WELD, or WOLD, *Reseda luteola* of Linnaeus, a plant used by the dyers to give a yellow colour; and for this reason called, in Latin, *luteola*, of *luteus*, yellow. For the characters, see *Reseda*.

When the plants are pulled, they may be set up in small handfuls to dry in the field, and when dry enough, tied up in bundles and housed dry; care being taken to house them looely, that the air may pass between them to prevent their fermenting. That which is left for seeds should be pulled as soon as the seeds are ripe, and set up to dry, and then beat out for use; for if the plants are left too long, the seeds will scatter. Mortimer and Miller.

Weld is much cultivated in Kent, for the use of the London dyers.

Mr. Heliot observes, in his Art de Teindre, that for dyeing with weld, the best proportions of alum and tartar for the preparatory liquor are four parts of alum, and one of tartar, to sixteen of the wool; the quantity of the tartar being determined by the greater or less brightness of colour proposed; and that the wool, thus prepared, is to be boiled again with three or four parts of weld to one of wool, but often much less: that for light shades, it is customary to diminish the alum, and omit the tartar; and that, in this case,
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cafe, the colour is more slowly imbied, and proves less durable.

With a view to economy, the weaker shades of colour are dyed in the same bath, after the stronger are fininished. A golden yellow, more or less orange, is given by a weak madder bath, after the welding.

Silk is dyed of a golden-yellow, generally with weld alone, according to the following process: the stuff is first boiled in soap-water, aluminized and washed, then padded twice through a weld bath, in which, the second time, some alkali is diffused, which gives a rich golden hue to the natural yellow of the weld. The colour is further deepened by a little annatto. The solutions of time with weld give to silk a bright clear yellow. In order to dye cotton yellow, Berthollet directs first to cleanse it with wood ashes and water, to rainfe, alum, and dry without further rinsing, and then to pass it through a yellow bath, in which the weld is somewhat more than the weight of the cotton. When the colour has sufficiently taken, the cotton is thrown into a bath of sulphate of copper and water, and kept there for an hour; after which it is boiled with white soap-water, and, lastly, washed and dried. In order to obtain a deeper jonquil-yellow, the alumining is omitted, and, instead of this operation, a little verdigris is added to the weld bath, and the cotton fininished with soda.

Weld is particularly preferred to all other suffrances in giving the lively green lemon-yellow. It is, however, expensive; and it is also found to degrade and interfere with madder colours more than other yellows. We may here add, that the fine delicate yellow, obtained from weld, is much used by the London paper-stainers, and folded in the form of hard lumps, confining chiefly of chalk saturated with the colouring matter. Melfi, Collard and Fraher have given the following improved process:—Diffuse any quantity of fine whiting in boiling water; add to it one ounce of alum for every pound of whiting, which will occasion a brisk effervescence, and fill these materials well together till the gas is wholly diffusel. On the other hand, boil in a separate vessel some weld with water just sufficient to cover it, for fifteen minutes, filter the yellow decoction, and then mix it with the whiting and alumine in such proportions, that the earths may appear to be saturated with the colouring matter. Then let the mixture remain a day at rest, and at the bottom will be the precipitated earth firmly united with the colour, and of a fine yellow tinge, which may be conveniently dried on chalk-flours.

The weld yellow is a water colour, and is never mixed with oil.

WELD, in Agriculture, is a plant which is not frequently cultivated in the field by the farmer, for the purpose of giving and affording a bright yellow and lemon colour to woollens, silks, cotton, and thread, as well as for its use in the manufacture of check and fustian, and in some other intentions. It is for the flower-floms that it is principally grown, as being useful in the process of dyeing the several articles. It is often known by the names of woolly and dyer's weed.

It may be noticed, that in the growth and culture of this plant, the foils most suitable are those of the fertile mellow kinds, whether of the loamy, sandy, or gravelly sorts; but it may be grown with succours on such as are of a poorer quality; but in the former, the plants will rife to a much greater height, and produce much larger leaves and foils, than in the latter description of lands.

It has, however, been stated, that the foil most suitable to it, in Essex, is the strong stiff loam moderately moist, but not wet. A foil rather moist, but mellow, seems the most suitable and proper for it.

It is necessary, in the preparation of the ground, that there should be a tolerable degree of fineness produced in the mould of the soil, which may be effected by repeated ploughings given in the more early spring months, and suitable harrowings. The surface of the land in the feed furrow should be left as level as possible, that the feed may be diffused more evenly over it, and with greater regularity and exactness.

