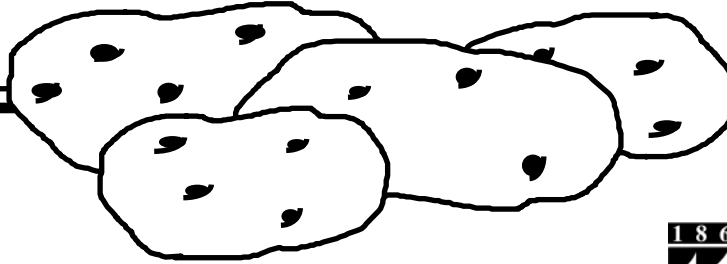


SPUDLINES



DECEMBER 2004
VOL. 42 NO. 3

CONFERENCE ISSUE



Dear Potato Grower,

Here is the latest issue of Spudlines. We have decided to try a new approach to editing Spudlines. Steve, Jim, and I will be taking turns editing the issues as they come out. Hopefully this will both spread out the work in the office, and provide enough change in style to keep the reading interesting as well as informative. This issue has articles on insecticide resistance in Colorado potato beetles, information on millipedes, cull piles, nutrients in field spread tubers, temperature and growth, grazing cattle as a potential rotation "crop", and influencing public policy.

The Maine Potato Conference and Trade Exhibit will be held on January 26 and 27 at the Caribou Inn and Convention Center. Pesticide applicator recertification credits and CCA credits will be available. We hope you will attend. The annual meeting of the Maine Potato Board will be on January 21 at the Presque Isle Inn and Convention Center. The Board is scheduled to meet at 2:00 PM; there will be a social time at 6:00 and dinner at 7:00 PM.

On behalf of the folks in our office, let me extend our personal best wishes for a cheerful Holiday season and a happy New Year to you all.

All the best,
Peter Sexton, Crops Specialist

This publication is in part supported by a grant from the Educational Committee of the Maine Potato Board. The potato growers, processors and brokers of Maine pay assessments. Portions of these assessments were approved for the educational purpose of keeping Maine potato growers and related Maine industry people informed.

Upcoming Programming of Interest - 2005

- | | |
|-----------------------------|---|
| January
11-12-13 | Augusta Ag. Trade Show
Civic Center, Augusta |
| January
21 | Maine Potato Board Annual Meeting
Presque Isle Inn and Convention Center, Presque Isle |
| January
26-27 | Annual Maine Potato Conference
Caribou Inn and Convention Center, Caribou |
| February
2-3 | New England Regional Training for Ag. Service Providers
Black Point Inn, Scarborough, Maine |

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Imidacloprid Resistance in the Colorado Potato Beetle

Dr. Andrei Alyokhin, Entomologist, University of Maine

Pesticide resistance in arthropods is a serious problem that costs farmers millions, if not billions, of dollars each year. Currently, about 540 different species of arthropods are resistant to 310 different chemicals. Cases of resistance have been reported from 168 countries, making it a truly global phenomenon. Some pests are resistant to a single compound. However, many of them are simultaneously resistant to several related (cross-resistance), or even unrelated (multiple resistance) chemicals. New cases of resistance are being continuously detected in a wide variety of crops, and no commercial grower can consider himself (or herself) to be completely immune from this problem.

Development of insecticide resistance in insect populations is a typical evolutionary process driven by survival of the fittest individuals. Initially, resistant insects result from random mutations caused by some internal (e.g., various molecules bumping against DNA in their chromosomes) or external (e.g., solar radiation) factors. As is usually the case for most oddball individuals, resistant mutants do not do very well among the general population under normal conditions. Their survivorship and reproductive success is usually lower than that of their susceptible peers. Therefore, relatively few of them persist in a population that is not exposed to a particular insecticide to which they have developed resistance. However, the situation changes dramatically when such an insecticide is being applied. Resistant insects find themselves in the position of a class nerd who makes a fortune in the computer business and flies his private jet to a high school reunion. The chemical kills off susceptible genotypes, while resistant mutants survive and thrive in the absence of competition. Pretty soon, their numbers increase to densities sufficient for causing economically significant damage.

