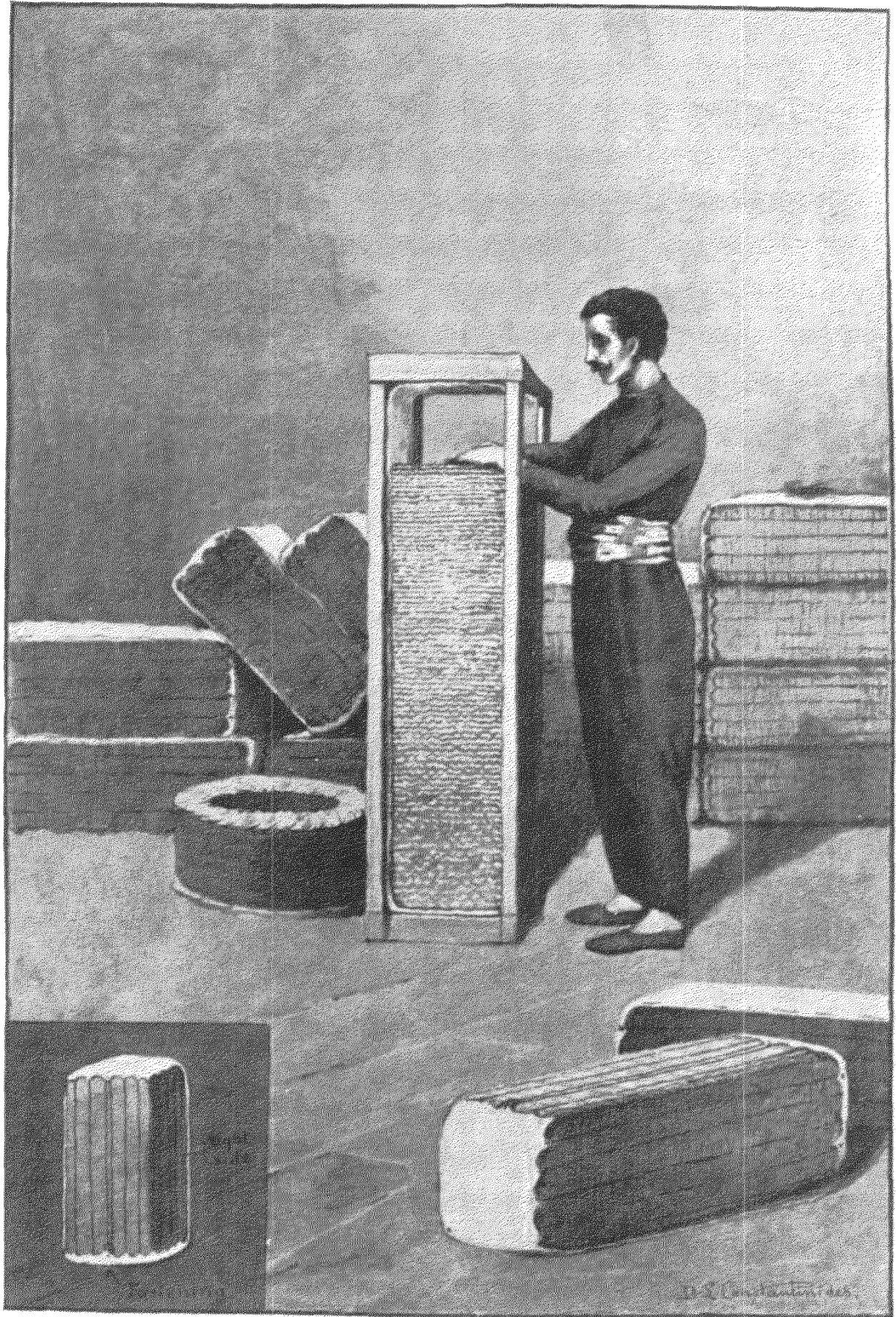
- 1st. A. Faultless leaves.
- 2nd. B. Slightly discoloured.
- 3rd. C. Green or dark. Serviceable.
- 4th. D. Inferior.
- 5th. E. Very common and green
- 6th. R. Refuse.
- 7th. K. Scraps.

It is usual to indicate to the buyer how much there is of each class and most of the parcels are sold with only firsts, seconds and thirds. Fourths, fifths and refuse are sold usually for the German and Dutch markets, and the scraps are burnt.

From these classes they are packed into bales or ballots, being carefully stowed in wooden skeletons, purposely made so as to be able to insert the wrapper and to give free access to the packer's hands. The top and bottom rows and the inner and outer edges contain, as a rule, a lower grade tobacco, as they are more exposed to wear and tear. Many artful dodges are practised by clever packers to include inferior leaves, without their being discovered on examination, but most warehouses have a reputation for honest, clean packing, and the experienced buyer knows where to look in order to discover the fraud, besides knowing who is, and who is not to be trusted; otherwise examining would be an endless job.

In order to assist the buyer, we will now give an explanation of the usual method of packing.

Basmas are packed in ballots called Dubecs, or Bales called Basmas, although there is really no difference between a ballot and a bale, but some markets, such as England for instance, will not take high class goods unless they are packed in ballots. A ballot is a very small package weighing about 25 to 30 lbs., while a bale weighs double; ballots are covered with white cotton cloth, laced by fine black woollen cords, and bales are wrapped in a coarse woollen mat and laced either with black woollen ropes or ordinary jute twine.



PACKER.

The ballots are supposed not to contain any inferior leaves, and only small ones ; this packing costs about 2d. to 4d. per lb. extra—an unnecessary waste of money.

Many markets now prefer to buy the high-class goods packed in bales and we appreciate their wisdom. In England if buyers were to see Utz leaves packed in bales they would call it Basma—now Basma, as we have already explained, is a kind of tobacco, and not the size of the leaf. In packing either ballots or bales, the operator starts naturally from the bottom, where he generally places two rows of second rate leaves, between which he sometimes hides half a row of inferior tobacco which is naturally invisible, then he puts three rows of the best leaves on the right side, then a few rows of second rate tobacco ; when he reaches the middle he again puts in the best, then second again for three rows, then best, and one top row second ; the left side is all second, the inner edge second, the outer edge first quality at the extremity, and second a little inwards. That is known in Cavalla as Egyptian packing.

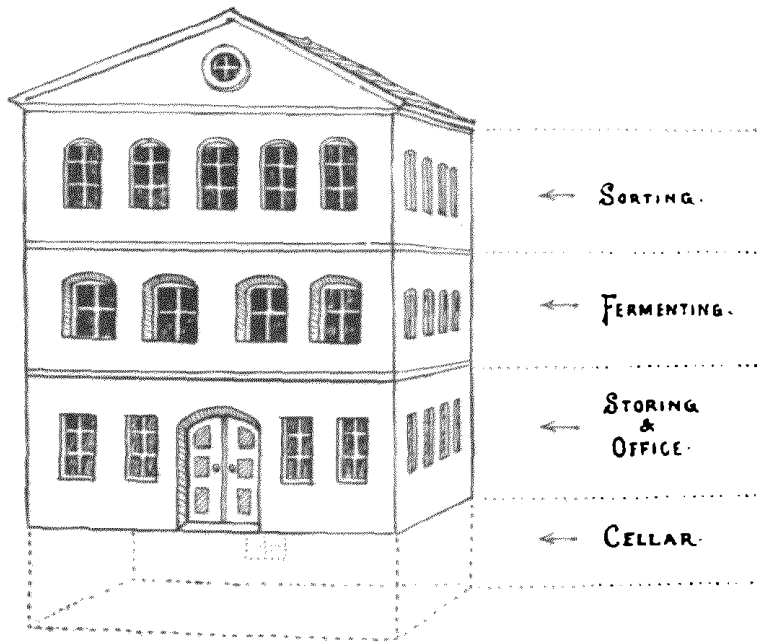
Russian packing is clean throughout, but there is always a slight difference between the right and left sides ; in order to know the right from the left, it is necessary to place the ballot or bale in an upright position, and have the fastening of the cord in the middle of the bottom, as the diagram here explains.

Work in the warehouses begins about April and finishes by the end of July. Of course there are times when it is prolonged, but the general rule is for everything to be ready for the buyers who generally attend in August or September.

After the leaves are packed, the bales or ballots are handed over to the charge of the Stevedores, being previously weighed and recorded in the Stock-book thus:—number, quality, size of leaf, name of village, name of grower or number of plantation, and name of packer; all these particulars are essential in order to identify any subsequent changes that may occur, for instance, if you are not satisfied with the quality the blame is on the grower, if you do not like the work then the workman is to blame, if the condition, then it is the village. However, in order to have everything in perfect order and condition, the goods should be packed before fermentation begins, because the leaves being soft and malleable do not break, and they settle better under their natural easy pressure; besides, if there are any leaves liable to damage, they are removed before fermenting by the sorter, and thus further mischief to the adjoining leaves in contact with them is avoided.

Now we come to the most critical period of the tobacco leaf—fermenting, because, before tobacco ferments it is not fit to smoke. Fermentation takes place as a rule in the months of May and June, depending of course upon the condition of the atmosphere. In Turkey it is called sickness, which it undoubtedly is, resembling fever.

What is the cause of fermentation? It is a difficult question to answer by a direct reply, but there is no doubt that there are two things necessary in order to bring on fermentation, viz., heat and dampness. A German scientist, Dr. Suchland, of Halle, believes that it is caused by a microbe, and that microbe lives on a certain amount of food which it finds in the leaves, and it exists as long as there is sufficient food for its sustenance, on the exhaustion



WAREHOUSE.

of which it dies and so fermentation ceases. The process of oxidisation is supposed to be acquired by the help of the micro-organism in combination or contact with the oxygen emanating from the tobacco, and without needing the aid of the oxygen existing in the atmosphere; thus it resembles *ensilage*.

The Havana growers possess a secret process of improving the quality of their tobacco on fermentation, by throwing a spray of a liquid called "*betun*" on it. This is believed to be a culture of bacteria in a liquid form. One species of bacteria alone does not seem to produce good tobacco, it having been found that good quality tobaccos possess a large number of species of bacteria. There is no doubt that fermentation causes chemical changes in the composition of the tobacco which are more or less unknown, unless it is the evaporation of bi-oxide of carbon, ammoniac and organic matters, or such changes as take place in wine, beer, etc.

The greatest care and anxiety is exercised in Turkey as soon as the tobacco, now packed in bales, shows signs of heating; it is then placed on the floor tightly laced in order to exclude the air, but edgeways so as to facilitate the escape of the gases, all doors and windows are closed, and space is allowed all round each bale, which naturally necessitates a great surface flooring capacity, the time occupied in fermentation is uncertain, sometimes when the weather is alternately cool and warm, it takes over a month, sometimes when it is continual warm weather, it is over in two or three weeks; the leaves become soft and sweating, and they slowly alter in colour and appearance. The

colour begins to improve, the combustion also, the greenness gets reduced every day, and the flavour attains a satisfactory standard.

Every second or third day the bales are turned over but never allowed to be on their flat side, and the cords are tightened where they have become loose. There is no doubt that exposure to a current of cool air will seriously damage the colour of the tobacco, and if there is any moisture it will violently increase the process of fermentation to the peril of the tobacco. Inexperienced and ignorant people generally think that cool air will help them over the critical period all the better, but they find their mistake out afterwards; the less you expose the tobacco to outer air the better for its recovery. When the tobacco begins to cool, which is a sign that the fermentation has proceeded to a certain extent, they place the bales upright, so as to bring the leaves into a horizontal position, but if it shows signs of heating again it must be restored to its former position for a few days, and again placed upright afterwards.