In this, as in many or indeed most other cafes, the feed should be collected from the beat plants, and those which have remained upon the foils till rendered perfectly ripe; as such only vegetates perfectly, and the plants in such cafes should not be left fl tand too long, as the feed is liable to shed. It should be perfectly fresh when used, as old feed never comes up well, or in to regular a manner.

In regard to the proportion of feed which is necessary, it is commonly from about two quarts to a gallon the acre, according to circumstances, when feed alone: but when mixed with other crops, a little more may be required, which should be blended with a little sand, or some other such material, at the time of fowling it on the land, as rendering it capable of being fown more evenly.

It may be observed in respect to the time of fowling, that this feed of crop may be put into the ground either in the spring, as about the latter end of April or beginning of May; or in the latter end of summer, as the beginning of August; being mostly fown in conjunction with other crops in the first period; but when fown alone at the latter feaston, the produce is in general the better and most full. Some of the writers in the Essex Report on Agriculture speak of the culture of this feed of crop as simply that of transplanting from the seed-beds about Midsummer. The feed, in these cafes, is fown in the beds in the early spring, for raising the plants. In the county of Norfolk, it is laid, that they sow it in the month of April with barley; in the proportion of from a quarter to half a peck to the acre, in the manner of clover, and frequently with clover at the same time, to be mown or fed in the following year, after the weld is pulled.

It is mostly fown broad-calf, whether grown in mixture with other plants or alone; and as the feeds are of a very small size, it requires an expert feedman to perform the labor. It is necessary always to have the feed, thus mixed, as much as possible, and the waste, as by this means they suppose it may be affected with greater exactness, facility, and readiness.

It is falted that weld, when grown with other sorts of crops, such as barley, buckwheat, beans, peas, clover, or grafs-feeds, is usually put in after them; in some cafes immediately, but in others not till some time has elapsed. With the first and second crops, when fown so late as the beginning of May, it is mostly the practice to fow it directly afterwards, giving the land a flight harrowing with a very light close-tined harrow to cover it in. The barley being fown under furrow, the weld-feed with some is immediately fown over the surface, and lightly harrowed in, and then rolled. Where the barley feeding is performed so early as March,
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March, or the beginning of April, the sowing of the weld-feed is best deferred till May, when it may be differed over the land, and left in that manner to be washed in by the rains. With bean and pea crops, it is often sown before the frost breaks or hoeing of the crops in the latter end of June, or beginning of July. In cultivating it with clover and grass-feeds, it is often sown at the same time with them; but a better practice is, perhaps, to delay it till some time afterwards, as both these crops require to be sown at too early a period for this plant to rise safely. But in cahes where no other foot of crop is grown with weld, which is probably the best method, it is usually sown evenly over the surface of the land, and covered in by harrowing with a light bulth harrow, having afterwards recouer the roller in light foot of land.

Though it is common in cultivating crops of this sort, not to pay any attention to them after being sown; yet as the plants are of slow growth, and liable to be greatly injured in their progress by the riling of weeds, it must be of much benefit not only to keep them perfectly clean, but also to have the mould stirred about their roots. In about a month from the time of sowing, the plants are mostly in a flate to be eallly distinguished; a hoing should be then given when the weather is dry, which may be performed in the same manner as for turnips only, using somewhat smaller hoes for the purpose. Some dirct that the plants in this operation should be set out to the distance of three or four inches; but it is better to let them have more room, as six, seven, or eight inches; which not only lefens the excessive of the butterfines, but contributes to the advantage of the crop. In the spring, a second flate hoing may be practised about March, in a dry time; and if any weeds rise afterwards, a third may be given in May. Where the land has been well prepared, one hoeing in autumn and another in the spring may be fully sufficient. Hand-weeding, though practiced by some, is in general too expensive in these cahes.

It may be observed, that the proper period for pulling this foot of crop is when the bloom has been produced the whole length of the flams, and the plants are just beginning to turn of a light or yellowish colour, as in the beginning or middle of July in the second year. The plants are usually from one to two feet and a half in height. It is thought by some advantageous to pull it rather early, without waiting for the ripening of the seeds, as by this means there will not only be the greatest proportion of dye, but the land will be left at liberty for the reception of a crop of wheat or turnips; but in this case, a small part must be left solely for the purpose of providing feed. In the execution of the work, the plants are drawn up by the roots in small handfuls, and set up to dry, after each handful has been tied up by one of the flams, in the number of four together in a foot of erect position against each other, as is done in some other kinds of crops.

