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AN
ENUMERATION
OF THE
PRINCIPAL VEGETABLES,
AND
Vegetable Productions,

That may be substituted,
EITHER IN PART OR WHOLLY, IN PLACE OF
WHEAT AND OTHER BREAD-CORN,
IN TIMES OF SCARCITY :

WITH
SHORT NOTICES
Respecting the best Modes of preparing them for Use.

BY THE AUTHOR OF
SOME INFORMATION ON THE USE OF INDIAN CORN.

Birmingham,
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MDCCXCVI.

[*Price One Shilling.*]

Under some of the culinary vegetables, the common modes of dressing them are omitted, and other ways of preparing them (little known and seldom practised in this country) by which they may be rendered more alimentary, are recommended in their stead.

It were to be wished that gardeners and farmers would cultivate more largely some of the articles mentioned in this Enumeration, particularly the Jerusalem artichoke, the orchis, the large-rooted parsley, skirret, and buck-wheat.

January 16, 1796.

N. B. Concerning the use of potatoes in bread, it is proper to remark, that nothing is gained on the score of economy, by mixing them with wheat-flour; but it appears from the account lately published by the Board of Agriculture, that they may be employed very advantageously for making bread with some other sorts of grain, the qualities of which they greatly improve.

As the articles mentioned in the last section are sold at a high price, it may be thought by many that they are too dear to be freely employed for alimentary purposes; but it is to be remarked, that, in estimating the expence of such substances, we are to look not to their bulk, but to their nutritive power, which, in some of them, is 8 or 10 fold greater than that of flour or other meal. They are, in relation to other alimentary vegetable matters, what portable soup and jellies are among the different kinds of animal food; i. e. they contain the greatest possible supply of nourishment within the smallest compass.

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SECTION

SECTION I.

Of nutrimental Roots.

ARTICHOKE, *Jerusalem* (*HELIANTHUS tuberosus*). This plant, which is a native of America, thrives well in our gardens. It is a species of sunflower. The roots consist of knots, tubercles, or bulbs, which in a good soil run to a considerable size, and when baked, roasted, or boiled, become perfectly mealy, like potatoes. They are rather sweeter than these last; but are quite as wholesome and nutritious, and may on all occasions be used in their stead. In favourable situations this plant produces a great number of bulbs; and as the leaves may be employed as fodder for cattle, it is to be hoped, that it will be more generally cultivated in this country than it hitherto has been.

BEET. *The red beet.* (*BETA vulgaris*). This root, when well boiled or roasted, affords considerable nourishment. On account of its sweetness, it requires to be seasoned with a little vinegar, in order

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to suit it to most palates. It is an agreeable addition to stewed, fried, or baked meat, and eats well with cheese. Used in these ways it leads to a great saving of bread. A little ginger prevents it from lying heavy on the stomach, and from being too loosening.

BEEF. *The white beet.* (*BETA Cicla*). The celebrated *Mangel Wurzel*, or *Root of Scarcity*, is a variety of this species of beet. It may be dressed for the table in the same manner as the red beet; but it is rather of a coarser quality. See "Lettsom on the Mangel Wurzel. London, 1777."

CARROT. *The garden carrot.* (*DAUCUS Carota*). The usefulness of this root boiled by itself, stewed and baked with meat, or put into broths, is universally known; but it is a piece of information with which we have been but lately made acquainted, that a wholesome and palatable bread may be made from carrots, mixed with a proper quantity of flour of wheat, rye, or maize. For this purpose the roots, after being thoroughly washed and cleaned, are to be cut into thin slices, which are to be dried in an oven till they become hard and brittle, and fit to be ground to a meal. This *carrot-meal*, mixed with a due proportion (*viz.* about twice its weight) of wheat flour, and kneaded with yeast and water,

