

WINTERING-OVER OF WEEDS

BY HERBERT GROH.

With the arrival of winter comes a check to all vegetable growth, and an interesting question arises in one's mind as to what becomes of the many varieties of weeds, at that time. Are they killed, or are they to reappear? This we should know, so that the earliest opportunity may be taken to attack and exterminate them.

Weeds are commonly classified as annuals, biennials, and perennials, with winter annuals as a convenient though not very scientific further distinction. An annual weed may be a winter annual when it starts in the fall, and is fortunate in its location or in the season; or it may be regularly a winter annual a little farther south.

Annuals.—Ordinarily an annual is a weed that germinates in spring or early summer, grows and reproduces before winter, dying naturally or when caught by autumn frosts, and leaving its progeny safely tucked away within seed-coats capable of withstanding winter's adversities. It is the seed of the annual therefore, that holds the strategical position, and its importance is well attested by the abundance of it, as compared with other weeds. If we can induce the seed to germinate before winter, or if we can start it early enough in spring, frost in the one case and preparation for spring-sown crops in the other will get it while young, and through a moist, friable seed-bed germination can only be secured by providing after harvest and fall cultivation. Even then some weeds, like wild oats, refuse to be tempted forth to their undoing; but the fall work is not entirely lost on them, since it prepares for their earlier start in the spring. For most annuals, any practice which will hasten spring germination, as fall instead of spring plowing, drainage and rigging up over winter if necessary to dry the land early, and running the harrows quick over all bare fields before proceeding with a root system already developed, they are able in the spring to outstrip the farmer who is not promptly on the job. They are soon too sturdy to be easily uprooted, and some are in bloom by the time other vegetation is starting. Stinkweed and shepherd's purse may commence flowering at an

inch or two in height, and may even go into the winter in bloom, remaining fresh under the snow, and proceeding to mature seed on the return of warm weather. Even more than for annuals it is important to attend closely to the condition of the fields at wintering-in, and in early spring. Winter annuals sometimes thin out by a stroke of the harrow before the ground becomes too hard in spring. Otherwise hand-pulling, a desirable safe-guard in any event, becomes unduly laborious. Biennial weeds usually start growth early enough in the summer to provide themselves a stout tap-root, and a strong rosette of leaves lying snugly on the ground to carry them through the winter and furnish reserve food for the following year which is quickly pushed up in the second year. Blueweed and evening primrose are good examples. Unless killed as seedlings, the broad-shared cultivator is the best implement for them; or they may be spaded or hand-pulled while the ground is soft. Such weeds simply branch out again, and go to seed a little later, if mowed, or cut above the crown only once.

Perennial weeds. While also reproducing by seed, maintain themselves from year to year by their strong root systems, which may be creeping, like those of the Canada and perennial sp. thistles, or short and fleshy as with the docks and dandelion. No simple operation in fall or spring will suffice to exterminate the average perennial, although exposure to the action of frost on an up-turned furrow or ridged land will help. Most perennials come through the winter primed for vigorous growth; and except in land to be under fallow or a tilled crop, it is usually most practicable to let them spend themselves in preparation for seed production, and then by timely cutting of hay or grain, prevent this. Plowing before the plant has a chance to replenish its lost stores must then be followed up by close starvation of the underground parts by the use of the broad-shared cultivator as often as they would reach the light; or in some few cases by dragging them out bodily into the hot sun to dry. Couch grass and dock, in fact, are better removed entirely when this is possible. A mere occasional stirring of perennial rootstocks only serves to break them up and transplant them, like so many cuttings.

Rotations.—It cannot be over-emphasized that a regular rotation of crops, which provides a cleaning crop at intervals, another crops of clover, etc., and at all times, the most thrifty and complete possession possible of the soil by crops, is the best insurance against weeds. In addition, enough should be known of the special life history of each weed to guide one in the choice of additional methods of attack and to make them seasonable.