The whole process reduces the natural temperature of the leaves and assists the evaporation of the heat created by fermentation; it takes the best part of May and June, and sometimes it goes on till the end of July. But in Turkey it is a natural fermentation and not artificial as in other countries, and I believe that this is one of the reasons of the peculiarity of the flavour of Turkish tobacco which is both unique and inimitable. In France, Austria and Hungary they ferment the tobacco by making large heaps of it and the temperature soon rises to 140 degrees, it then stops for a time and gradually begins to cool; these countries produce very coarse tobaccos, and you can easily see in them

the effects of this excessive fermentation. In Havana the heaps are composed of about 2,000 to 3,000 lbs., but the heat is never allowed to exceed 100 degrees. In Turkey it very seldom reaches that. Dr. Suchland thinks that the heat should be controlled and be kept between 78 and 108 degrees in order to obtain favourable results. Of late years, in America all tobaccos are artificially fermented by stoves soon after drying, and so they are placed on the market and used the same year as they are grown. After fermentation ceases the bales should be placed upright on the top of one other, and their position changed every few days so that the ones underneath be placed on the top and vice versa ; this helps to smooth the leaves and give them a nice appearance. After a month's storage treatment of this kind, they are ready for shipment and no further risk is run except in unfavourable seasons, of which we will speak later. There is no doubt that atmospheric conditions contribute largely to the quality of the tobacco produced, and there are years which yield very unsatisfactory crops, which often become ruined upon fermentation. In Turkey, growers as a rule believe that the final condition of the tobacco depends on the weather prevalent in the months of October and November, and if there is much moisture and fog the leaves absorb too much of it, and that causes excessive fermentation and damage. I have made repeated experiments and kept accurate records to ascertain that, and I came to different conclusions, which enabled me to avoid the disastrous consequences which ruin many growers and warehousemen in this line of business. I have been firmly convinced that the soundness of a crop depends upon the atmospheric conditions at the time of gathering, and as

these are as a rule favourable in the summer, the earlier the crop is gathered the less danger there is of it going wrong. I firmly believe that the violent and destructive fermentation of some ruinous years has been caused, not by the moisture absorbed in the autumn by the hanging leaves, but by their not being thoroughly dried in the summer after they are cut, or in other words, if the natural sap of the plant is not completely evaporated.

Thus, if a crop is early planted, and gathered before the rains begin, the leaves are in consequence thoroughly dried, and if the autumn should prove moist and wet, however much external moisture they might absorb, that would be subsequently expelled without causing damage; but if a crop is late and the gathering is not completed before the autumnal rains begin, these rains cool the atmosphere, chill the ground, and the tobacco is not dried sufficiently to get rid of the sap completely, which, in my opinion, will cause excessive fermentation and damage in the hot months of the next year.

My advice therefore to those buying unfermented tobacco, is to prefer early crops to be on the safe side, and avoid late crops always; in cases when you cannot avoid such crops, always buy after fermentation. That there are exceptions I cannot deny, for I have seen for instance crops quite the reverse, but there was good reason for it, as in my records I notice two years with late planting through wintry springs, that were rectified by a dry autumn. The two worst crops on record were those of 1884 and 1890; the first was damaged by excessive rains and the second by excessive dryness, which latter condition, curious to say,

Record of Crops.



- 1901—Poor in substance.
- 1902—Gummy, dark, aromatic, improve with age.
- 1903—Good, but leafy, very large.
- 1904—Thick, dark, medium.
- 1905—Poor in substance.
- 1906—Good red, badly stained.
- 1907—Poor and bad color.
- 1908—Small medium. bad color.
- 1909— „ „ „ „
- 1910—Very large, leafy, light and poor.

is a source of damage, owing to the fatness of the leaf, which, according to my theory, prevents the thorough evaporation of the sap. There are also two years on record in which no fermentation took place, the atmosphere being hot and cool alternately, and the evaporation taking place too slowly ; but such years should be carefully guarded against, as in my opinion the fermentation then is only half carried through, and is completed the following year ; in such rare instances we see tobacco getting damaged the second year after gathering, and very few know the reason why. I now append a record of the conditions of the crops for the last ten years for the perusal of those interested, and as their course is very erratic it is the duty of every manufacturer who possesses sufficient capital, to lay in a stock for one or two years in advance, whenever he finds a good crop, in order to avoid bad years ; he may also bear in mind that Turkish tobacco is in its prime after two summers, and continues to improve until the fourth year, after which it remains stationary for two or three years more, unless it is of a very thin and poor crop, in which case it must be used before the third year.

*PART III.***Topographical.**

THE most important tobacco fields in Turkey are situated in the south-east corner of Macedonia and the adjoining border of Thrace, from which it is separated by the river Nestus. This district produces about 30,000,000 lbs. of the most expensive tobacco grown in the old world, which is quite as famous as that of Havana. The chief town and port where the trade is carried on is Cavalla, opposite the island of Thasos, the ancient Neapolis where St. Paul first landed when he came to Europe on his way to Phillippi, which is now in ruins; Cavalla was the landing place for Phillippi, and lies on the ancient Ignatian way which used to connect Rome with Constantinople. It has grown extensively within the last twenty years, if not in beauty at least in importance, and as regards edifices, for it now possesses some of the finest tobacco warehouses in the world, exceeding two hundred in number, large and small; but it has no harbour, quays or paved streets. It is inhabited by 20 to 25,000 souls, the majority being Greeks and the remainder Turks, Jews and Gipsies. When the

Panorama de Cavalla

Πανοράμα Καβάλλας



CAVALLA.

warehouses are fully working it is estimated that the population increases by 5,000 at the lowest computation, through the influx of workmen from the neighbouring country, who readily find work between April and July, as workmen are always wanted at that time. The adjoining country produces very little else than tobacco, which is all brought into Cavalla for manipulation and exported from there to all parts of the world ; but Austria takes the greatest quantity if not the highest quality. The exportation amounts to about 25,000,000 lbs. annually, Austria and Hungary taking approximately the one half.

Currency in Turkey is very complicated and varies according to locality ; it is very puzzling and mistakes are often made ; we shall quote prices here on the basis of 2d. per piastre, but a buyer should always settle beforehand at what rate the Turkish gold pound is reckoned in each locality.

The Turkish pound is divided into 100 piastres and is worth 18s., but the silver value of it is 108 piastres ; in some localities they still calculate on the Kaime or paper value, which is 178 to 183 piastres per pound gold.

The bulk of the transactions however, are settled on the basis of the silver Medgitie (dollar), which is worth 20 piastres at 2d.=3s. 4d., thus a seller often asks you a price at so many Medgities per oke.

The coins in circulation are :—

	Medgitie	=	3s. 4d.—20	piastres.
$\frac{1}{2}$	„	=	1s. 8d.—10	„
$\frac{1}{4}$	„	=	10d.—5	„
2	piastre piece	=	4d.	
1	„	=	2d.	

and the “metallik,” worth $\frac{1}{2}$ d., is an amalgam coin.

Cavalla being the centre of the trade, we shall make it our starting point in describing the surrounding country and its varying production. The fertile plain of Phillippi being shut off from the coast by a range of mountains rising abruptly from the sea, there is very little cultivation along the seaboard, such as there is is confined to the two small plains situated on either side of the town, viz., Kutchuk Orman on the west, and Kara Orman on the east. These produce a very showy kind of tobacco, reddish and substantial, but being grown in proximity to the sea, it is affected by the salt spray thrown out by the waves, and carried by the winds inland, causing the tobacco to have a bad combustion. The same effect takes place in all districts which are in the neighbourhood of the sea. The tobacco is sold unclassified, excepting grower's refuse, at prices ranging from 8 to 10 piastres silver currency (viz., at an equivalent of 2d. per piastre in English money or four cents of an American dollar) per oke which equals 2.83 lbs. (English).

Almost facing Cavalla in a south-westerly direction and on the slopes of the hills descending to the sea, is the district of Lefteré, which produces a considerable quantity of a medium quality of Basma, rough in appearance and of a mixed colour, but mild and serviceable tobacco and not so much affected by the sea winds, the fields lying well back and at an elevation. The principal producing village is Lefteré, on the site of the ancient Eleftheropolis, and where there is the seat of a government sub-office (Mudirie); next to Lefteré in rotation are the small villages of Kochicar, Dresna, Chiusti and Ftere, all about an hours' distance from each other; this district was very important

in ancient times, and here were planted several Greek colonies, the ruins of which are still visible, and near Ftere, there are hot mineral baths of great medicinal value, which must have been established by the Romans as their construction indicates; they are used even now by the population of the neighbourhood in the summer, although difficult of access on account of the wild state of the country and the total absence of roads.

The climate is mild, being sheltered by the high mountains on the north; the olive tree grows wild and there are also extensive groves of almond trees. Except at Lefteré, which supplies Cavalla with vegetables, there is comparatively little cultivation; wild game abounds, such as deer and wild pigs, besides woodcock, partridges, pigeons and hares.

The country is very sparsely populated and the hills are covered with oakscrub and ilex, out of which they make charcoal. There are many shepherds who manufacture a rich soft cheese which they preserve in skin bags. The annexed map indicates the exact position of the afore-mentioned places. From Cavalla a tolerable carriage road over the hills north-westwards, and following the ancient Roman road, "The Ignatian Way" (which is still visible in parts), leads to the fertile plain of Phillippi and the extensive tobacco-producing district. After ascending the hills to a height of 650 feet, a magnificent panorama presents itself; the rocky and barren ground above Cavalla is transformed into one of the finest and most extensive plains that European Turkey possesses, almost circular and surrounded by mountains rising to 7,000 feet, intersected

by rivers and lakes and presenting a carpet-like appearance, studded with towns and villages ; facing north, 20 miles distant is the chain of the Rhodope mountains, which separate Roumelia from Macedonia, and rise to a height of 7,000 feet ; while on the west, 10 miles off, is the majestic Mount Pangeon, one of the most charming mountains in the near East.

The snow on the peaks lasts about eight months of the year. On descending to the plain, which takes about one hour after quitting Cavalla, the road here bifurcates westward, leading to the districts of Pravista, Zichna and Serres. We shall follow the straight road to Drama, describing each village as we proceed ; this road skirts the eastern side of the hills and is the highway to the most important tobacco-producing ground. At the foot of the hills and at the very beginning of the plain is a large farm called Mademly Chiflik, this derives its name (Metal Farm) from the ancient mines in the neighbourhood, it is now planted with tobacco, although formerly it produced cereals and stock. The tobacco grown on it is of medium quality, rather rich, and fetches about 10 piastres per oke; further on the right and just under the hills are, in rotation, the villages of Zigos, Kortzu, and Selian, which produce medium tobacco of full flavour, rich red colour, and not much aroma, but cool smoking and of good palate ; the village of Selian is the largest and most important, possessing about 300 farms. This district obtains from 8 to 15 piastres per oke all round. Close to the village of Selian begin the ruins of Phillippi, the battlefield depicted in Shakespeare's play "Julius Caesar," between the two great Roman armies of Brutus and Cassius and Antony and

Caesar, which took place here in 42 B.C. The whole place is now in ruins which are strewn in all directions ; there is a station for carriages and horsemen on the road here just before one reaches the ancient walls, where all travellers halt at a primitive hostelry and a coffee stall on the opposite side, and they are enabled to have a closer view of the ancient ruins ; this however, will hardly be of interest to tobacco buyers.

Just beside the ruins of Phillippi is another village named Raktza, which produces Basibali (Persichan) tobacco selling at low prices. It is rather coarse and strong, and unsuitable for the English market, the price being 5 to 7 piastres per oke. After passing the ruins close to the hill where the Acropolis or Citadel of Phillippi stood, the road crosses a rivulet (which discharges into a great marsh, standing at the foot of Mount Pangeon and covering about 5,000 acres of land) over a stone bridge on which some mills are situated, and traversing a marshy ground where rice is cultivated, leads to the district of Kir, which produces the finest tobacco grown on this plain. The first village just before entering the district is the small village of Bounarbash. Here the springs of pure water that supplied Phillippi lie ; they are of great abundance and the ancient aqueducts are still visible. This village produces a good quality tobacco, full flavoured, and sold at from 10 to 15 piastres per oke.