water, and a little salt, in the usual way, yields a sort of bread or cake, which is very nourishing and well-tasted. Its colour, it is true, is no recommendation of it, as it differs, in this respect, both from white and brown bread; but to use the words of the pamphlet from whence this account is taken, provided what is set before us is palatable and wholesome, we must not, in times of scarcity, object to it, because it may not be altogether pleasing to the sight. See "Some Information respecting Indian Corn. London, 1795." If these roots are mashed, and brewed like malt, they yield a sweet liquor, which being properly worked or fermented with yeast, becomes a strong drink, like ale. Good spirits, equal to the best sort of corn spirits, may be obtained from carrots, by boiling them to a pulp, straining the juice from them, fermenting it with yeast for the space of three or four days, and then distilling. The refuse of the carrots is very good food for hogs. See Transactions of the Royal Society of Edinburgh for 1790.

CELERY. *The garden celery.* (*APIUM graveolens*). In its wild state, this plant goes under the name of *Smallage*. It is a well known pot-herb. When it is eaten by itself, it is commonly taken raw; but it is better to have it stewed, in which state it may be eaten very freely, so as to afford considerable

nourishment. In this way it is a light and wholesome vegetable. There is a sort called the *turnip-rooted celery*, the roots of which are nearly of the shape and size of a turnip. They should be boiled or stewed in the same manner as the common sort, with which they agree in flavour and nutritious quality.

CICHORY. *Succory, or Wild Endive.* (CICHORIUM *Intybus*). The roots of this plant, gathered before the stems shoot up, and boiled, are wholesome and nourishing. They are an useful addition to broths. When sliced, well dried, and ground down, they may be made into bread, with a proper proportion of wheat or rye flour. Of late, the dried and roasted roots have been much used in Germany, and other parts of the continent, as a substitute for coffee.

COUCH-GRASS, see GRASS, *dog's*.

DANDELION. *Pissabed.* (LEONTODON *Taraxacum*). The roots of this vegetable, so common in every hedge and field, are deprived of their hot and pungent quality, and of most of their bitterness (indeed of all that is disagreeable) by boiling or stewing. Thus prepared they are, like cichory, salutary and nutritious, and deserve to be brought to the

the table as much as any of our garden roots. They are greatly liked abroad; and we are told, that when a swarm of locusts once destroyed the harvest in the island of Minorca, many of the inhabitants subsisted upon this plant.

DOG'S-GRASS, see GRASS, *dog's*.

DOGSTONES, see FOOLSTONES,

EARTH-NUT, see PIGNUT.

ERYNGO, or *Sea-holly.* (ERYNGIUM *maritimum*). The root of this, as well as of the common eryngo (*eryngium campestre*) is palatable and nutritive.

FOOLSTONES, or **DOGSTONES,** *male and female.* (ORCHIS *mascula*, and ORCHIS *Morio*). The mucilaginous roots of these plants, which grow wild in our fields and pastures, may be turned to great account in times of scarcity. They are exceedingly wholesome and nutritious; and with very little trouble *Jalap*, equal to that which is brought from the Levant, may be prepared from them. All that is necessary, is to wash the roots well, and free them from the fine brown skin, which covers them, by means of a small brush, or by dipping them in hot water, and afterwards rubbing them with a coarse

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cloth. After the roots have been thus cleansed, they are to be spread out on a tin plate, and placed in an oven, heated as usual, where they are to remain six or ten minutes, in which time they will have lost their milky whiteness, and have acquired a transparency like horn. They are then to be removed, in order to dry or harden in the air, or before the fire. Salep, thus prepared, may be afforded at ten-pence or a shilling per pound; whereas the foreign salep is sold for six or seven shillings per pound. It contains a great quantity of nourishment in a very small bulk. When the Persians perform long journies, they take care to provide themselves with a supply of salep, which they find to support them under fatigue, more effectually than rice, or any other kind of food. In order to prevent famine at sea, it has lately been proposed, that the powder of this root should constitute a part of the provisions of every ship's company. Two table-spoonsful, or an ounce of this powder boiled in two quarts of broth, make a rich thick jelly, sufficient to support a man for a day. This is not only a most nourishing, but at the same time a very palatable, and exceedingly wholesome food. See "Percival's Essays, Vol. I. London, 1788."