A BOY'S APPEAL FOR CANADA'S FORESTS

(An essay written by Percy Russell, age 10 years, grade 6, Field, B.C.)

MISS ETHEL J. MILLAR, Teacher.

"Protect the Forest! It is yours!" should be our slogan. All Canadians should accept and help because we derive much revenue from forests. Our national development, our future welfare, and our industries depend entirely on the forests.

Protection of forests reduces taxation. The forest fire loss to Canada is \$15,000,000 annually, and no nation can survive continual losses of this nature. The welfare of Canada depends on a sufficient supply of cheap wood. Few Canadians realize the importance of this. All should be trained to be careful of fire.

Forest fires are an annual occurrence. Ground fires, surface fires, and Crown fires do much damage. Fires spread rapidly through undergrowth, and dead trees. The bearded growth on old evergreens carries fire quickly. Shavings from mills cause many fires. Fires travel up hill quickly. Burning trees fall and start fires lower down. Wind, heat and dry weather aid fires. Dampness and heavy dew hinder small fires.

Fires leave desolation in their path. As eighty-six per cent of the fires are due to human agency, they could be prevented. Settlers clearing land, and railroad campers are responsible for many fires. Tourists and hunters leave campfires and throw down matches and cigarettes. In 1918 a fire (caused by campers) between Banff and Fernie, caused considerable damage. Last year at Emerald Lake a fire, started from cigarettes, was reported by a fourteen-year-old boy.

The value of forests to British Columbia people is shown in the lumber, pulp and shipping industries. After a fire, mills and factories close; railroad construction stops; and transportation ends. All industries depending on the forest stop. Men become idle; pay-rolls are wiped out; and lumbermen and hunters, settlers and tourists avoid it. Wild life disappears, burned land is useless for farming; water is scarce; and scenic beauty is lost. The annual loss to Canada is \$15,000,000. "The young growth of to-day is the forest of tomorrow." Keep the forests for future generations.

Be careful of fire! Fires can be located by close observation from



SMART COAT FOR GIRLS.

Sturdy, durable and correct, with a free and easy smartness. Nutria fur makes the collar of this double-breasted straight-line coat, fashioned of cinnamon-brown chinchilla and lined throughout with flannel. Deep cuffs of the cloth trim the plain sleeves, and patch pockets proclaim their usefulness on cool days. The diagram pictures the simple design of the party finished coat, No. 1215, which is sized 4, 6, 8, 10 and 12 years. Size 8 years requires 2 1/2 yds. of 36-inch, or 1 3/4 yards of 54-inch material. The lining requires the same amount of material as the coat. Price 20 cents.

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HOW TO ORDER PATTERNS.

Write your name and address plainly, giving number and size of shop patterns as you want. Enclose 20c in stamps or coin (coin preferred); wrap it carefully for each number, and address your order to Pattern Dept., Wilson Publishing Co., 73 West Adelaide St., Toronto. Patterns sent by return mail.

Bill's at the Fair.

My vacuum sweeper's broken. The toaster's on the blink. There's something in the drain pipe That's stopped up the kitchen sink. The hired men are quitting. The barn is full of flies. The crops all look so sooty. It brings tears to my eyes. The place is going to ruin. But Bill, he doesn't care, Because he's showing cattle

At the Tinkum County Fair. For Bill is "Fair Show" brave, His farm it just, just so he'll ride With cane in hand, for hours he'll stand To watch the judge decide. Some ribbons blue may come his way, But if they don't he's just as gay. For Bill will care, just so he'll see To show his cattle at the Fair. They talk about us women, Why, the simplest can't compare, With any man that's got a bunch Of cattle at a Fair. —Elsa L. Clark.

Alfalfa as a Pasture.