Before describing the important district of Kir, I must first explain that here the growers divide their crop into two parts, viz., Montan and Maxoul—the latter consists of all the sound and finest leaves, the former of all the faulty

ones; these are sold separately. It is customary to deduct from 10 to 20 per cent. from the Maxoul for large leaves which are paid for at a low price, viz., from 4 to 6 piastres per oke.

In order to explore the district of Kir, which lies at the eastern extremity of the vast plain that here closes up, it is necessary to quit the highway, and, taking an eastward direction, we visit the various villages here situated close to each other. Between the village of Bounarbash, which forms the entrance to the Kir district proper and the large village of Borian, which is traversed by the highway, runs a very wide torrential river which divides the land into two parts abutted on by lofty cliffs.

On the right lies the village of Kir itself which contains six parishes, named Himetli, Boujak, Hasapli, Arapli, Hasan-Mahale and Organzili.

The tobacco produced at Kir proper is of a superior quality, very rich and strong, not suitable for England on account of its strength, but much sought after by Russian buyers; above the village of Kir though, on the mountain slopes, lies a group of villages which are known under the name of Little Mahala and produce very sweet flavoured tobacco which is comparatively mild. The prices ruling at Kir are from 12 to 25 piastres for Maxouls and 5 to 8 for Montan. The Little Mahala district consists of several small villages in close proximity to each other.

The first is Dismekli, which produces the finest tobacco of Sirdily shape, fetching from 15 to 25 piastres for Maxoul. The next village is Parzarlar, the tobacco of which is

little more flavoured and the price is from 10 to 20 piastres. Next to that is Kavakli, which produces more substantial tobacco than any of the others, but it is very showy and fetches from 10 to 20 piastres. There are two more very small villages, Kanaklar and Dovalar, both producing very fine tobacco, the prices ranging from 10 to 20 piastres.

Still above these villages, which lie at an elevation of 200 to 300 feet above the plain, is a mountainous country, amongst the declivities of which are situated a few straggling villages producing nothing but tobacco; these are called Dermizorian, Chal and Ola, and produce mild tobacco of a good type but not of good appearance, fetching from 6 to 12 piastres all round. We now cross the torrent and we have, opposite Kir, the famous district of Kir-Mahala, where the highest prices are obtained, mostly from Egypt and lately from America. The centre of this district is the large village Noustratli, which now is in the proud position of possessing a railway station on the junction line from Salonica to Constantinople. The name Mahala means in Turkish, parish, or quarter of a town, and emphasises the close proximity of the villages which in this region lie very near to each other. Here the tobacco is also sold ready sorted, viz., Maxoul, Montan and Refuse. Noustratli produces a very substantial and full flavoured tobacco of great merit, but hardly suitable for England on account of its strength.

The prices ruling for the Maxoul are from 30 to 45 piastres; the other villages further on obtain even better prices, Noustratli having got the bad reputation of smuggling tobacco from the Kir district into their own.

The growers here are of a more wealthy class and possess fine houses, giving the village a superior appearance.

An opportunity is here given us to pay a tribute to the great virtue of hospitality to strangers on the part of the inhabitants, who will look after your comforts and never expect a reward ; in fact if you were to offer any it would be a great insult ; of course the manifestation of such goodwill on the part of so poor a peasantry is very much appreciated, especially where there is a lack of accommodation for strangers.

Next and almost contiguous to Noustratli are two small villages, Simsirli on the north and Borjanli on the south-east. Simsirli produces the mildest tobacco grown on the Mahala (proper) district ; prices for Maxoul rule from 30 to 50 piastres, Borjanli of medium strength at prices from 25 to 40 piastres.

A little distant from these two, and situated towards the north are the villages of Suruziler, producing fine, leathery and rather dark tobacco, prices from 40 to 50 piastres ; and Keli, Malkalar and Kanaklar with very fine tobaccos of full flavour pricing from 40 to 50 piastres per oke.

Beyond these two villages lies the larger village of Zaaritch, which is now a worthy addition to the famous group ; this village was considered an outsider owing to its producing very mild and flimsy tobacco more of a mountain description, but the demand for mild tobacco and the great improvement of its quality have brought it into great request and prominence, and it now obtains double the amount of the former prices of only a few years ago.

In my opinion, it produces the finest and most suitable high-class tobacco for the English market, mild, mellow and light in colour and bulk; the prices rule from 25 to 45 piastres for the Maxouls.

There are two small villages on either side of Zaaritch, namely Gerekli and Yurekler; they produce almost similar tobacco. Here ends the Mahala district, this being the highest cultivated part of the slopes rising from the plains, which here attain the height of nearly 2,000 feet.

Opposite this and continuous to the Little Mahala district from which it is separated by a low ridge of mountains, lies the Karamanli district, with a group of small villages, producing a good quality tobacco akin to the Little Mahala quality; but being an outlandish place and not very safe, it is rarely visited by buyers, and is mostly in the hands of the middlemen, who secure large quantities of the produce from the poorer growers, and re-sell to the buyers in big lots; these tobaccos are very suitable for England but difficult to procure. Part of this district produces a mild and bright sort of Persichan of great merit; the ruling prices are from 10 to 15 piastres for unsorted Basma of which they produce a little, and 6 or 7 for Basibali which is of the Kabakolak kind; the principal villages are Karamanli, Koozlookui, Chilikler, Libotoon and Hassan Balar, Dedeli, Safkalar, Kiranli, Kektesli and Kiuleli. The villages of Beresta, Murajik and Lisian produce exclusively Basibali, so also do a large group of small villages on the north called the Chetz or Buk district, which here reaches the river Nestus, that separates Macedonia from the province of Thrace.

On retracing our steps in order to return to the main road, we come across two Christian villages, all those already described being inhabited by Turks alone.

These two villages lie between Noustratli and the highway to Drama; they are supposed to be of great antiquity, being remnants of towns belonging to the second Roman Empire, one of them lying close to the top of the cliffs of the great torrent named Idrinitzik, a corruption of Adrianopolis; this village produces large quantities of a very superior tobacco, being a cross between Kir and Mahala, to which latter place much gets smuggled. The prices ruling are from 15 to 30 piastres.

This tobacco, however, is very liable to heat in bad seasons, the village being damp. The next village, Chatalja, lies in a hollow and produces much coarser and stronger tobacco, pricing from 15 to 25 piastres.

On the main carriage way there are two large villages, the straggling and poor hamlet of Borian, where we left the road on our way to Kir, being the first; it produces a large quantity of an inferior kind of Kir tobacco, strong and showy and much sought after by the Monopoly's purveyors, who mix it with Kir proper in order to reduce the value of their parcels. It sells from 8 to 15 piastres. The next village is Doxat, which is really a small town containing a mixed Christian and Turkish population, and producing a large quantity of the most showy tobacco grown on this plain.

Here dwell the most skilful cultivators, who, by paying a great deal of attention, produce, from otherwise unsuitable soil (being on the plain and far from the mountain slopes where the soil is more favourable for delicate growths), tobacco of a beautiful texture and colour, but it is unsuitable for England on account of its great body and strength.

It is bought by the Monopolies and fetches from 10 to 20 piastres.

One hours' ride further on is the town of Drama, the Capital of the Province and seat of the governor (Liva). The town itself is not very large, having a population of only 7 to 8 thousand inhabitants, but being centrally situated and served by the railway, it is of great importance and a great market rendezvous for all the surrounding country.

It lies 39 kilometres (21 miles) from Cavalla and close to the northern barrier of mountains, on the slopes of the Rhodope.

It possesses an abundant supply of water in the shape of numerous springs rising all over the ground and making the place rather unhealthy ; these are due to a subterranean river which disappears five or six miles further on in a north-easterly direction.

The neighbourhood of Drama as well as the village of Ravika on the east and all the villages on the north-west, produce a large quantity of Persichan tobacco which is of full body and strength and unsuitable for the English market ; it sells at 10 to 12 piastres per oke. The principal

villages are Dranova, Visochan, Plevna, and Persichan, from which the tobacco derives its name, and further west Kubalista, and Carlicova ; the majority of the population of these villages are Bulgarians, the rest being Greeks.

The land to the south of Drama, opposite which lies Mount Pangeon, is impregnated with waters which run into the great marsh of Pravista, and is used for cultivating rice and cereals, being too swampy for tobacco. There are several big estates here owned by the ancient nobility of Drama, which was the feudal seat of the great potentate, Tahir Omir Bey, who supplied an army to the Sultan in time of war.

Drama possesses two or three tolerable hotels, an important railway station, Law Courts and barracks (it being a garrison town), a busy market place, post houses and several inns.

From Salonica it is six hours distant by rail, and sixteen hours from Constantinople, with which it has direct railway communication. Retracing our steps where the road bifurcates on reaching the plain after its descent from the mountains, shutting it off from the sea coast, we proceed to the left westward and keeping close to the mountains on the south of us in almost a straight line towards Mount Pangeon. At first we meet with a very small village called Vassillaki, where a Turkish Teke (hermitage) is situated, together with a coffee house and a farm producing tobacco of medium Basma fetching about 10 piastres per oke.

Proceeding on towards Pravista, we have on our right the great marsh which at some parts almost touches the road, and on the left and close to the hillside the

villages of Prenzova and Kinali; these produce a very inferior quality of Basibali which is bought by the Monopolies at the price of 3 to 5 piastres per oke, but it is not suitable for England.

On reaching the south-west corner of the plain, we arrive at the town of Pravista which is the centre of the district which produces the tobacco known in England under the name of Cavalla and locally under the name of Londres.

This tobacco is grown in a narrow and long valley which lies to the south of Mount Pangeon and is barricaded from the sea by a low ridge of mountains rising to a height of 2,000 feet, thus forming an elongated plain about ten miles long by two wide. This tobacco is of the Basibali nature and is supposed to have sprung from Virginia seed; it is the only Turkish tobacco resembling and blending with Virginia; before the importation of Chinese tobacco it was all consumed in England for cutting purposes, viz:—for pipe tobaccos; but lately, other markets have been opened for it and now the importation is greatly reduced, almost as much going to the United States as that quantity coming to London. The leaves are large, of bright colour, and very mild and bulky, burning with great ease, when mixed with Virginia for cigarette purposes to the extent of 10 to 15 per cent., it increases the bulk and improves the combustion of it. It is largely used in mixtures in England.

The production is about 2,000,000 lbs., 30 per cent. of which is discarded as refuse. The ruling prices are from 4 to $5\frac{1}{2}$ piastres per oke, the refuse obtaining $1\frac{1}{2}$ to 2 piastres per oke.

The best quality is produced in the villages lying on the right after leaving Pravista, which is south of Mount Pangeon, they are named Bostanjili, Elezik, Avli, (high up) Osmanli, Rehemli, Chitakli, Koolali, Samakov and Bosten, this latter being the largest village and possessing some ancient mines and fortifications in ruins; the opposite slope (Karsi Yaka) is much dryer and the tobacco is not so bright in colour; the villages situated there are called Dranova, Devekiran, Moursali, Tormooslu, Debekli, Beleziler and Demerli; beyond this latter and Bosten on the opposite side of the valley, the plain begins to assume wider proportions and eventually ends at the Gulf of Orfano, but there is very little tobacco cultivated at this end of the valley.

There is a large Christian village next to Bosten called Mesorop which produces the woollen mats or tobacco wrappers for the bales, and also a little Basma tobacco (as also the villages Iserly and Karian) which fetches from 6 to 10 piastres.