The Colorado potato beetle is infamous for its ability to develop resistance to virtually any chemical that has ever been used against it. The first case of resistance was reported in 1955. Since then, over 40 different compounds belonging to 8 different chemical classes have failed against this pest. In some cases, the insecticide lost its efficiency within the first year of being used.

Part of the reason for such high adaptability is the original diet of the beetle. The beetles feed on plants in the nightshade family that normally contain toxins in their foliage. Therefore, even before entering agricultural ecosystems Colorado potato beetles most

likely possessed fairly effective physiological detoxification machinery directed against natural plant poisons. Relatively little change was needed to start using it against human-made insecticides. Also, high beetle fecundity (on average, about 600 eggs per female) increases the probability that one of the numerous offspring mutates, just as buying 600 lottery tickets increases probability of getting a winning one compared to buying 6 lottery tickets.

The overwhelming majority of Colorado potato beetle populations are still susceptible to neonicotinoid insecticides. However, the first instances of resistance to imidacloprid have been already reported from commercial potato farms in New York, Delaware, and southern Maine. These cases are still very few and far between. Nevertheless, they provide an early and clear warning that if appropriate measures are not taken, neonicotinoids will join a long list of chemicals that are no longer effective against the Colorado potato beetles.

Ensuring long-term success in chemical pest control (which is another way of saying “preventing resistance development”) rests on the same three basic principles as ensuring long-term success in any other hostile encounter. First, you need to know your enemy. Second, you need to use a multiple attack strategy. Relying on a single tactic is usually doomed to failure, even if this tactic is sound in general (just think of an army that consists exclusively of tank brigades, without infantry, aviation, or engineering corps). Third, you need to strike hard, but stop once the adversary ceases hostilities and is ready to surrender. Remember that even a morning dove may become ferocious when cornered.

In practical terms, this means the following:

1. Do not rely on insecticides alone. Every grower should practice crop rotation, which has been repeatedly shown to suppress Colorado potato beetle populations.
2. Do not follow an insecticide with ANY other insecticides that have similar chemistry within the same season. Doing so will ensure the most favorable conditions for resistant beetles because all their competitors for food and mates will be dead. Please remember that all neonicotinoids are very much alike and should not be used one after another. Fig. 1 shows field performance of imidacloprid and thiomethoxam on a commercial potato farm that has an imidacloprid-resistant beetle population. Clearly, for all practical purposes there was not much difference between the two. In the same time, a carbamate (Vydate) provided much better beetle control.

3. Use economic thresholds when making decisions about spraying. Not only does chasing every single beetle with a sprayer result in a waste of time and money, but it also contributes to rapid resistance development. Trying to kill all the beetles with insecticides usually results in killing all susceptible beetles. Only resistant beetles survive (that's why they are called resistant in the first place). When resistant beetles mate with each other, all their progeny are resistant. When resistant beetles mate with susceptible beetles, their progeny are less resistant, and usually can be killed by the full label rate of insecticide.

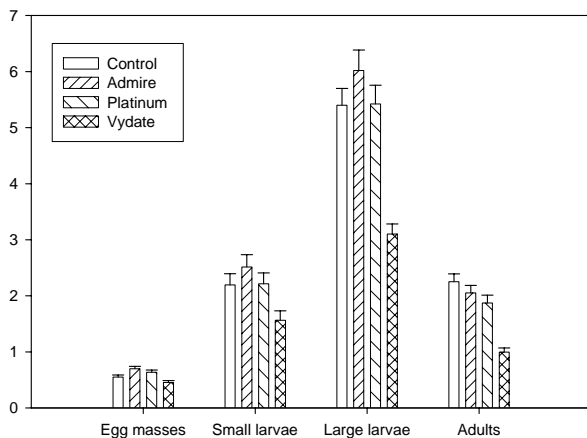
4. Leave refuges for susceptible beetles. If you apply insecticide in furrow or as a seed treatment to the whole field, you cannot use economic thresholds. However, you still need to supply susceptible mates for resistant beetles. Unless you intend to run a dating service for lonely beetles, leaving a few rows untreated at planting is your best solution. If needed, those can be treated later with foliar sprays.