Alfalfa as a pasture is relished by all classes of stock, but there is a tendency for the animals to bloat under certain circumstances. This may be overcome, according to a bulletin on Alfalfa in Manitoba just issued by the Dept. of Agriculture at Ottawa, by refraining from pasturing when the plants are moist with dew and by preventing the animals from burping themselves. Ruminating animals should be gradually accustomed to this pasture. Close grazing should be avoided. There should be no pasturing in the seeding down year, and very little in the second year.

To Make Steak Tender.

Many people use a knife for pounding beefsteak, in order to make it tender before frying. It cuts the fibres slightly, and thus makes the steak a little more tender. A far more effective method, however, is to dip the steak in flour, then pound it well, on both sides, with something heavy, as a potato masher. The heavy metal masher are best of all for this purpose. Steak treated in this way will be found amazingly tender and delicious.

Without sunlight, mineral salts in the blood of chicks were not deposited in the bone, and the chicks developed leg weakness or rickets, and made no growth. The same thing, the experimenters say, applies to children and to all forms of animals liable to bone diseases.

S.S. LESSON

November 15. Paul's Arrest in Jerusalem, Acts 21: 17 to 22: 30. Golden Text: "If any man suffer as Christian, let him not be ashamed.—1 Peter 4: 16.

SUBJECT. THE NATIONAL INDIGNMENT OF PAUL AT JERUSALEM.

INTRODUCTION.—What Paul had predicted during his last journey to Jerusalem came to pass. Jewish anger, which had been steadily growing against one whom they supposed to be the betrayer of the nation, came to a head, and Paul was seized and roughly handled by an incited multitude, from whom he was only saved by intervention of the Romanarrison. It must be remembered that Jewish national feeling against the Roman government was rising steadily. The Jews, mixed by fanatical leaders, had drifted irrevocably on to the course which little more than ten years later brought about the fatal rebellion in which Jerusalem went down in blood and slaughter. To such people, bent on recovering the old national independence of Judaea, the very existence of Paul was abhorrent. By declaring that the law was abrogated in Christ, and that the old barrier between the Jews and the Gentiles had been taken down, he was held to be a traitor who had led away the national honor.

Consequently, we understand the nature of the attack now made on him, and in our study of the lesson we shall have to attend to the details of the national indignment. On his arrival at Jerusalem, Paul, in conversation with James, the president of the Jewish church, learned that there were many Jewish Christians who were out of sympathy with his teaching regarding the law of the institutions of Moses, and James urged him to correct their misunderstandings, Acts 21: 17-26. Needless to say, however, it was not from these Jewish Christians, but from the non-Christian nationalists, that the attack upon him now proceeded. The signal came from certain Jews who had observed Paul in Asia. Seeing him in the temple, they immediately incited the mob to seize him and bring him to account.

It is not too far to say that the national hope is in danger. They have found in the very temple the renegade who for years has been undermining the cause of the Jewish people. First, he has spoken against the people by his own assertion that God has given his kingdom to the Gentiles. Secondly, he has spoken against the Law by declaring that it has been repealed through Christ. Thirdly, he has defamed the place, that is, the temple, by saying that it will pass away, and that Christian believers are the true temple of God. As the Jews believed that God intended his kingdom only for themselves, and only upon condition of their keeping the Law, they are indignant at what he has said when God came to set up his kingdom, he would suddenly appear in his temple (Malachi 3: 1), it can be seen that the charge against St. Paul was a very serious one in non-Christian Jewish eyes. And as if all this was not enough, they now raise up the charge that Paul had introduced Greeks into the inner court of the temple, and so defiled it. This, if true, was an offence punishable with death.

V. 29. It is apparent, however, that the last charge was quite untrue. The accusers had seen Paul, accompanied by Trophimus the Ephesian, in the streets, and they imagined that he must have taken Trophimus into the temple, and placed all along the wall between the outer and the inner court of the temple, forbade any Gentile to advance into the inner court upon pain of death. One of these inscriptions has been discovered in recent years.