GOATSBEARD, see SALSAFI.

GRASS,

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GRASS, *Dog's Couch-grass, Squitch-grass.* (*TRITICUM repens*). The knotty roots of this grass, so troublesome to farmers and gardeners, are sweet, mucilaginous, and wholesome; and when dried and ground down, may be made into bread, with a proper mixture of flour.

LIQUORICE. (*GLYCYRRHIZA glabra*). This root, which is cultivated in some parts of England, when dried and reduced to powder, may be made into cakes with a double or triple quantity of flour. These cakes are very palatable and wholesome.

MANGEL WURZEL, see BEET.

ONION. (*ALLIUM Cepa*). This is a well known wholesome and nutritious root, especially when boiled or roasted. *Garlick, Shallots*, and the other sorts of allium, are to be considered rather in the light of seasoning, than of food.

ORCHIS, see FOOLSTONES.

PARSLEY. (*APIUM Petroselinum*). Parsley-roots, when well boiled, afford a light nourishment. The *large-rooted* parsley, which is cultivated in the gardens round London, and which was first introduced into this country from Holland by Mr. Miller

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in the year 1727, is a valuable vegetable. The roots of this sort run to the size of an ordinary carrot, and are very sweet and tender. They may be eaten alone, boiled or stewed, or in broths and soups.

PARSNIP. *The garden parsnip.* (PASTINACA *fativa*). A well-known wholesome and nutritive root; but disagreeable to many palates on account of its sweetness, which, however, may be easily corrected by seasoning it with a little vinegar. A small quantity of pepper, or other spice, is further useful, in preventing it from proving flatulent, which it otherwise sometimes does, when eaten too freely. These roots contain a considerable quantity of sugar. When brewed, parsnips afford a sort of wort, which being fermented with yeast, gives a strong liquor, that may supply the place of beer and ale.

PIGNUT, or Earthenut. (BUNIUM *Bulbocastanum*). These roots when baked, roasted, or boiled, and freed from the peel or rind, are sweet, wholesome, and nutritious. When cut into slices and well dried, they may be ground to a meal, which may be used with wheat or rye flour for making bread.

POTATOE. (SOLANUM *tuberosum*). The most valuable of all esculent roots in this country. Till within

within this year or two, potatoes have been used in England merely as garden-stuff, to be taken sparingly with meat and other animal food; but now that wheat and other bread-corn have become so scarce, these roots are pretty generally employed as substitutes for them, and are now eaten at most tables either alone, in place of bread, or baked into bread with wheat, rye, or barley flour. In nutritive power and wholesome qualities, they certainly come nearer than any other roots that are cultivated in this country, to wheat and other grain. An endless variety of dishes may be prepared from them, and they are so mealy and mild in their flavour, that they never cloy or pall the palate. They are excellent whether boiled or roasted by themselves, beat up with milk, made into a pudding with milk and eggs, or put into broths and soups. The following receipt for making POTATOE SOUP cannot, in this time of scarcity, be too generally known. It is taken from a patriotic pamphlet lately published, under the title of "Useful Suggestions favourable to the Comfort of the labouring People and decent Housekeepers. London, 1795." This soup is made by stewing about five pounds of the coarsest parts of beef or mutton, or even part of a bullock's head, in ten quarts of water till half done; then pare the skin from twenty-four pounds of potatoes, and put them in

in the stew-pan with the meat, together with some onions, pepper, and salt. Stir it frequently, and when the potatoes are boiled sufficiently it will be found a very excellent dish. If a few beef-bones are added, it will make the soup richer, and a greater quantity may be made. The meat, when seasoned with the onions and pepper, will eat extremely well along with that part of the potatoes which remain whole and do not mix with the soup; and in this way a most comfortable meal for a large family is obtained, without using any bread at all. What is called the sticking of the beef, which is rich and full of gravy, is the best meat for this kind of soup, because it is not only the cheapest, but goes the farthest.