The plain ends at the river Strimon, near its mouth and the site of the ancient Amphipolis, extensive ruins of which are to be found near the village of Yenikiroy.

The market town of Pravista has a population of 5,000 inhabitants and is the seat of a sub-governor (Kaimakam). It possesses some inns and a few tobacco warehouses and several market booths, and, although in proximity to the great marsh, it is comparatively healthy, having a current of air from the mountains passing through it from a defile leading to the valley just described; the population is

consisted of Greek, Turkish and Gipsies; there is a rather dilapidated road leading from here to Zichna and Serres skirting the northern slopes of the great mountain which stands like a giant above it.

This road takes a northerly direction and on its left are situated the villages of Kotchan, Paleochori, and Nikisian, which produce a medium kind of Basma of reddish colour, good flavour, but not much aroma; it is suitable for England and fetches from 10 to 20 piastres with 10 to 20 per cent. reduction for large leaves.

On the northern slopes of Pangeon lies the Zichna district which is new to tobacco growing; the production here was mainly cotton, but of late they have successfully cultivated tobacco which assumed a special variety, having developed an extraordinary amount of aroma reputed to be derived from Ayosolouk seed which was originally sown here, and also the lanciform shape of the leaf (Sirdily). At first, however, manufacturers had a great deal of trouble with this sort of tobacco on account of it getting very dry and unpliant after ageing, but successive cultivation of the fields seems to have overcome that fault; the tobacco is thick and rather dark, and mixed in colour, and the large leaves are too coarse and strong, but the small leaves now packed into Dubecs are very much sought after for their aroma by almost all the markets, and the production advances every year.

The villages lie in a zigzag way; the best known are Kromista, Chereplian and Provista, others Kiupkui, Vitasta, Radolivos, Semalto, Sfelinos, Lakovikia, Vulchista,

and Angista, the latter a station on the Railway line; prices range from 15 to 25 piastres with 10 to 20 per cent. allowance for large leaves.

Beyond that district is a very extensive marsh (Lake Tachinos) ancient Kerkinitis, on the north of which lies the town of Serres, near the river Strimon (Turkish Karasou).

Serres is mentioned by Doue, a French traveller, who visited this country at the beginning of the last century, as being one of the jewels in the crown of Turkey, but it has declined very much in importance; its main produce was cereals and cotton, recently however they have paid a good deal of attention to the cultivation of tobacco, which is now on the increase. Its character is the same as Zichna but with less aroma and more strength, and it is bought as a rule by the monopolies; prices range from 10 to 25 piastres.

The best villages are Visnik, Dovista, Subaskioy, Topolian and Sarmusakly, which, besides numerous others, were the first to cultivate tobacco; Serres is on the railway, and five hours distant from Salonica.

To the north of Drama and Serres, approached through the mountains, lies the district of Nevrokop. Here tobacco has been produced for many years of a very coarse and strong description but very showy; it is more of the Basibali and Kabakolak type and it is unsuitable for England, prices range from 5 to 10 piastres.

To the west of this district is Petrich and Djumaya; the tobacco produced here is also of the same character; these two districts are close to the Bulgarian frontier.

District of Sarissaban.

WE have now to retrace our steps to Cavalla in order to explore the eastern portion of the country.

By following the Ignatian Way eastwards of Cavalla, we pass the Kara Orman, which produces similar tobacco to the Kutzuk Orman. It possesses about 80 farms and is almost a suburb of Cavalla. This part was enclosed by extensive fortifications built by Justinian to protect the port from the incursions of the Goths; the remains of these are now visible.

On the mountains above are the straggling villages of Eski Cavalla and Kokala, which produce a small quantity of tobacco similar to that of Kara Orman; the road, a carriage way in a very bad state of repair, follows the coast for about an hour and a half when it emerges at Tserpenty, in the maritime plain of Yenitze. This plain is formed by the alluvial deposits of the river Nestus and extends to Maronea, a district of over thirty miles long, and slopes gradually from the mountains to the sea forming a belt of low land five to ten miles wide, very fertile but sparingly cultivated, with numerous marshes and lagoons.

The low lands are given up to the cultivation of cereals; in the lagoons extensive fisheries exist, while the waste lands are covered with flocks of sheep and cattle.

The villages on the slope and also between the mountains produce very fine tobacco suitable for all markets.

The principal town is Sarissaban, where the government offices are situated, a miserable and unhealthy village lying in the middle of the western part of the ground which is divided by the river, and where a well attended market is held once a week. The tobacco villages lie well up to the hills, and are known under the name of Karsi Yaka ; the first at which we arrive is Kayabunar, the only Christian village on this side, that, with the next two Karajilar and Gorian, produce a medium class of tobacco of full flavour fetching from 5 to 7 piastres for the Sira-pastal, and 10 to 20 for the Maxoul.

It is necessary here to explain that this plain is very much exposed to the east winds which prevail when the crop is gathered, and the wind causes a great deal of damage by tearing the leaves; the growers therefore separate the second leaves (Maxoul) from the damaged, which are called Sira-pastal and sell them quite distinct from each other. Sira-pastal on account of its ragged appearance never found a market in England. It generally sells at a considerably lower price than the Maxoul, indeed very often only one-fourth of the latter; though from a manufacturer's point of view the merits of the tobacco are the same; thus a manufacturer who wants to save money could utilize it without sacrificing his quality; the Russian and German markets make great use of it.

Some of the villages on these slopes produce tobacco equal to the finest grown across the river which is

universally known under the name of Yenitze ; as for instance, Kurudere, very strong, Chobanli and Becktimish, medium, Inzes, mild ; prices ranges from 30 to 45 piastres for the Maxoul, and 7 to 10 piastres for the Sira-pastal ; and Karakaderli, Kavajik and Arapli fetching from 20 to 30 piastres for the Maxoul and 6 to 8 piastres for the Sira-pastal.

On the mountains above there are several villages producing very fine tobacco of medium strength, showy, of a light red colour, and suitable for all markets ; it sells at prices ranging from 15 to 25 piastres for the Maxoul, and 7 to 10 for the Sira-pastal. It is difficult to procure in small quantities, as this district is, like the Karamanli which it adjoins, in the hands of the middlemen who have a great influence over the growers here, and whom they terrorize, keeping them in a state of serfdom.

This district is difficult of access, there being no roads in it, only mule tracks which are very rocky and precipitous ; the people are the worst in the country, being in open feud with each other, and many murders take place, giving a lot of trouble to the Governors and gendarmes. The principal villages are Ouzounkeui, Nederli, and Barakli, also Mustafa-Olar, Darovasi, Gazilar, Kavajik and Neïpli, which is nearest to Cavalla. The packing is not clean as in the lower villages, and when manipulated the tobacco gives a low percentage of good leaves ; it is almost all manipulated into Dubecs and mixed with the better class, which it closely resembles.

Yenitze District.

NOW we come to the famous Yenitze District, the produce of which, by the bye is considered as Macedonian tobacco, although it actually lies in the province of Thrace, which is separated from Macedonia by the river Nestus.

Yenitze is now only a name, the town having been deserted on account of its unhealthy position after a great fire in 1843, when the inhabitants migrated to Xanthi (Turkish Eskedge) which, from a small village lying in a gorge at the foot of the mountains, developed into an important town (15,000 population), on the line from Salonica to Constantinople, and is now the tobacco centre of that district.

This is the place where tobacco was first grown in Turkey about the middle of the 18th century, and known under the name of Yenitze, it became famous all over the world; the tobacco was then grown right down into the plain and in the neighbourhood of the town of Yenitze, but the best sorts are now produced on the slopes of the mountains to the north of the maritime plain. It is also still produced in the lowlands around Yenitze, but is not considered as good as that grown near the mountains

which is known under the name of Yaka. This belt runs from the town of Xanthi, from east to west, until it reaches the river Nestus which separates it from the district of Karsi Yaka which we have previously described. Yaka proper consists of eight villages, viz :—Kerechiler, Moursal, Kijiltza Moursal, Cheleply, Fichirly, Chakirly and Oktzilar, the last two close to the river, and above them, high up, the village of Saltikly; the first five produce rather strong tobacco, and the last three milder. There is no doubt that Yaka tobacco is the finest and most expensive in the world, prices ranging from 30 to 70 piastres per oke for the Maxouls, and 8 to 15 for the Sira-pastal, and many growers here getting as much as one thousand pounds for their produce.

The fields are small and terraced on the mountain slopes, the soil is of red clay loam mixed with small flint stones, the plants are short, the yield being very small per acre. A careful examination shows the matured tobacco leaves to be rather leathery and velvety in appearance, with the veins on the back raised and distinct; it generally burns badly on account of its rich manuring, the villages possessing large flocks of goats for that purpose. The villages of Kerechiler and Moursal are the largest and most important, and their produce is much sought after by the Russians and Roumanian Regie, unfortunately their plantations extended towards the plain of Yenitze and thus the quality of their produce got deteriorated, so now they obtain the lowest prices; whatever they grow, however, in the fields that are close to the mountains, if not mixed with the produce of the plain, is of great merit. Kijilza Moursal is the best of this group, but with the change of

taste for mild tobaccos the produce of Saltikli and Chakirli now obtain the best prices. Oxilar is a new addition to Yaka, and the poorest in substance and value ; its colour is the lightest while that of Saltikli is reddish of a distinct hue and the most showy in appearance. Abutting on Yaka, and lying more on the plain is a group of villages known under the name of Little Yaka, which produce also fine tobacco but of a secondary description ; the villages are named from west to east, Tikisli, Dautlou, Choban Mahale, Teke and the fields of the outskirts of Xanthi, and their produce fetches from 15 to 25 piastres for the Maxouls, and 5 to 10 for the Sira-pastal ; then there is the plain known as Ova, consisting of various farms, and the villages of Balabankeui, Osmanlou, Ortakeui, Demenli, and Bouloustra, the last near the sea, and close to the site of ancient Abdera. This latter village is affected by the sea breeze and the tobacco has the usual drawbacks of the salt air, viz : bad combustion and loss of colour after fermentation.

The prices of the produce of Ova are the same as these of the Little Yaka ; a lot of this tobacco is introduced into the parcels of Yaka sold in Xanthi, and it is very difficult of detection, as it does not possess the same aroma, being coarse, but the taste is almost identical. A buyer should exercise great care to avoid being deceived, the only indication is a dullness in the colour, the absence of aroma, and sandiness on the surface of the leaves ; the adulteration is so ingenious however, as to make it difficult of detection.

Above Yaka is the mountainous district of Xanthi, which produces a fair quantity of a mild type of tobaccos

of great merit. The tobacco is cultivated in the little valleys found in the undulations of the mountains, which are here continuous and extensive, being the principal range of the Rhodope chain, which extends to Roumelia and Bulgaria. The highway to this district is through the gorge at the back of the town of Xanthi; this is known under the name of Xanthi Chebel or Mountains and runs northwards and parallel to the Yaka until it meets the river Nestus; it is divided into two groups, viz., Derekol and Souyoulou. The name Derekol means torrent, and all the villages are situated on the cliffs of the torrent.

As we proceed through the gorge, high above on the left, we come upon the small villages of Makaklar and Kitzili; these two produce the darkest and most substantial tobacco of this kind, very much resembling the Yaka, except for the aroma. It is often mixed with the latter as an adulterant, and prices range from 10 to 25 piastres for the Maxoul and 5 to 8 for the Sira-pastals.

As we proceed eastwards, we pass the following villages on either side;—Altmatzali, Emerli, Kourdalan, Doumanli, Kerestan and Sitza, which all produce tobacco similar to the first two we have already described, but somewhat lighter in colour and texture; the prices ruling are also a little less.