5. Use full label rate of insecticides. Otherwise, you might not kill the hybrids between resistant and susceptible beetles (see above).

Preventing resistance is as essential a part of good insecticide stewardship as minimizing drift or wearing personal protective equipment. Necessary steps should be taken *before* insecticide failure becomes noticeable in the field, which in our case means pretty much right now.

Fig. 1. Average number of beetles per plant for different insecticide treatments in small-plot field trials in an area with imidacloprid-resistant Colorado potato beetles.

Mean number of Beetles per plant.



Millipedes

James D. Dwyer, Crops Specialist, UMCE

During the past few weeks we have had several growers bring millipedes into our office for identification. These small blackish-brown wormlike creatures were found in potato storages, and the growers were questioning if they were wireworms and could they be a problem for the potatoes in storage.

Millipedes, also known as “thousand-legged worms”, are blackish-brown in color and are cylindrical and slightly flattened, producing a wormlike shape. Millipedes are elongated animals, most of which have two pairs of legs per body segment, except for the first three segments, which have only one pair of legs. The legs may be difficult to see unless one looks closely. Antennae are short, usually seven-segmented, and the head is rounded. Their short legs ripple in waves as they glide over a surface. They often curl up into a tight ‘C’ shape, like a watch spring, and remain motionless when touched. They range from 1/2 to 1-1/4 inches long depending on the species. They crawl slowly and protect themselves by means of a scent gland, which produces an unpleasant odor.

Millipedes can resemble wireworms but can be easily distinguished from wireworms by close examination and noting their many body segments as well as the numerous legs. Remember wireworms are classified as insects and as such have only six legs; millipedes are classified as myriapods and are not an insect.

Millipedes normally live outdoors but can become an indoor nuisance by their presence. At certain times of the year, usually late summer or fall, they leave the soil and crawl into houses, basements, first-floor rooms, and even potato storages. Fall migrations during rainy and cool weather may result as a natural urge to seek protective sites for hibernation. Millipedes do not bite humans or damage structures, household possessions or foods. These animals should pose no real threat to the potatoes in storage. They can give off a disagreeable odor and, if crushed, leave an unsightly mess.

Millipedes are attracted to dark, cool, moist environments. They feed on living and decomposing vegetation and occasionally on dead snails, earthworms and insects. Slight feeding injury can occur on soft-stemmed plants, in gardens and greenhouses. They cannot tolerate water-saturated soil, which forces them to the surface and higher ground. Drought conditions can also stimulate migration. In the autumn, it is believed they may migrate in search of protected overwintering sites. If conditions are favorable, sometimes hundreds or thousands, literally shovels full, of millipedes can be found in

garages, first floor rooms and basements. Others believe that migration occurs when the food supply dwindles in October and November.

These animals overwinter as adults in protected areas and lay their eggs during the summer months. Some species of millipedes construct nest-like cavities in the soil in which they deposit eggs, while other species will lay their eggs in damp areas without constructing any type of nest.

People should be aware that anyone handling these creatures without gloves will notice a lingering odor (hydrogen cyanide-like), and the fluid can be harmful if rubbed into the eyes. If crushed, millipedes may stain rugs and fabrics.



Cull Piles and Late Blight

Steven B. Johnson, Ph.D., Crops Specialist, UMCE

Few plant diseases can rival the widespread misery and despair of potato late blight. Potato late blight is caused by *Phytophthora infestans*; a fungus-like organism that overseasons in infected tubers, cull piles and in infected volunteer plants. Between 1845 and 1860, one million people died in Ireland alone as a direct consequence of the potato late blight famine, and another one and one half million emigrated from Ireland. The “hungry forties” in England and other parts of Europe were also a result of potato late blight.