	s.	d.
5 lbs. of this beef generally cost 2d a pound, but at present it will be 3½d. in all	1	6
Bones to enrich the soup	0	4
24 lbs. of potatoes may be bought for less than the price of a quartern loaf of bread.		
The cost will be	1	0
A bunch of onions	0	4
Pepper and salt	0	4
10 quarts of water	0	0
Total expence of ingredients	3	6

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This dish will afford a savoury, comfortable, and even a plentiful and wholesome dinner to a family of ten or twelve persons, including children, at the expence of 3½d. for each. It will fill the stomach with what will be found both palatable and nourishing; it will prevent that desire for large quantities of malt liquor, which always become necessary when the same sum is expended in a dinner of baked meat, or of bacon and bread, which is not so wholesome, leaves the stomach empty, creates thirst, and does not convey half the nourishment; and in point of weight of food, the proportion for the same money, is considerably above four-fold in favour of the potatoe-soup and meat. As the price of potatoes and meat fall, this soup will come still cheaper, so that instead of 3½d. a family may dine well at 2d. or 2½d. a head.

For making POTATOE-PUDDING, the potatoes should be first well boiled, then freed from the skin, and afterwards set for about half an hour in the open air, if dry, or before the fire, in order to let the watery particles evaporate. The potatoe pulp is then to be beat up with milk and eggs, and boiled in a pudding cup, tied over with a thick close cloth, in the usual way: or, instead of boiling it, it may be baked, which generally answers better. This pudding is exceedingly palatable and nourishing.

ing. To give it a greater consistence, a small quantity of flour may be beat up with the potatoe-pulp.

The last preparation of these valuable roots which remains to be noticed, is POTATOE-BREAD. Various receipts are in use and have been published for this purpose: The following one, communicated by Dr. Wright, of Edinburgh, to the Board of Agriculture, and printed in their "Report," appears to be as good as any. Choose the most mealy potatoes; when boiled and peeled, beat and roll them smooth on a table with a rolling-pin; then knead with an equal quantity of wheat-flour, with a sufficiency of yeast, water, and salt (this bakers call sponge). Set the dough for a night in a warm place; and by next morning, if the yeast is good, it will have risen, and is ready to be made into loaves. This bread is much lighter and sweeter than flour-bread, and keeps moist for many days. All will depend on kneading the dough well, and keeping it long enough in the oven till it is thoroughly baked. Instead of wheat-flour, rye-flour, the flour of India corn, or barley-meal may, according to circumstances, be made use of. Further hints for making potatoe-bread, are to be found in a pamphlet before quoted, entitled

entitled "Some Information respecting the Use of Indian Corn."

It is hardly necessary to remark, that potatoes contain a great quantity of *starch*, which is separated by grating the clean raw roots, washing them well in cold water, and letting them settle. The powder which settles at the bottom, is starch. Lastly, good spirits or brandy may be extracted from these roots, by boiling them to a pulp, mixing them up with as much water as will give the whole the consistence of thin gruel, setting the same to ferment three or four days with yeast, and afterwards distilling. See "Report of the Board of Agriculture."

SALSIFI, or *Purple Goats-beard*. (TRAGOPOGON *porrifolium*). The roots of this plant, which grows wild in our meadows and pastures, and which is also cultivated in many of our kitchen gardens, are, when boiled, wholesome and nourishing. The same may be said of the *Yellow Goats-beard* (TRAGOPOGAN *pratense*) the roots of which taste like asparagus, and are (Withering's Botan. Arrangement, Vol. II. p. 828) nearly as nutritious.

SEA-HOLLY, see ERYNGO.

SKIRRET.

SKIRRET. (*Sium Sifarum*). This plant is much cultivated in our kitchen gardens. In a favourable soil, the roots grow to the length of six inches or more, and become at least as thick as one's finger. They are white and have a sweet taste, similar to that of parsneps. When boiled, stewed, or fried, they are tender and nutritious. They are frequently stewed in milk, and put into broths and soups, which they serve to thicken and flavour. By rasping the raw roots, washing the raspings well in cold water, and afterwards allowing them to settle, they yield *starch* in the same manner as potatoes. They also contain a great quantity of sugar. By brewing these roots, and fermenting the wort obtained from them with yeast, a strong liquor may be prepared, similar to that which is obtained by the same means from parsneps.