Vs. 30-36. The effect of all these charges upon a populace seething with national indignation was indescribable. Paul was rushed out of the temple, a mob behind him, being immediately locked, and the apostle was on the point of being murdered by the mob, when the captain of the Roman guard located in the fortress of Antonia, just north of the temple, got word of the riot and promptly intervened to save the scene. His appearance with a troop of soldiers and officers at his back imposed a check on the rioters, and they stopped beating Paul. Unable to find out from the confused scene who had done the deed, the captain of the guard thought it best to take him into custody. But so extreme was the popular violence that when they came to the steps leading to the barracks at the Antonia fortress, Paul had to be lifted bodily by the soldiers and hurried into safety.

Vs. 37, 38. And here a surprise was in store for the captain. Paul had asked permission to speak to the people. The captain, before granting it, was led to ask Paul if he was not the Egyptian who, some years before, had headed a popular rising against the government. Paul replied proudly: "No, I am a Jew, native of Tarsus in Cilicia, a burgess of a very famous city." This was enough for the captain of the guard, and he gave permission accordingly. The "Egyptian" in question was a false prophet who had induced thousands, belonging to the Jewish anti-Roman organization known as the Sicarii or Assassins—hence "murderers," as they are here called—to follow him into the wilderness, promising that he would lead them in a march on Jerusalem, the walls would fall down before them. The insurrection was crushed by Felix and the ring-leader fled. Hence the captain's question.

In setting a mousetrap, single the meat over the bait. Just a moment after putting it in place—the odor will prove very enticing to Mr. Mouse.

I will find them in a good pasture and upon the high mountains of Israel shall their fold be.—Ezekiel 34: 14.

FOR HOME AND COUNTRY

The Northern Ontario Women's Institutes in Convention.

Owing to the expanding needs of the work, it was decided this year to hold two Women's Institute Conventions, one at Elk Lake for the far north, the other at Burk's Falls for the centre north, instead of the one formerly held at North Bay. Both were very successful in forming a meeting ground for the discussion of needs and reports of achievements of Northern Ontario branches and districts.

Crisp and bright as their woods and lakes, the delegates came with an infectious give-and-take spirit to meet each other and the Departmental representative, living up to the old motto, "If you know a good thing, pass it on."

The Mayor arrived promptly to welcome the visitors to his pretty town. His address was replied to by Mrs. Mawhinney of Huntsville, District President of Muskoka, who with a number of fellow delegates were specially invited guests of the Northern Convention.

Health services from various sources, traveling libraries, education in the Institutes and public schools, the demonstration-lecture courses, program planning, and co-operation with the Institutes of older Ontario were some of the subjects which received attention in the brisk discussions through which a merry laugh roared not infrequently, or which an interval of community singing agreeably interrupted.

Not only what to do—but how to do it—was the insistent demand as the branch reports came on and the Convention took time to interrogate delegates whose branch seemed to be getting unusually good results in home management, community progress, recreational features, or growth in members.

"Give everybody something to do, not too much, but something," advised New Liskeard, telling how they revived a branch membership from seven to eighty-five. "Feed the men, Ma-sonie and other banquets are good service and good publicity agents besides. At our Mothers' Day we had 175 mothers. This was achieved by one taking care of several families so the mothers could get out. We find the sewing course makes good dressers as well as good needlewomen."

Much help given to local needy families was reported and the blind received the usual steady practical sympathy from the branches as well as the school falls, schools, and Sick Children's Hospital. Trout Creek, consulting with the Health Nurse, donated five water coolers to its four schools.

Home tinkering as a practical matter for a series of demonstrations on the monthly program brought on a live discussion as did the question of selling tickets for quilts as a means of raising money. The general feeling was that it was a form of graft which should not be encouraged in sound community building.

One of the delightful social features was a visit to the spacious and beautifully kept Children's Shelter at Burk's Falls, which most of the branches assist as part of their migration work. They were very proud of the fact that the baby of the Institution had carried off first prize at the Baby Show held recently.