The 2004 potato-growing season saw late blight as a widespread problem across our production region. This disease is expected to threaten potato production in the region next year as well. With an average or wet early part of the 2005 growing season, it is my expectation that the disease may occur earlier than in 2004 and consequently cause even more loss than in 2004. While there are many actions potato growers can take to reduce late blight, few have such large benefits as elimination of cull piles.

Cull piles are a major source of inoculum for late blight. The late blight pathogen survives only on living tissue. Cull piles provide this, and allow the disease cycle to continue. This is the weak link in the disease cycle and is the most easily disrupted. In fact, many late blight prediction systems incorporate the proximity of cull piles.

Cull piles are not a suitable method for cull disposal. Field spreading is one option. Best Management Practices (BMPs) were developed in the late 1990’s to deal with field spreading of cull potatoes. The allowed period for field spreading of cull potatoes is from 1 October to 15 March south of the Southern Aroostook Soil and Water Conservation District. The dates are 1 October to 30 March for the soil and water conservation districts in Aroostook County.

Spreading of cull potatoes cannot be performed on any soils that are shallow to bedrock. There are two different spreading

rates for appropriate soils. The rate for spreading is 495 cwt per acre on soils that are 1) moderately well drained (seasonal water table between 16 and 48 inches); or 2) moderately deep soils (20 to 40 inches to bedrock); or 3) somewhat excessively drained. The rate for spreading is 660 cwt per acre on soils that are well drained or deep to bedrock.

There is a minimum 100-foot setback from wells, springs, ponds, streams and lakes for field spreading cull potatoes. Additionally, the slope of the field cannot be greater than 15 percent.

Field spreading of cull potatoes is not a perfect situation, but cull piles should not be an option.



Estimated Nutrient Content of Field Spread Potatoes

Peter Sexton, Crops Specialist, UMCE

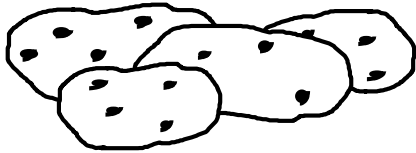
Field spreading of cull potatoes raises the issue of their nutrient value for the following crop. The fertilizer value of the tubers depends, of course, on how many pounds per acre are applied, and also on how quickly they break down and release N in the field. By my calculations, the C:N ratio of potato tubers is about 25 to 1, which means that initially they will not release much N as they decompose. However, given that tubers are about 70 % starch, we can expect them to break down fairly quickly. Table 1 gives an estimate of the amount of several nutrients that would be added to the soil with varying amounts of tubers either field spread or left unharvested. This estimate is based on tuber mineral concentrations from an on-farm nutrient uptake study conducted in 2003 with Russet Burbank potatoes in Fort Fairfield, Maine.

Table 1. Estimated amount in pounds of N, P, K, Ca, Mg, B, and Zn added to the soil per 100 weight of tubers that are field spread or left unharvested in the field.

Element	200 cwt	300 cwt	400 cwt	500 cwt	600 cwt
N	76	114	152	190	228
P	9	13	18	22	26
K	83	124	165	207	248
Ca	1	2	3	3	4
Mg	4	6	7	9	11
B	0.02	0.03	0.04	0.04	0.05
Zn	0.08	0.11	0.15	0.19	0.23