SQUITCH-GRASS, see GRASS, *dogs*.

SUCCORY, see CICHORY.

TURNEP. (*Brassica Rapa*). A sweet mucilaginous and wholesome root; but by no means so nutritious as the potatoe, Jerusalem artichoke, and some other roots. In the *Musæum Rusticum et Commerciale*, we meet with a receipt for making *turnep-bread*, which is there said to be very palatable.

able and good. It is made by boiling the turneps, mashing them, pressing the water out of them, and afterwards mixing the pulp with an equal, or twice the quantity of wheat-flour. The whole is then kneaded with a proper quantity of yeast, water, and salt, and baked. This bread is very white and light. It has, however (especially for the first day or two) some smell and taste of the turnep. If there were no other objection to it but this, it might well be recommended for general use, on account of its cheapness; but we are convinced it is by no means so wholesome and nutritive as potatoe-bread, and must therefore confess that turneps are very unfit to be applied to such a purpose.

SECTION

SECTION II.

Of nutrimental Fruits and Seeds.

ALMOND. *The sweet Almond.* (AMYGDALUS communis). Eaten in the usual way with the skins on, and without being well chewed, almonds are digested with difficulty, and disorder the stomach. But when freed from their skins, or blanched, and reduced to a paste by trituration with a little loaf-sugar or gum-arabic, they become sufficiently light and digestible, and afford, bulk for bulk, almost as great a quantity of nourishment as any other vegetable substance. In this state of a paste, they may, with a small admixture of wheat or other flour, be made into cakes, which will satisfy the appetite and support the body more effectually than twice as much wheaten-bread. This almond-paste may also be made into puddings with ground rice or millet; or it may be put into broths and soups, which it serves to thicken and render more nutritious. Lastly, the almond-paste may be further employed for making a liquor that will in a great measure supply the place of milk.

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This liquor or emulsion is easily prepared by triturating the paste with boiling water, which should be added to it little by little (that they may mix together very smooth) and in such quantity as to give the whole the colour and consistence of new milk. The proportion should be three quarters of an ounce (or at most an ounce) of blanched almonds, with 2 tea spoonfuls of powdered gum arabic, and 3 or 4 lumps of sugar, to a quart of water. The sugar is not absolutely necessary. This will be found to be a very pleasant and wholesome morning and evening beverage, and will be an excellent substitute for tea. It will cost less than the same quantity of cow's milk; and if used in the place of tea, the daily saving in expence will be very considerable. This is a matter well worth the attention of labouring people and small housekeepers; and when it is considered, that by the use of this substitute the health and the purse will be equally benefited, we may hope that these hints will not be thrown away. If the almond-milk should create flatulency, this inconvenience may be easily obviated, by triturating along with the almonds some carraway-seeds, which will give an agreeable aromatic flavour and pungency to the liquor.

ARTICHOKE. *The common artichoke, or French artichoke.* (CYNARA Scolymus). The edible parts
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of this plant are the receptacle or bottom of the head to which the florets and seeds are fixed, and the fleshy part of the scales. The only state in which they are commonly eaten, is boiled. But by drying these parts in an oven, and afterwards grinding them to powder, they yield a sort of meal, which is mucilaginous and nutritious, and may be employed for a variety of purposes. It is especially suited to thicken broths and soups, and may be also mixed in small quantities with flour puddings. In the drying, the peculiar mawkish taste of the artichoke is in a great measure taken off.