It is remarked, that sometimes they, however, become sufficiently dry by turning, without being let up. After they have remained till fully dry, which is mostly effected in the course of a week or two, they are bound up into larger bundles, that contain each sixty handfuls, and which are of the weight of fifty-six pounds each; sixty of these bundles constituting a load. These latter are tied up by a firring made for the purpose, and folded under the title of woold cord, in many places where this kind of crop is much grown and provided for the dyer and calico-printer.

On account of the weld plant being extremely uncertain in its growth, and the whole crop seldom becoming in a flat to be pulled at the same time, it is proper to have an experienced labourer to direct the butterfines of pulling, in order that the pullers may not proceed at random, but take the different parts as the plants become ready, or in danger from the blight. In which case, the greatest possible dispatch should be made, as the loss of weight in the produce will daily increase, and the grower be of course greatly injured in the quantity of it.

After the weld is become sufficiently dried, which is known by the crispness of the leaves, and the flans turning of a light colour, and when the plants are ripe, the seeds falling out; according to some, it should be flacked up lightly in the barn, in order to prevent its taking on too much heat; while others advise, that it should be flacked up closely in the manner of wheat, being left to sweat in the same way as hay, in the more this takes place, the better; the quality of the weld being thereby increased, if there be no mouldefness. When the crop has stood till fully ripened, the seed may be taken before it is put into the barn, which may be easily procured by rubbing, or slightly beating each of the little handfulls against each other over a cloth, tub, or any other convenient receptacle, as, by thrashing, the quantity of the weld would be much reduced in weight.

The price of this foot of feed is mostly about ten or twelve shillings the bushel, which may be sold to the feedsmen in a ready manner.

It may be observed, that in crops of this kind the produce is in some degree uncertain, depending much upon the nature of the feed; but from half a load to a load and a half is the quantity most commonly afforded, which is usually folded to the dyvers at from five or fix to ten or twelve pounds the load, and sometimes considerately more.

This is a foot of crop which is mostly dispofed to the dyers and calico-printers, as well as other manufacturers. The demand for it, however, is sometimes very little; while at other times it is so great, as to raise the price to a very high degree.

Weld is a crop which is particularly liable to be injured by the blight, which probably has induced the growers of it to raise it with those of other kinds, especially of the grass foot; because, where the weld crop does not succeed, a portion of sheep feed may be afforded by the others, for winter and sprving use. It is noticed, that the blight frequently comes on so suddenlly, that crops which appeared healthy, and in a vigorous state of growth, during the whole of the winter and sprving, promising a large produce, are about the month of May attacked by this vegetable disease, so as to be nearly destroyed. It is known to be present by the plants, especially about the lower part of the flams of them, turning of a yellowish or pale reddish colour, while the upper parts remain green, and seem healthy. When it appears early in the month of May, there is always danger of the crop being destroyed; but when it comes on at a later period, or where the plants from other causes, as the dryness of the feedon, begin to change colour in the flanks, the only chance is that of having them pulled as expeditiously as the butterfines can be performed, and in the readiest manner possible.

It may be remarked, that it would seem better and more convenient to cultivate this crop alone, or without any mixture of other plants; as, in the former way, it must be much injured and confined in its growth, on account of the close-ness and shade produced by the plants of the other crops that surround it. It is the custom, too, when grown with other crops, especially those of the grass kinds, to very commonly feed them down in the winter and sprving feedings with
with sheep, or some other light sort of live-stock, under the
notion that they will not touch the weld plants; but this is
by no means the case, as they are found to feed upon them
without any nicety, and must, of course, do very great in-
jury to their growth and flowering. In cases where weld is
sown among clover, as is not unfrequently the case, the best
method is probably to pull it out when it has got to matur-
ity, before the clover is cut. Where sown on summer
fallowed land with rape and grass-seeds, towards the latter
end of that season, in which case it often does extremely
well, the crops are mostly fed by lambs in the course of a
month or six weeks after the sowing, when little or no in-
jury can be sustained by the cropping of the weld plants.

Weld, on account of the great consumption of vegetable
food which it causes, without contributing any thing to the
amendment of the land, can only be introduced with pro-
priety, probably, in situations where manure or substan-
ces of that kind can be easily obtained. However, in cases
where the crops of this kind are cultivated with sufficient
tillage, care, and attention, they may be a good preparation
for wheat or turnips, in some instances.

It may sometimes, too, be grown with advantage in the
neighbourhoods of large dyeing, printing, and other such
manufactories, where the consumption, and consequently
the demand for it, are very great. If this sort of produce
cannot be disposed of soon after it is pulled and tied up, it
may be preserved perfectly sound for several years, by being
stacked either in the barn or on stands in the open air,
taking care to prevent the attacks and ravages of rats, or
other vermin.