To the north of these villages, well up in the mountains which here gradually rise to over seven thousand feet, making the country equal in beauty and scenery to any in Europe, lies the large village of Gabrova, and a little further the villages of Margarit and Messili; these latter two produce the mildest tobacco grown in Turkey. They

are in the habit of packing it in small ballots called "Kenevir," a name signifying canvas or hemp and derived from the wrapper of the ballots. This tobacco is easily attacked by the worm on account of its mildness and sweetness; it is as a rule badly sorted and fetches from 10 to 20 piastres for the Maxoul and 4 to 6 for the Sira-pastal. Gabrova is inhabited by Bulgarian Christians and is famed for the beauty of its women who, by the bye, do the greatest amount of work, the men going to Xanthi in the season to work in the warehouses as packers; the climate here is very healthy on account of the absence of any stagnant waters, and the bracing qualities of the mountain air, but it is altogether out of the beaten track through the lack of any roads; it is well wooded with magnificent groves of walnut and chestnut trees and abounds in wild game. In the type of its inhabitants one can trace the ancient races from which was recruited the army of Alexander the Great with which he conquered a great part of Asia and Egypt.

On descending from Gabrova to the riverside, or the Souyoulou portion of this district, we approach Buk, which possesses a railway station near an iron bridge over the river Nestus. All the villages of the Souyoulou are situated on the cliffs near the river bank between Buk and the gorge which emerges into the plain at Chakirli in the Yaka district. They are named Arpazik, Ouseinkeui, Horuzlou, Mamatli, Kouzloukeui and Kourlar, all producing very fine tobacco, very showy, and possessing a delicate flavour; it fetches from 12 to 25 piastres for the Maxoul and 4 to 7 for the Sira-pastal. Next to Kourlar and right on the bank of the river, is the large village of Yenikeui

which, like Gabrova, is inhabited by Bulgarians, and these two are the only Christian villages in the district. Beyond Yenikeui, which is on the railway and has a station, and perched up in the mountains, are two villages Ada and Sarnitz. These two small villages produce the very best tobacco and obtain the highest prices, ranging from 15 to 30 piastres for the Maxoul and 5 to 8 for the Sira-pastal; their fields are small terraces almost hanging on the mountain sides, which here attain an elevation of nearly three thousand feet, and lie close to the river which emerges through a defile hardly surpassed in grandeur by any scenery in Europe. The railway from Drama to Xanthi follows this waterway and finally comes out into the plain by a wonderful chain of eighteen tunnels, above which one can espy the eagle soaring in the air.

If you draw a line from Port Lagos (the port of Xanthi) and follow the waterway up to Xanthi, then through the district we have just described to Buk, from Buk to Drama, Drama to Nevrokop, Nevrokop to Serres, and back to the coast by the river Strimon, you will encompass the tobacco district proper of Turkey. This line will comprise a belt of about sixty miles in length by thirty in width, beyond that there are tobacco producing places here and there, but the cultivation is not systematic, nor is it of a high standard.

To the east of Xanthi is a small district called Swan Yaka (Onion slopes), its main produce being as its name implies, onions, but lately the inhabitants ventured on tobacco-growing; their tobacco however is of an inferior kind, fetching from 5 to 15 piastres. Further on is the town of Gumuldjina, a great wine centre, which also now

produces a kind of tobacco, red in colour and small size, which remains a long time green, no doubt, through unskilled cultivation. Above Gumuldjina on the mountains known by the name of Kritzali, there is a better kind of tobacco produced possessing much aroma, but it has the peculiarity of retaining its moisture for ever. This sells at from 5 to 10 piastres unsorted; the percentage of good leaves on manipulating is very low, and the working of it costs very much; but when this is carefully effected it is of great merit. The best districts are Chamdere and Sultan Yeri. The crops are very small and the collecting of them very tedious, on account of the very limited produce of each individual grower. The district is inaccessible and the people, who still retain their ancient name of Agrians, meaning Wildmen, are of a rather savage nature; but they are a very fine type of men.

Opposite these mountains there is a neck of high land projecting right into the sea called Maronea; the peculiarity of this place is, that although no tobacco is cultivated in it, it produces the best tobacco blenders in Turkey, who acquire their skill by working as sorters in the warehouses in Xanthi.

Further east at Sufli, a silk producing centre, a rough kind of tobacco is grown known in England under the name of Bulgarian, but it is only fit for pipe smoking, it has a fine yellow colour and possesses more flavour and substance than Cavalla tobacco, but retains its greenness and moisture for a long time; on account of this fault it has not found much favour in England; the price on the spot is very low, being 3 to 5 piastres per oke, mixed. It ferments very violently on account of the excess of moisture

it possesses, and often gets damaged thereby. There is also some tobacco grown by the towns lying near the Sea of Marmora, inside the Straits of the Dardanelles, but it is of a very inferior and coarse kind, hardly suitable for export; it is generally bought by the Turkish Regie and cut up for local consumption.

Almost the same applies to various districts westward of Serres; the demand for low grade tobacco for the Austrian and German markets has induced many villages around Salonica, and as far as Uskub, to try their hands at tobacco cultivation. Their produce is coarse, and of a low grade; it resembles Basibali and sells at low prices. The same applies to the produce of Bulgaria, although efforts have been made of late to improve its growths. It will take a very long time however, before the high standard of the Macedonian tobaccos is reached, although, by exercising great care, some districts have succeeded better than others in attaining that ambition.

The centre of the Bulgarian tobacco cultivation is the village of Haskovo, in Eastern Rumelia, close to the Turkish frontier.

Turkey in Asia.

HAVING exhausted our description of all the tobaccos produced in European Turkey, we now take up the much larger area, and variety of kinds produced in Turkey in Asia. Before we proceed however, we must prepare the reader not to expect anything of the nature of the tobaccos produced in Macedonia ; for there is an entire absence of the skill and care which is bestowed there upon cultivation. The individual growers' produce here is much larger than in Macedonia, as it does not require the same amount of care, but it is in consequence imperfect and deficient in many respects, although the soil and climatic conditions are if anything more favourable.

The production of Asiatic Turkey is nearly as great as that of European Turkey the most important centres being Samsun and Trebizonde on the Black Sea.

Samsun produces about 7,000,000 lbs. of a coarse distinct type of tobacco of the Basibali nature, much darker than the Macedonian in colour, stronger in flavour, almost destitute of aroma, with a large size of leaf and containing very little nicotine, hence good from an hygienic point of view.

There is a belt of land in this part of Turkey called Madden which produces the very finest tobacco, known in England as Baffra, getting this name from a town in this district. This tobacco in particular is of very high quality, in my opinion the top leaves (Duruk and Duruk-Alti) attain the highest standard of a form in hygienic point of view. This not on account of their aroma, as they do not possess much, but because the leaves mature and ferment thoroughly and thus all injurious substances are eliminated from the tobacco leaves. The tobacco in this district is bought up-country by the Batman, a weight equal to 16 lbs.; the leaves are tied in hands or bunches with a fibre tie made out of maize; the stalks project about an inch beyond the leaf proper and are usually butted (cut off) before being used in England, an unnecessary process as they are not bitter, but by standing the juices of the leaves drain outwards through them and cause mildew at the extremity.

Samsun tobacco is very cheap, the prices ranging from $1\frac{1}{2}$ to 5 piastres per oke, but the better kinds of Baffra and Madden run to a high figure, not so much on account of the primary cost as of the tedious and expensive process of extracting them from the mass of unclassified tobaccos that are packed together by the grower, and one has to spend a lot in wages for sorting, in order to obtain only from 5 to 10 per cent. of fine leaves. Therefore it does not pay an English manufacturer to embark upon manipulation, the best way is to buy the goods sorted; the price of fine Madden in Samsun is from 40 to 50 piastres for the top leaves, (Duruk and Duruk-Alti), and from 20 to 30 piastres

for the large leaves called Bellia ; there is also a refuse called Chikinty which is serviceable, corresponding to the Sira-pastal and fetching from 5 to 10 piastres per oke.

The great merit of Baffra is that it is the rectifier of any faults that the tobaccos of Macedonia may possess.

Very aromatic or mild tobaccos are as a rule hot, but by adding Baffra you amend them ; Yakas are bad in combustion, but Baffra will improve them and so on, in fact any faults the tobaccos may have, excepting that of strength, which Baffra will naturally increase.

There is only one drawback, the darkness of its colour does not tally with bright tobaccos and in consequence should be used sparingly. In England few manufacturers use it, being frightened by the uninviting appearance of the tobacco, but if they knew the benefit it would bestow on their produce they would swear by it. The Americans have discovered its sterling properties, and now make a very extensive use of it.

Trebizonde tobaccos are much lighter, flimsier, and destitute of any good properties but colour ; a district in the interior, Tokat, produces a very sweet, rough kind of tobacco, but being very thick and oily it is not liked by manufacturers here who prefer dry tobaccos. Many growers from [this district were induced to emigrate across the border into Russia to Souhum Kale where an extensive cultivation of tobacco now takes place, but it is used mostly for the internal consumption of Russia ; it is of the same nature as Samsoun but of greater body, size and strength.

Sinope, Kerasunde and Ismid, also produce a small quantity of tobacco similar to Samsoun ; the first two are on the Black Sea, and the last named inside the Straits, almost opposite Constantinople. Further south, to the north of Smyrna, Magnesia produces a distinct kind of tobacco, used mostly for local consumption ; it resembles the Greek tobaccos but is much darker and possesses a distinct flavour, not liked by everybody.

Ayosolouk District.

NOW we come to a district, the produce of which is erroneously supposed to contain opium, because there is a great deal of opium produced on the same soil, but no trace of it has ever been proved on analysis to exist in the tobacco grown here. The injurious effects of this tobacco are caused through the great excess of aroma in combination with mildness and it is the outcome of the resinous parts of the leaves. It is a curious fact that here they do not manure the fields, but then they do not produce the same crop every year, the usual practice being to produce tobacco two years in succession, and barley the third, and the same over again; the bad properties of the tobacco therefore do not lay in the urine, neither does the tobacco acquire its aroma from the manure, as in Macedonia. Another curious fact is that the large leaves of the plants here, which are not so thick as the top ones, are less injurious, another proof that the bad effects are the results of excessive aroma, just as it is with all tobaccos which combine mildness and light colour with much aroma, for they are injurious to the throat and sensitive organs of the head through their pungency.

Ayosolouk tobacco is quite a modern product, forty years ago tobacco-growing being unknown in this part of Asia Minor; in the seventies some farmers tried their hands at it and sold it at a very low price unaware of its value;

It was exported to Russia and created such a sensation as to cause a big demand; then the secret leaked out that it was the most aromatic tobacco in the world, and more extensive cultivation took place, the original plantations being on the site of the ancient Ephesus, now occupied by a village called Ayosulouk (St. Luke) from which it derives its name. The Russians call it Shwara, but the abbreviated name, Soulouk, is more in use. This tobacco is cultivated by the farmers in much larger quantities than in Macedonia, though the labour is unskilled and the packing rough, the tobacco being left on the strings on which it is hung to dry; they also pack a little into Dubecs and Basmas, first flattening the leaves, but they have never been able to give it the colour and smoothness of the Macedonian tobacco. The usual practice is to buy it in bulk as it hangs to dry and the buyer sends his own men to pack it, being allowed ten to twenty per cent. for shrinkage and scraps.