BEAN. *The common bean.* (VICIA Faba). The green, unripe seeds of this well-known vegetable, are a favourite summer-food in this and other countries. But the meal obtained from the ripe and dried seeds is seldom made use of. Yet, when mixed in a small proportion with wheaten or rye-flour, it yields a sufficiently palatable and not unwholesome bread, and may therefore be occasionally used in this way, in order to save wheat-flour. In the "Account of the Experiments tried by the Board of Agriculture in the composition of various Sorts of Bread, Lond. 1795," we are informed, that when bean-meal or flour is used for bread, in some places, it is steeped in water, to take off the harsh flavour, and that afterwards, when mixed

mixed with wheat-flour, the taste is hardly to be perceived. It is mentioned that specimens of very good bread have been produced before the Board, mixed as follows: 1 lb. bean flour, 1 lb. potatoes, and 4 lb. flour. It is further observed, that the flour or meal, both of beans and pease, by being boiled previous to being mixed with wheaten flour, incorporates more easily with that article, and probably is much wholesomer than otherwise it would be. In addition to the above, we have only to remark, that as bean-meal is rather heating and binding, we think the proportion of it in mixed bread should not exceed that which we have here taken from the account published by the Board of Agriculture, viz. should not be more than one sixth of the whole.

BEAN, *kidney*, see KIDNEY-BEAN.

BUCK-WHEAT. (POLYGONUM Fagopyrum). Within these few years this plant has been much cultivated in this country; but rather for the purpose of feeding hogs and poultry with the seeds, and of obtaining fodder and manure from the stalks and leaves, than with a view to procure an aliment for man. Yet the meal ground from the seeds is very wholesome and nutrimental, and is

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much used in many places abroad instead of wheat-flour. It is commonly made into thin cakes.

CHESNUT. *The common chesnut, or sweet chesnut.* (*FAGUS castanea*). This fruit freed from the husk, well dried and ground down, yields a palatable and nutritious meal, which in the southern parts of Europe, and particularly in the Island of Corfica, is frequently made into cakes and loaves. If chesnuts were more plentiful in this country, the meal obtained from them might be advantageously mixed with thrice its weight of flour, and made into bread. But at present they are too dear to be generally used in this way.

CUCUMBER. *The common cucumber.* (*CUCUMIS sativus*). The best mode of preparing this fruit for the table, is stewing it. When so prepared, it is readily digestible, and considerably nutritious. In this way it may be eaten pretty freely. To prevent flatulence, it is proper to season it with a little pepper. We have been informed that this fruit, after the seeds and soft pulpy part are scooped out, being cut into slices, dried in an oven, and grated or pounded, yields a sort of meal, which may be used (like the powder from artichoke-bottoms) for thickening broths and soups.

GOURD.

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GOURD. *The common, or bottle Gourd.* (*CURBITA lagenaria*). When this fruit is about half grown, it may be dressed in the same way as the cucumber, with which, at that period of its growth, it agrees in all its properties.

HAZLE-NUT. (*CORYLUS Avellana*). This fruit may be applied to the same purposes as the almond, which see.

KIDNEY-BEAN. (*PHASEOLUS vulgaris*). In this country the ripe seeds of this plant are seldom eaten; but when boiled and freed from their skins, they are much esteemed abroad, where they are eaten cold, as a salad, seasoned with vinegar and pepper. They are very farinaceous and nutritive; but like all other pulse, rather flatulent. The meal, mixed with a proper quantity of flour, may be made into bread.

LUPINE. *The white lupin.* (*LUPINUS albus*). The ripe seeds of this plant may be used in the same manner as the seeds of the preceding.

PEA. *The garden pea.* (*PISUM sativum*). Passing over the well-known ways in which pease are commonly eaten, we have only to take notice of the use of the meal in making bread. In this respect, the same may be said of it that has been already said under

under the article of beans, to which therefore the reader is referred.

POMPION, or *Pumpkin*. (CUCURBITA *Pepo*). This fruit, when very young and less than half grown, may be eaten in the same manner as the gourd. The ripe seeds of this fruit, and indeed of all the cucumber and gourd kind, contain a considerable portion of oil, and yield by trituration with gum arabic and water, a milky liquor, like that which is obtainable from almonds.