ESSENTIALS IN THE SUCCESSFUL INSTITUTE.

"It is being more generally realized every year," said Superintendent Geo. A. Putnam, speaking on Essentials in Institute Work, "that the Women's Institutes can be depended upon to be on the job. Not only that, but to be on the right job at the right time. The results of over a quarter of a century of this is seen in the changed and improved conditions of social life in the country and in the status of women themselves—the development of individual talent and the way in which combined talents are made the property of the whole community as formerly they were not.

While the Provincial and District Conventions are of very real value in this broad sharing of the best ideas and methods of work and in the inspiration that comes from numbers, the thing of real value, of the great value is the work done in its own community by the branch and the branch members.

How can this best be accomplished? By making a survey first, informing yourselves of the needs of your own home, your own community. Ask yourselves, "What can a group of women do, working co-operatively, to better conditions in this neighborhood?" Then plan a program which will meet the essentials. Utilize local resources to the fullest possible extent. Arrange educational gatherings—social gatherings, a feature of which shall be chatting together on matters of vital interest.

Inform yourselves as to the services available from the various Government Departments, from the Colleges, in the shape of literature, libraries, films, lectures, technical education which can be brought to your own community instead of having to go away for it. Arrange for systematic instruction in sewing, foods and feeding, home nursing, millinery, in the neighborhood.

Plan for your boys too—courses in mechanics, carpentering, masonry. "Women of to-day have responsibilities outside of the home. They must guide community housekeeping as well

PUTTING IT OVER THE WEATHER

There is in the minds of most farmers a sort of sub-consciousness that he must submit at all times to the dictation of the autocrat, the weatherman. Whatever he orders in the way of weather seems to go with the majority of us without question. Yes, in a sense, the good farmer is no such vassal to that despot.

The farmer can, to a considerable degree, insure himself against weather extremes. Fields fed with legumes, manures and fertilizers will produce crops that can withstand a little dry weather or too much rain, better than crops can on soils lacking in plant food and cultural conditions. Lime and phosphates diminish the unfavorable effects of an open winter upon the land, and, by increasing the amount of fertilizer heavy in nitrogen, one can help the fall grains to gain a degree of growth that will reduce to a minimum the possibility of winter-killing.

A consistent, liberal fertility program is a method whereby the farmer can protect himself against a considerable portion of the crop damage resulting from bad weather. So long as it is not in the hands of the farmer to order the sort of weather that would best suit his purpose, it is policy for him to provide conditions that will minimize damage should weather extremes come.

A Roadside Selling Kink.

A roadside seller of farm produce near a western city, who sold a whole season's crop in a single day, picked for his "big day" a November date, when most roadside sellers of apples and cider were out of the market. In choosing the day, he waited until weather conditions would be just right—mild, sunny hours after a spell when autists had been making few pleasure trips into the country. Such weather calls them out in unusually large numbers. An early snowstorm had left roads slushy and muddy, so bad, in fact, that the city autists had their choice of a meagre few main thoroughfares, and one of these was the road on which the apple merchant took his stand.

He lined his wares up beside the paved road, stuck up a sign quoting prices, and was ready for business. In the course of the day he sold hundreds of boxes of apples, and barrels of apple cider. His "cleaned up" before the day was over. At retail prices, or very little below, he sold in a day a quantity of fruit and cider it would have taken weeks to peddle out household. Because he showed cleverness in picking a sales date, he sold apples and cider so fast that the sales expense chargeable to each separate item was very low.

At one time scores of autos were stalled on the main road, and traffic was literally at a standstill—except the apple traffic. (Every roadside market should have plenty of room for cars to drive in, so as to prevent this stalling of traffic, as well as accidents on the highway.—Editor.)

Such a clever plan as this makes direct selling attractive to the shrewd producers.

My Party Box.