The best tobacco is produced in a place called Giaurkeui, and fetches from 15 to 25 piastres; this is always packed in the strings. Other producing centres are Odemish and Lydga which yield the greatest amount of Basma and Dubec; these tobaccos are very aromatic but contain a lot of sand. The district of Sokia also produces a good deal of flat leaf which is more free from sand, but it is very much attacked by the worm which plays havoc with it. Sokia is a great liquirice country, and the tobacco, I believe, obtains some of its properties from the soil, thus making it sweet and susceptible to the worm. The stem of this tobacco is quite peculiar, being dark and thin. Close to this part of the country, and separated from it only by a very narrow sea passage, lies

the island of Samos which has made great strides in tobacco cultivation ; the tobacco produced here is identical with the Ayosolouk, but the harvest coincides with that of the vine which is the mainstay of the growers here, so they do not give it proper attention and in consequence do not obtain as high prices as on the mainland ; those however who take more pains with the tobacco cultivation produce a very good quality which promises well for the future. Here they sell from 4 to 10 piastres, the production on the mainland being about 5,000,000 lbs. per annum, and that of Samos about 1,000,000. This island being autonomous, is not under the control of the Tobacco Monopoly ; it is a very pretty and healthy island and free from the restrictions imposed on the mainland by the Turkish Government. Now as the ruling prices of Ayosolouk tobacco are of such a wide range that it is difficult to estimate accurately the raw material, we therefore will price the ready marketable article, the conditions here being such as to make it impracticable for a manufacturer to buy from the grower. String Solouk sells from 3 to 25 piastres per oke, the lowest price being obtained for the loose leaves which are called Tongas and are packed in heavy bales ; they are as a rule broken, green, and damaged leaves, but they contain a great deal of aroma, being mostly from the top of the plant. These are unsuitable for England, and fetch from $2\frac{1}{2}$ to $3\frac{1}{2}$ piastres, next are the large leaves which contain very little aroma and fetch from 4 to 10 piastres, above that are the small aromatic leaves the prices of which are guided by the colour, aroma, and quantity of sand adhering to the leaf, these fetch from 7 to 12 piastres excepting Giaurkeui which

fetches, as we have already said, from 15 to 25 piastres. Dubec sells from 30 to 60 piastres, Basma from 10 to 20.

There is one more tobacco-producing district of importance in Turkey namely Latakia. The tobacco exported from here is quite distinct from all other kinds on account of its peculiarity of flavour and especial treatment; this tobacco however is specially prepared for the English market which alone uses it with the exception of a small quantity which goes to Egypt.

As the tobacco is cured on the stalk, the plants are set very close together in order to restrict their growth, then they are cut down, dried and smoked.

There has been a great deal written about the way this smoking is carried out, some asserting that it is smoked by the burning of a mass of rubbish such as camel and cow dung, old rush mats, etc.; the fact is that the peasants who grow this tobacco, hang it inside their huts where they keep their hearth fire fed by branches of cedar trees and aromatic shrubs, such as wild myrtle and boxwood and anything else that may be handy for the purpose. This smoking process and the natural scent of the top of the plant which is left entire, seed and all, cause the great aroma that this tobacco possesses, apart from which there is nothing to commend it to a smoker; the great amount of carbon imparted by the smoking process causes a dryness of the mouth if smoked alone or in greater proportion than it is usual to mix it.

This tobacco is known locally under the name of Aburiha.

The prices of Latakia have fluctuated very much lately, but its intrinsic value is from 5 to 10 piastres.

The tobacco produced for local consumption here is of a different type altogether and is called Saklebank, it consists of the fully-grown leaves of the plant and is very strong and rough.

An attempt has been made by the Zionists, to cultivate tobacco in the ancient land of Palestine, but it has not been a success, the tobacco produced being coarse, sandy and rough ; that may be on account of the virgin soil and the lack of training of the settlers in agriculture.



Turkish Tobacco.

TECHNICAL.

Manufacturing and Cigarette-Making.

I AM afraid there is not much to be learnt by theory in tobacco manufacture, but the novice, if he be of a persevering and diligent nature, without which characteristics indeed he will never make an accomplished and successful man, will find in this part of the work many hints which will help him to acquire his knowledge.

It is imperative that a Blender should possess at least two of his senses developed to a high degree, viz., the Sense of Smell and the Sense of Taste, unless they are very keen, and especially the first mentioned, he cannot attain to a high degree of Expertism in this branch of the trade; of course, it need hardly be said, that to these two senses must be added the sense of vision, in order to enable him to judge the leaf at the outset.

Next to that, he must try to examine carefully the different properties of the various leaves of tobacco, some of which impart flavour, others aroma, strength, colour, combustion, etc.

In the foregoing parts of our treatise we have given exhaustive descriptions of the various growths, but we must now recapitulate the different properties of tobaccos of the Levant, under their respective headings.

DUBEC.

Of these various kinds and strengths, the best and most expensive is the Yaka. It is the king of Tobaccos. But it is not easy to manufacture, as its combustion is as a rule faulty on account of the excessive manuring that the growers give the ground, in order to obtain the aroma. It is also too strong for the English Market, although not so for the American.

In order to reduce the strength, it is necessary to mix it with very mild Dubecs, such as Mountain Dubec; combustion is improved by adding Baffra (Madden duruk), but as it is also very expensive the cost is lowered by mixing in Maxoul Basma.

KARSI YAKA is also a good class and expensive Dubec, possessing a better combustion than Yaka, and, though it is of about the same strength, costs slightly less.

MAHALA is the next high-class tobacco, which is of medium strength, better combustion and could be smoked unblended. Basma is also added here to reduce the cost. This is used extensively in the making of Egyptian Cigarettes.

ZICHNA Dubec tobacco has come very much in vogue lately; it is combustible, very aromatic and of medium

strength; this also can be smoked unblended, but as it possesses a bad colour and too great a substance, it is advisable to blend it with coloury and light Basma, and a little Madden, but no Ayosolouk. Great care should be taken to procure the right tobaccos that will blend with it, as it is not every tobacco that combines with it successfully.

KIR Dubec is strong and unsuitable for England, being more sought after for America and Russia. It possesses all the properties of Mahala, but is much stronger.

LITTLE MAHALA however, is a very desirable class of tobacco and much more suitable for England than Mahala, being much milder and cheaper, and could be smoked by itself.

There are several second rate Dubecs which are of medium strength, very little flavour and aroma; these require blending with Ayosolouk and light Basmas to improve their properties. Amongst these we may class the SARISSABAN, SWAN YAKA, OVA and KARSI YAKA MOUNTAIN tobaccos; as a rule they have bad colour and some, especially the Ova, lack combustion, their chief characteristic being flavour and coolness; the best for England are the Karsi Yaka Mountain.

MOUNTAIN DUBECS, these, being very mild, coloury and light, are very suitable for England, excepting a few villages near the Yaka, which produce rather strong tobacco, and the eastern part of the district which produces very moist tobacco. But one of the great faults of Mountain Dubec is that it smokes hot, and for that reason cannot be used alone; it should be mixed with strong Basma, Baffra and Ayosolouk, as their aroma is scenty and not of the right sort.

BASMAS.

Of course it will by now be understood, these are the larger leaves of all the foregoing varieties, and possess the same characteristics in a modified degree.

We cannot expect much aroma out of Basmas, and they naturally possess more strength than the Dubecs; if therefore, a cheaper blend is required, Basmas should be mixed with the Dubecs. Basmas are also necessary, on account of the size of the leaf, to bind the bulk of the tobacco together. Their chief characteristics are flavour and coolness in smoking.

PERSICHAN.

This is a very fine substitute for Basma, especially where strength is required; it also makes fine thread and colour, and is the tobacco suitable for straight cuts. Those from the district of Buk are very fine and mild, and can be used in the place of Basma to advantage.

SERRES.

These tobaccos are very much like Zichnas, but much stronger and satisfying. With the exception of a few select villages they are unsuitable for England, and they are very difficult to blend, not assimilating easily with other sorts.

CAVALLAS.

These are used as a rule for mixing with American tobaccos and they are not suitable for Cigarettes except

when they are red in colour; they are mild, very combustible, but lack flavour and aroma and they are the lowest grade of all the Macedonian tobaccos.

In the same category should be placed the Bulgarian tobaccos, although these latter possess more flavour, but also great softness.

SIRA PASTAL.

This is the broken leaves of the tobacco of the Xanthi District. These are not sent to England on account of their unsightly appearance, and do not obtain prices compared to their merit, but these of Yaka and Karsi Yaka fetch prices equal to the Maxoul Basma and are very fine in flavour and aroma and a good substitute for Yaka Dubec. Mountain Sira Pastal is much cheaper on account of its flimsiness.

The last grade is the refuse and scraps which are not suitable for England, the proportion of the duty on their value being enormous.

BAFFRA.

This is often confused with fine Samsoun. The properties of both rectify almost all the faults of other tobaccos which form the bulk of the blend.

MADDEN.

This is the very best, the small leaves of which (Duruk and Duruk Alti) are of medium strength and with a slight aroma and distinct flavour and very combustible.

The large leaves (Belli) are more suitable to blend with mild tobaccos which lack combustion.

SAMSOUN.

Common Samsoun is only suitable for low grade tobaccos. All the Samsouns being of very dark colour do not harmonise with very light tobaccos, and on account of their gummy nature are liable to country damage more than any other class of tobacco.

AYOSOLOUK.

These tobaccos are of two varieties viz:—The string, and the flattened leaf, which is packed in Dubecs and Basmás. The latter being handled three times in packing loses a little of its aroma. The string is only handled once, and being tightly pressed down retains its flavour and aroma much better, but, being difficult to separate properly when dry, is avoided by many manufacturers. We cannot caution the blenders enough to see that it is thoroughly separated, as otherwise it will fall in patches when mixed in the bulk and form lumps, causing some cigarettes to be made entirely of it. Unless that is done, it is much safer to use the flattened leaf. Good qualities of string in small leaves not more than 8 to 10 per cent. are required, if used to a greater extent its appearance becomes noticed, and it affects the throat of the smoker. The large leaves are much less harmful but possess less aroma and larger proportions are required, their use is increasing as they possess all good flavour and mellowness.

DUBEC SOLOUK.

This is a very expensive tobacco on account of its costly manipulation, and is only fit for high-class blends.

BASMA SOLOUK.

This is of various grades, the best leaves as a rule being put into Dubec style of packing. It possesses the same properties as the leafy string, but has not as much colour as the Macedonian Basmas.

The lower grades called fourths and Sira-pastal are distinctly greenish in appearance although they possess some aroma.

TONGAS.

This is a variety unknown in England on account of its scrappy appearance, it is made of all the loose and broken leaves and as the top leaves of Ayosolouk are more or less dark and greenish, they all find their way into the Tongas which possess a great deal of aroma, and for that reason are very much used in countries where the duty is low. Although a great deal has been written about the injurious properties of Ayosolouk, it is an article of necessity and many manufacturers have found out that they cannot do without it

We do not advocate an excessive use of it; 25 per cent. should be the maximum. When put in to the extent of 10 per cent., which is a reasonable proportion, it cannot be easily detected or cause unpleasant results.

GREEK.

Greek tobaccos are very rarely used for cigarettes, the attempt to raise a Basma with Turkish seed however produced some very fine tobaccos which could be used with advantage in mixing with Turkish to a minor degree

Tobacco Cutting.

THE hand cutting machine is a thing of the past, manufacturers now using mechanical appliances.

There are several good machines of English and German manufacture.

The English cutting machines are the stronger and more durable but are more costly than the German, which are more simple in construction and easier to handle; they are both excellent machines for their purpose and easy to operate with as long as care is taken to do the feeding properly and evenly and to keep a watch while at work.

Turkish tobacco being the most delicate of tobaccos and dry by nature, requires very careful handling otherwise it will become a mass of scraps and come out of the muzzle of the machine in the shape of smalls and dust.