POPPY. *The white poppy*. (PAPAVER *somniferum*). The seeds of this plant possess no narcotic or sleepy quality, which resides wholly in the heads or capsules, and leaves. The seeds themselves abound in mucilage and oil, and are very nutritious. They may be used either to make a milky liquor with water, like that procurable from almonds, or may be bruised and made into cakes with a double or triple proportion of flour.

POPPY. *The red, or corn poppy*. (PAPAVER *Rheas*). The seeds of this possess the same nutritional properties as those of the preceding species, but in a less degree.

VETCH.

VETCH. *The common vetch, or tare*. (VICIA *sativa*). Much inferior as food for man to pease and other pulse; but in times of great scarcity, vetch-meal, previously soaked in water (as recommended to be practised with bean-meal) may be made into bread with a large proportion of wheat or rye flour, viz. in the proportion of one part vetch-meal to seven of the latter.

WALNUT. (JUGLANS *regia*). In nutritional properties, this fruit agrees with the hazel-nut, to which the reader is referred.

SECTION

SECTION III.

Of other Vegetable Matters,

that may be used freely for the support of man:

GUM ARABIC. This valuable gum, which is largely imported into this country, exudes from the trunk and branches of a tree of the *Acacia* tribe, which grows naturally in Arabia, and is called by writers on natural history, *MIMOSA nilotica*. In nutrimental qualities it agrees with Salep, of which an account is given under the article Foolstones. It is, however, more mucilaginous, and, weight for weight, even more nutritive than the dried orchis root. There are daily instances, says Dr. Lind, of persons being supported for many months by gum arabic alone. Hasselquist, in his voyage to the Levant, informs us, that a caravan from Ethiopia to Egypt having expended all their provisions, lived for two months on gum arabic dissolved in water; this gum having luckily been part of their merchandise. It serves as a sustenance for whole negro towns, during a scarcity of other provisions occasioned by a failure of their crops of millet and rice; and

and the Arabs, who twice a year collect this gum in the inland forests on the north side of the river Niger, have no other provisions to live upon for some months. According to Sparrman, some of the Hottentot tribes, when in want of other provisions, live upon this gum for many days together. It may be used in various ways, dissolved in water, in milk, or in broths. It may also be employed with great advantage for mixing oily liquids with water. Such mixtures are exceedingly palatable and supporting. N. B. *Cherry-tree gum* is nutritive, but in a less degree than Gum Arabic.

TAPIOCA. This is a mucilaginous substance obtained from the roots of a species of *JATROPHA*, or *CASSAVA*, and is imported into this country from the West Indies and South America. It is highly nutritious, and requires no other preparation than to be moistened with hot water, or boiled therein. A little sugar and spice, or wine, are palatable and wholesome additions to it. By boiling it in milk a thick pottage, or sort of hasty pudding is obtained. This is very strengthening; but rather too heavy for delicate stomachs. Tapioca may be made into puddings in the same manner as rice.

SAGO. This farinaceous substance is prepared from the pith of a palm-tree which grows in the

East Indies, and to which botanists have given the name of *CYCAS circinalis*. An inferior sort, from a different tree, comes from the West Indies. Indeed the pith of most of the palms is of a like mucilaginous and mealy nature. Sago is prepared for the table in the same manner as tapioca, with which it coincides in every respect.

OIL. *Sweet Oil, or Sallad Oil.* This is obtained by pressure, from the ripe fruit of the olive-tree (*OLEA europæa*). In Italy, and the more southern parts of Europe, it in a great measure supplies the place of butter. By triturating it with a sufficient quantity of gum arabic (previously made into a thick jelly or mucilage with warm water) it may be made to incorporate with water, so as to give a milky liquor similar to that already mentioned under the article of Almonds. The proportion should be half an ounce of oil, with an ounce of the jelly or mucilage of gum arabic, to a quart of water. A little sugar and some aromatic seeds, such as carraway, will render this liquor more palatable, and make it fit better on the stomach. This, like the almond-emulsion, may supply the place of milk, and supersede the use of tea.

THE END.