Girls, have you ever longed for some contests or games for a party, something different, and couldn't find them? Have you ever said "I read the jolliest game the other day, but I can't remember where?" If you have, then start a party box. My party box was started years ago, and it was only a large shoe box kept on mother's closet shelf.

Every time I found a contest or game in a magazine I clipped it out and put it in my box. Whenever I attended a party which I had especially enjoyed, I jotted down something about it—the menu, the favors, decorations and games and added it to my collection.

As the years have passed my box has been a friend in need many times, both to myself and to my friends. Often I have been on the entertainment committee for a club party, a Christian Endeavor social or a community league meeting. Although many times I had but little time to give to the work, I always found just the thing in my box. As the opportunity presented itself from time to time I have added several little books on entertaining to my collection, but I really like my magazine collection best of all.—Grace Gordon.

How I Dry Pumpkin.

In the fall, after the flies are gone, I pare pumpkins, cut in small squares one-third inch thick, string on heavy cord, stretch across the kitchen above the stove, and let hang till dry. To use, soak over night in cold water, adding a little baking soda. In the morning drain, add fresh water, and cook till done. Mash and use like other pumpkin for pie.—Mrs. A. J.

Unique Hope Chest.

One day while in the attic I discovered an old trunk and had an inspiration. I lined the trunk with blue challis, tacked it on with brass tacks, enameled the outside in a color to harmonize with the color of my room furnishings, enameled trimmings and hinges back.—H. V.

ON RIDDLES

Guessing riddles and solving puzzles have the same effect on the brain that running, jumping, etc., have upon the body. Well known that moderate exercise strengthens the muscles and improves the circulation of the blood.

Riddles are of very old date. The first one we have any record of was propounded by Samson to the Philistines, and given seven days to guess. Certainly would have killed Samson's wife given them the ancient ages and of Greece and Rome were of solving puzzles, and they send them to each other, when he rushed from the "out Eureka!" (I have found the solution of the problem that him for a long time. Riddles are also mentioned in the fabulous stories of mythology. The Sphinx was to be half woman and half lion, every one who came to the Nile, and if they did not solve it would devour them. The first one to break the Sphinx's spell was Oedipus. "What is it that walks in the morning, two legs, three at night?" Oedipus answered with "man." "It is man. In infancy, he crawls; in morning of life, he crawls; at noon, he walks erect; in the age he leans on a crutch; for a supplementary thing, he has a supplementary pair of legs. The old English several riddles, and Oedipus, who lived opposite to the same street in London, ten amuse themselves by riddles and conundrums to the learned and eager Swift wrote a great many riddles. Lord Byron the letter "H" is perhaps the English language. Charles Dickens, when very fond of guessing, John B. Good, the great lecturer—who was a millionaires—was famous when powers of intuition and noted for his aptness at riddles.

In fact, I believe, if all the men of genius and were traced to their boy-days, found that nine-tenths of them had this lighted-on amusement.

My Little Wooded

My little wooden house That keeps my secrets close, That offers cheer alone To that welcome me with Upon the stormiest day.

My little wooden house, That mothers me and ever, In loving arms eternally, I send my shining thank For you—emblem of God's love.—By the

Violin-Making

The Haslemere Festival has been drawing attention and the devotion of the many past in the street making strings was always a great occupation. Stradivari fame, is believed to have the assistance of his father, a 1116 violin, besides which a Stradivari violin is located as accurately as a great price. It is known to-day.

Wasteful Girl

Sandy was engaged a few days before her day, succumbed to the girl had her hair styled and friends congratulated her upon her improved appearance. "Without any make-up," she showed herself to her

Disapproval

But Sandy viewed with disapproval. "It is hard on me, too," "verra hard!" After five a packet of hairpins

Direction

"My goodness!" the gentleman as he stepped had with the first catch had a very successful. When he did you catch it? "Just walk down the 'Private' and keep right on to a notice, 'Keep protected.' A few years there's a fine pool in 'No fishing allowed,' are, sir!"

A man's sins

but more often in