The machines are capable of producing any degree of thread; the finer the tobacco is cut the milder it will smoke; coarse cut tobaccos retain their flavour in a much greater degree. The process of cutting causes Turkish tobacco to sicken, it is advisable therefore directly it is cut, to be well but carefully shaken once or twice and be laid out to regain the air it lost in the process of pressing while in the machine, and not to be made into cigarettes

for at least 36 hours, the longer the better. If anybody wants to test the wisdom of this course, he can smoke it on the day it is cut and again two or three days later and he will see the difference in flavour. The best receptacle for Turkish cut tobacco is a tin lined box, with ample ventilation; it should be shallow and not closed tightly and the tobacco should never be allowed to remain there longer than 5 days without being shaken over again. Cut Turkish tobacco if very moist is liable to ferment and spoil by mildew; if very dry it should be liquored carefully and sparingly by a fog pump and never be allowed to be moistened by wet cloths as that will develop bitterness; but if it comes out of the machine in proper condition and be carefully stowed away it will not require any further moistening.

When the cut tobacco is given to the cigarette makers to be made into cigarettes it is advisable to give them only enough for the day's output; some manufacturers prefer to give them sufficient to make a round number of 1 or 2,000 in order to check the quantity used.

It is often the case that one class of tobacco will produce more cigarettes than another; where the duty is heavy and the tobacco costly it is a great consideration to the manufacturers to give the preference to such tobaccos as they possess corkiness and give greater bulk.

These properties are to be found in certain crops; it does not pay to use heavy clumsy tobacco unless you get it cheap; sometimes the difference in the weight amounts to $\frac{1}{2}$ pound per 1,000 for any ordinary sized cigarette.

The next consideration is the paper to be used. The best paper is the French Rice paper, but this paper being very thin and transparent; it makes a cigarette dark in appearance and liable to crease through thinness; so manufacturers are obliged to use a thick starched paper, which is not good to smoke, in fact the most objectionable part of cigarette smoking is the paper, which is decidedly unhealthy and harmful to the eyes. Edison discovered in it a very deadly poison called acroleine; great care therefore should be directed to the selection of the paper, which should be rolled with as narrow lap as practicable and the least printing possible on it, the gold (which is mostly bronzing) should be avoided, blue being the least harmful colour.

There are several modes of Cigarette making, the latest fashion being the Egyptian hand-pressed oval cigarette, which is rolled and pressed in one and the same operation; but the best cigarettes are those made in the hand without any hard pressing.

Cigarette makers should be carefully selected, as it is not the cheap man who is the most economical to employ for more reasons than one. A good cigarette maker will turn out no faulty cigarettes unless you allow him to work at a terrific speed. It is necessary to see that his hands, sticks, stone and the starch he uses are clean, and it might also be advisable to supply him with a blouse to work in and to see that he does not produce much dust or scatter any of the tobacco about him.

It is best to have someone in the factory to prepare the starch carefully, for although it appears a simple

matter there is even an art in this, as properly made starch gives a good appearance to the cigarette. Personally I should prefer that every factory should have the tubes made without starch but with crimping by machinery, it is a much cleaner practise but the prejudice of the machine-made cigarette keeps many factories from employing that method.

Every cigarette maker of course is attended by a cutter and packer ; the scissors must be always sharp or else the ends of the cigarettes become jagged and torn. The girl or boy who is employed to do that work must be thoroughly efficient and used to the work as many cigarettes get broken and creased, or the ends fall off through careless handling.

It is advisable to keep the cigarettes on a well ventilated tray for a few days before packing them in boxes, and they should be placed in a dry spot where the temperature is never under 60° Fahrenheit, and with as little moisture in the air as possible.

The Egyptian cigarettes acquired their reputation through the dryness of the climate ; but it is curious that it is on this same account that they cannot store the raw material in Egypt, and yet they produce the manufactured article under the most favourable conditions. In a factory therefore, you must produce the Egyptian climatic conditions artificially, as far as is practicable.

Boxes or tins should be made very accurately in measurement as there is a great deal of neatness now demanded by the smoker ; the public has not been

educated up to recognizing that the expense of packing is superfluous waste, but as long as they pay the piper, it does not matter.

Great care should be bestowed upon packing the cigarettes into nice rows, and the labels should be affixed with great care, avoiding excess of starch, especially of inferior quality. Manufacturers ought to pay extra attention to this final stage of the process.

Cigarettes once packed and sealed ought to be placed in a dry cool room, devoid of moisture but well ventilated. Many cigarettes get spoilt in the Stock rooms through inattention, especially when the air is full of moisture, to which Turkish tobacco above all others is susceptible. It is necessary therefore to keep a thermometer and also a hygrometer to guide one. A cigarette, properly kept will be good for years, but as the papers get discoloured with age, it is advisable not to keep stock longer than three months, and thus regulate the output according to the trade.

In the case of cigarettes manufactured for export, it is advisable to exhaust them ; this is done by heating the tins after sealing hermetically, so as to create an expansion of the enclosed air, then by pricking allow it to escape from the tin and immediately closing the aperture again. As, however, this process causes a certain amount of fine aroma to escape, it should be done with great care ; it should not be carried on too long, and the heat ought not to be excessive. Some people employ wet heat, others dry ; it is immaterial so long as you see that the tins are

thoroughly sealed and there is no leakage, otherwise the process is useless; one should be guided by the bulging of the tins.

Cigarettes treated in this way will smoke differently to those not exhausted, it is necessary therefore to make your blends slightly varying. It must be taken into consideration that this process liquifies the resinous properties of tobaccos and thus improves the palate, but deteriorates the aromatic properties; it is advisable therefore to employ less gummy and more aromatic tobaccos in order to retain the same properties as the ordinary blend.

Examples of Blends.

WE will now append some examples of blending, the figures however should not be taken as gospel, but by increasing or decreasing the percentages of the sorts indicated, the manufacturer will be enabled to arrive at a satisfactory result. One should bear in mind the basis of the blend, as crops vary in strength, flavour and aroma. It will be necessary to vary the quantities employed, but not the kinds of tobacco indicated.

A pile of blend once made should be thoroughly mixed, and very little liquored as Turkish tobacco will soon spoil if watered to excess; 5 per cent. is quite enough, none at all better still, provided the tobacco is not too dry. Fine sorts as a rule retain their natural moisture; too much water has a tendency to make Turkish tobacco bitter in taste.

Extra Quality.

					per cent
Maxoul Yaka Dubec	...	...	...	...	40
„ Mountain Dubec	...	...	...	...	30
„ Basma	...	...	...	...	20
Madden Duruck	...	...	...	...	10

Ditto Extra Aromatic.

					per cent.
Maxoul Yaka Dubec	...	...	...	...	30
„ Mountain Dubec	...	...	...	...	20
„ Basma	...	...	...	...	20
Dubec Ayosolouk	...	...	...	...	20
Madden Duruck Alti	...	...	...	...	10

Ditto Basis Mahala.

Maxoul Mahala	...	...	...	...	50
„ Mountain Dubec	...	...	...	...	30
Dubec Ayosolouk	...	...	...	...	10
Baffra Madden Duruck	...	...	...	...	10

Ditto Basis Zichna.

Dubec Zichna	...	...	...	...	50
Mountain Dubec	...	...	...	...	20
Maxoul Basma	...	...	...	...	20
Madden	...	...	...	...	10

First Quality Basis Yaka.

Karsi Yaka Maxoul	...	...	...	...	40
Mountain Dubec	...	...	...	...	20
Mountain Basma	...	...	...	...	20
String Solouk	...	...	...	...	10
Baffra Belli	...	...	...	...	10

Ditto Kir. Full Flavor.

Kir Dubec	...	...	...	...	30
Mountain Dubec	...	...	...	...	20
Basma	...	...	...	...	20
Basma Solouk	...	...	...	...	20
Baffra Belli	...	...	...	...	10

First Quality Basis Zichna.

					per cent.
Zichna Dubec...	...	...	...	...	40
Zichna Basma...	...	...	...	...	20
Solouk Basma ...	...	...	...	...	10
Mountain Dubec	...	...	...	...	30

Ditto Mountain.

Mountain Dubec	...	...	...	...	50
Solouk Basma ...	...	...	...	...	20
Baffra Belli ...	...	...	...	...	20
String Solouk ...	...	...	...	...	10

Second Quality Basis Yenitze.

Sira Pastal ..	...	...	...	...	30
Mountain Dubec	...	...	...	...	20
Basma ...	...	...	...	...	30
String Solouk ...	...	...	...	...	10
Baffra Belli ...	...	...	...	..	10

Ditto Zichna.

Zichna Basma...	...	...	...	...	40
Kir Basma or Persichan	...	...	...	...	20
Mountain Sira Pastal...	...	...	...	...	30
String Solouk ...	...	...	...	...	10

Third Quality.

Sira Pastal	...	...	...	...	40
Baffra Belli	...	...	...	...	20
String Solouk ...	...	...	...	...	20
Persichan	...	...	...	...	20

Common Quality.

						per cent.
Basma (C. & D. grades)	...	...	...	...	...	40
Samsoun	...	...	...	...	...	20
Ayosolouk	...	...	...	...	...	20
Persichan	...	...	...	...	...	20

WE do not attach hard and fast rules as to these quantities, they are to be varied until a desired effect is produced ; sometimes a very slight variation produces wonderful improvements.



Annual Average Production and Disposal of Turkish Tobacco.

	Okes.	Pounds
Internal Consumption... ..	6,000,000	17,000,000
Austria and Hungary	5,000,000	14,000,000
Germany	3,000,000	8,400,000
United States	3,000,000	8,400,000
Egypt	3,000,000	8,400,000
England	1,000,000	2,800,000
Italy	1,000,000	2,800,000
France	500,000	1,400,000
Russia	500,000	1,400,000
Roumania and Servia	500,000	1,400,000
Belgium, Holland, Sweden, Norway and Switzerland ..	500,000	1,400,000
India, China, Japan, Australia, South Africa and S. America	500,000	1,400,000
Cyprus, Crete, Samos, Tripoli, Tunis and Malfa	500,000	1,400,000
Total ...	25,000,000	70,200,000

Import of Unmanufactured Turkish Tobacco to United Kingdom.

				Pounds.
1901	...	...	...	894,270
1902	...	...	...	1,519,473
1903	...	...	...	2,435,761
1904	...	...	...	3,468,360
1905	...	...	...	2,983,941
1906	...	...	...	2,471,422
1907	...	...	...	3,920,349
1908	...	...	...	3,950,299*
1909	...	...	...	5,800,272*
1910	...	...	...	4,499,362*

* A portion re-exported to America.

Customs of the Trade.

THE terms on which tobacco is sold in England are as follows:—

On the importation of the goods the Customs weigh them net, viz. every tare is deducted, such as inner and outer wrappers and even ties when the tobacco is in bundles, and the goods are sold on that weight no matter how long they have remained in Bond, but as there are certain shortages and wear and tear, the seller deducts 2 lbs. on every package, which represents the sample drawn, and 4 lbs. in every 104 lbs. for draft; thus, if a bale or case weighed say 106 lbs. on landing, the net amount charged will be only 100 lbs.

The discount the buyer is entitled to on the amount of the invoice is 1 per cent. and the terms, two months prompt with an extra allowance of 5 per cent. per annum interest for unexpired time, if delivery is taken at any time before the invoice is due. Payday is the following Saturday after the expiration of the two months from the date of the invoice.

The buyer is not allowed any credit unless special terms are obtained but he is bound to pay on delivery of the goods.

Transactions are as a rule fixed on the samples which are drawn by the Dock Company, thus ensuring the true representation of the package but many buyers prefer to inspect the goods in the dock warehouse, in which case they obtain an inspection order from the seller and pay the inspection charges, but if they buy the goods these charges are refunded by the seller.

The Dock Company issues warrants for the goods when such are asked for and they are transferable by endorsement; they constitute a good delivery, on the other hand delivery orders are not good delivery unless presented to and accepted by the Dock Company.

The seller must pay all outstanding charges to the date of the invoice and also the rent until the due date.

A buyer should ascertain the true weight of the goods purchased by referring to the Dock Company on receiving transfer of the goods or by inspecting the Dock Company's Landing Account furnished to every importer.

A seller on delivering by warrants is entitled to demand cash in payment instead of receiving a cheque.

On buying goods it is customary to deliver a contract note from the seller to the buyer, if the latter does not return the same within 24 hours the transaction is binding on him.

The Customs allow a small reduction in the duty on the outstanding samples for wear and tear; all samples should be delivered to the buyer as the goods are liable for

the duty on the samples, and their weight is added on paying duty on the package they represent.

Only licensed manufacturers have the right to pay duty on unmanufactured tobacco, either direct or through an agent.

Each package imported must weigh 80 lbs. gross or more, otherwise it is confiscated, but may be allowed on the payment of a fine at the option of the Customs. A manufacturer can pay duty on the landing weight or if he chooses can reweigh and pay duty on the reweight.

The Dock Company's samples give full particulars of the goods they represent on a ticket attached to them.

Goods sold for export sometimes have special terms, but if these are not specified the above London trade terms hold good.

When buying goods in Turkey no allowances are deducted, buyers have to pay for the net weight of the goods and also for the value of all wrappers excepting Dubecs which are sold gross, viz. cloth and laces are sold as tobacco.

Historical Aspect of the Tobacco Fields of Macedonia.

THE tobacco fields of Macedonia are full of historical and archeological associations.

At the extreme West of the Gulf of Orfano and the mouth of the river Strymon was situated the important Athenian Colony of Amphipolis, which was captured by the Spartans through the relaxed vigilance of Thucydides the Athenian admiral, who was entrusted with the guarding of this coast.

This event caused the loss of a colony to Athens, and a gain of a great Historian to the world.

Thucydides was ostracised for a term of twenty years during which time he wrote his famous history.

Further inwards and to the North, towards Serres, is the lake Kerkinitis, inhabited by lake-dwellers who lived in huts built on piles driven in the bottom of the lake, and who existed on fishes.

Near to Amphipolis, the main body of Xerxes' army, on his march against Greece, passed at a spot called the Nine Roads and he made sacrifices by burying alive, nine native youths and nine maidens in compliment to the name of the road.

To the South of Amphipolis lies the promontory of Athos or Holy Mount, inhabited by monks to the number of 10,000; they live in monasteries founded by the Byzantine Emperors as far back as the 10th century, and some of them possess very valuable libraries of manuscripts which are occasionally visited by scholars of the Oxford and Cambridge Universities in search of archeological data.

No females are permitted in this territory, not even those of animals or fowls, excepting the vermin on the bodies of the holy fathers over which they have no control.

In the centre of this district was situated the town of Philippi, the capital of Macedonia, and here was fought the famous battle between the Roman Generals Brutus, Cassius, and Octavius and Antony, which is the subject of Shakespeare's grand play Julius Caesar.

On this same spot we can see the pulpit of St. Paul, where he preached to the Philippians, as described in the Acts XVI. 12.

The City now is in ruins with numerous ancient walls and inscriptions cut in the rocks of the citadel, which was enclosed by a triple wall.

Cavalla, the ancient name of which was Neapolis, was the landing place of St. Paul when he first set foot in Europe on his way to Philippi, and was traversed by the Ignatian way, one of the wonderful roads which the ancient Romans constructed and which is still partly in existence, here also are extensive walls constructed by Justinian in order to protect the port from the incursions of the Goths.

To the North of Cavalla lies the mountainous country inhabited by the warlike Thracian races from whom Alexander the Great recruited his famous army, which conquered a great part of Asia, as far as India.

At the extreme East of the tobacco ground there are still ruins of the ancient town of Abdera (near the present tobacco village of Bulustra) the inhabitants of which were renowned for their luxury, and many are the anecdotes related by the ancient writers on this point.

In order to illustrate their luxuriousness one of them is described as having had a sore place owing to the doubling of some leaves in a bed of roses where he was in the habit of sleeping.

Close to Abdera is a lake, on the North shore of which is situated the station of Diomedes, on the Ignatian Way, which connected the two capitals of Rome and Constantinople.

This place was famous for the fine breed of horses it possessed in Roman times, of which many fabulous tales are related.

The country to the north of this is inhabited by a fine race of men called Agrianes which means "wildmen"; they are of ancient blood, never having tolerated an intruder in their fastnesses.

This district commands the lower declivities of the Rhodope chain, one of the finest range of mountains in European Turkey.

Mount Athos.

BY LORD BYRON.

Beside the confines of the Aegean main
Where northwards Macedonia bounds the flood,
And views opposed to Asiatic plain
Where once the pride of lofty Ilion stood,
Like the great Father of the giant brood
With lowering port, majestic Athos stands,
Crowned with the verdure of eternal wood,
As yet unspoiled by sacrilegious hands,
And throws his mighty shade o'er seas and distant lands.
And deep embosomed in his shady groves,
Full many a convent rears its glittering spire,
Mid scenes where Heavenly contemplation loves
To kindle in the soul her hallowed fire,
Where air and sea with rocks and wood conspire
To breathe a sweet religious calm around,
Weaning the thoughts from every low desire,
And the wild waves that break with murmuring sound
Along the rocky shore, proclaim its holy ground.
Sequestered shades where piety has given
A quiet refuge from each earthly care,
Whence the rapt spirit may ascend to Heaven,
Oh, ye condemned the ills of life to bear,
As with advancing age your woes increase,
What bliss amidst these solitudes to share,
The happy foretaste of eternal Peace,
Till Heaven in mercy bids your pains and sorrows cease.

Tobacco Chemistry.

Tobacco has three distinct stages viz : the botanical, the commercial, and the smoking, and each stage possesses differing chemical compositions. The first which is while the plant is green does not interest us. The commercial stage is before it is actually consumed by lighting.

Several clever chemists who are interested enough to analyse the dried tobacco leaves found that they consisted of the following substances :—

INORGANIC— ACIDS—Azotic, Chlorhydric, Sulphuric, Phosphoric and Silicic.

OXIDES --Potassium, Sodium, Calcium, Magnesium, and Ammoniacal Iron.

ORGANIC— ACIDS—Malic, Citric, Oxalic, Acetic and Pectic.

OXIDES—Nicotin, Cellulose, Azot, Vegetable and Rosin.

The most important of these is nicotin which gives

the peculiar narcotic properties to the tobacco and which is found in the following proportions :—

GROWTH	PER CENT.
St. Domingo ...	0.82
Maryland ...	1.26
Samsoun ...	1.75
Yaka	1.84
Persichan ...	1.93
Brazil ...	2 00
Havana ..	2.45
Seed Leaf ...	3.70
Sumatra ...	4.10
Kentucky ...	4.50
Virginia ...	4.80 to 5.70

The third stage is the smoke we inhale and which of course by combustion alters the character of the constituents, some of which are evaporated and others reduced to ash. From the smokers point of view therefore that is the most important, and fortunately we are in a position to supply more or less accurate analytical tables.

The substances that enter our bodies are :—Water, free Carbon (soot), Ammonia (vapour), Carbonic Acid and Oxide Gas.

Oily Nicotin crude which consists of Nicotin proper and volatile empyreumatic substance containing Ammonia and bitter extract.

In addition there were discovered Carbonic, Acetic, Formic, Butyric, Valeric and Hydrocyanic acids, Creosote and Hydrocarbons by applying alkaline reagents; and Ammonia, Analine, Carbon, Hydrogen and Nitrogen by acid solutions.

Also out of the smoke of cut tobacco, Pyridine and Viridine, and out of cigars, Picoline, Lutidine, Collidine, Parvoline, Coridine and Rubidine.

Here we append a table showing the minimum and maximum substances produced by analysing tobacco leaves after being dried by subjecting them to a heat of 100 degrees Centigrade.

SUBSTANCE	PER CENT.
Nicotin	1 to 5
Resin	3 " 7
Starch	3 " 6
Glucose	nil " 16
Pectic Acid	5 " 12
Citric Acid	$\frac{1}{2}$ " 6
Potash	nil " traces
Soda	nil " 0.17
Lime	$2\frac{1}{2}$ " $6\frac{1}{2}$
Magnesia	1 " $2\frac{1}{2}$
Ferrous Oxide	nil " $\frac{1}{2}$
Alum	nil " $\frac{1}{4}$
Malic Acid	4 " 10
Oxalic Acid	$\frac{1}{2}$ " $2\frac{1}{2}$
Acetic Acid	$\frac{1}{4}$ " $1\frac{1}{2}$
Nitric Acid	nil " $3\frac{1}{2}$
Ammonia	$\frac{1}{4}$ " $\frac{1}{2}$
Cellulose	8 " 15
Manganese Oxide	nil " traces
Phosphorous	$\frac{1}{2}$ " 1
Sulphur	$\frac{1}{2}$ " 1
Silica	$\frac{1}{4}$ " $\frac{3}{4}$
Chlorine	nil " 2
Sand	$\frac{1}{4}$ " 4
Ash	$8\frac{1}{2}$ " 18

CONCLUSION.

At the time the present book goes to print the Turkish tobacco trade is labouring under an unprecedented crisis, the prices ruling being abnormally high and out of all proportion to the ones marked in the topographical section in describing the various villages of production.

We are, however, of the opinion that conditions will return to their normal state in the course of time unless unforeseen circumstances arise.

The causes of these high prices are, the enormous demand for Turkish tobaccos from the United States of America, and also the increasing consumption in Germany where only Turkish cigarettes are smoked. On the other hand, the unsettled state of Macedonia and insecurity of life has created a dearth of labour and a great advance in wages there, thus increasing the cost of production and manipulation of the article; and although the area of cultivation has extended to districts where other crops were formerly raised, such as Serres, Zichna, and the Salonica district, so far, no material help has been afforded from that quarter.

The manufacturer, however, who possesses financial resources will always find opportunities to get sufficient stock at reasonable rates, as the past history of the trade presents examples showing that very high prices are always followed by slumps.

In reviewing the tobacco markets for the past 40 years, a period which the writer keenly followed, we find that in the year 1879 incessant rains all the summer through spoiled the crop; the leaves having grown to an immense size and being left to rot in the fields caused a rise in prices which was succeeded by over-production, which culminated in very large stocks in the year 1883 and a great slump in prices. At the end of that year however, the Turkish Tobacco Monopoly was established and was the cause of a great rush to buy on the part of the manufacturers which enabled the lucky holders to sell at a great profit.

The following year's crop (1884) fermented so badly as to perish by country damage, and prices remained high until the 1885 crop was placed in the market; this was so large as to create a record for the following fifteen years. From the year 1886 conditions remained normal, until the year 1890 which was a year of great drought and the tobacco crop was very small, of very bad combustion, and a great part country damaged at an early stage. Both growers and dealers sustained heavy losses that year. The following 12 years went on smoothly until the year 1902, after the American Trust was formed, an attempt was made to corner Turkish tobacco by that concern, and prices increased to an alarming extent, which caused an over-production in the year 1903, the climatic conditions favouring a large crop, and the Americans having found that they could not so quickly consume the large stock they had acquired, a bad slump followed and prices ruled very low for two or three years in succession, and then normal until 1908 and 1909 which were very small crops and created a shortage.

In the meantime the consumption of Turkish tobacco in America went up by leaps and bounds, and the rest of the world demanded increasing quantities so as to enhance prices to such an extent as to create an unprecedented record, especially in the lower grade tobacco which was doubled and trebled in price ; the higher grades advancing also but not in the same proportion.

The 1910 crop was one which beat the record in quantity, but the demand was so enormous as to enable growers to obtain high prices ; labour troubles did the rest ; and now dealers and manufacturers are in a dilemma as to what the future will bring.

I am very much afraid that the high prices if maintained will restrict the consumption of the article, in the meantime the increased demand may prevent the lowering of prices to the former level of normality.

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