Substantial amounts of N and K are returned to the soil with field spreading of potatoes. How much of this N and K will be available for the next year’s crop? Nitrogen mineralization rates for manure and composted soil amendments are often on the order of 10 to 20 %. However, given the readily digestible nature of potato tubers, I think the microorganisms in the soil

will chew them up rather quickly and I would estimate that about a third to maybe one-half of the N applied in the tubers will be available for the following crop. Pretty much all the potassium in the tubers should be available; however, crops with a wide row spacing and inefficient root systems (like potatoes, and to a lesser extent broccoli) will have more difficulty capturing the potassium in the soil. For potatoes and broccoli, my suggestion would be to assume one-third of the N and half of the other nutrients will be available in the first season following field spreading. Even where very high rates of field spreading have been practiced, I would still suggest at least 80 lbs of N and K be applied at planting for potatoes. On the other hand, oats, barley and canola are planted in narrow rows and will emerge quickly and grow well in cool weather; these crops will develop an extensive root system and efficiently capture nutrients more efficiently than will potatoes. For small grains and canola, my suggestion would be to assume one-third of the N and all of the other nutrients applied in field-spread potatoes are available and decrease fertilizer rates accordingly.



Explanation of Base Temperatures for Growing Degree Day Calculations

Peter Sexton, Crops Specialist, UMCE

Base temperature is the temperature threshold at which growth and development of a given organism stops and starts. At temperatures less than the base temperature, metabolism is going so slowly that development is arrested - the organism basically just sits there and does little or nothing. For example, a volunteer potato or a barley seed in the soil in winter in Maine is not going to germinate or develop into anything, even though many days and months go by, until the soil warms up in the spring. At temperatures above the base temperature, development and growth increase as temperature increases up to an optimum. Some species are better adapted to cool temperatures than others, so base temperatures differ between species (Table 1).

In general, the warmer the temperature the faster a given chemical reaction will go forward. As a result of this, temperature is a critical factor affecting the performance and rate of development of all micro-organisms, plants, and animals. The reason we human beings don't perceive this in ourselves is because human beings (and all mammals) run at a relatively constant temperature (we're warm blooded). Whether the air temperature is 30, 60, or 90 F, our bodies will run at pretty close to 98.6 F. However, the crop plants we grow generally have to operate at whatever the air temperature is on a given day (think of how slowly a snake or a lizard moves on a cold day). Thus, their rate of development is very

much dependent on the temperature of the environment they are in. This is also true of the weeds, insects, and diseases we contend with. Their rate of development is not merely a function of time, but of accumulated temperature, or heat energy, over time. This is usually termed "thermal time" or "growing degree days" and is usually quantified on a daily basis by how many degrees the average temperature was above the base temperature. Growing degree days are calculated as the average temperature $[(\text{max}+\text{min})/2]$ minus the base temperature. Effectively, this sets the temperature scale to be zero at whatever your base temperature is. When average temperature is equal to or less than the base temperature, you have no development. Average temperatures greater than the base temperature start to accrue value on a daily basis. These values are added up over time and then used to predict events in the development and life cycle of a given plant or insect.

One problem with this calculation is that sometimes using the average temperature overlooks the fact that the plant or insect really cannot develop any faster than its maximum rate at the optimum temperature; further increases in temperature will not cause it to grow faster. Nor can the plant go backwards in development at temperatures less than the base temperature; it just stays where it is (there are no negative values in plant development). For this reason, another way of calculating growing degree days was developed called "modified growing-degree days". In this system, temperatures less than the base temperature are given the value of the base temperature (i.e. it cannot go less than zero). Temperatures above the optimum are given the value of the optimum temperature (the plant or insect cannot develop any faster than its maximum rate). This essentially shaves off the effect of extreme values in the daily calculations; in my opinion, it more accurately reflects what is going on inside the plant.

Besides predicting development, knowing the base temperature of the organism you are dealing with can be helpful in managing it. For example, with potatoes one wants to wait to plant until after the soil temperature has risen a few degrees above the crop's base temperature. If other management conditions permit, it is generally best to wait until soil temperature is more or less 5 F above the base temperature to plant crops that have trouble with seedling diseases. This way the seed can make a bit of headway in its development and doesn't just sit there while fungi grow on it. The base temperature for potatoes is 45 F. If at 45 F nothing is happening, then at 46 F almost nothing is happening. It is best to wait until the soil temperature gets to 50 F to plant potatoes in our environment. Obviously, there are many variables that impinge on the decision of when to plant (equipment available versus acres to cover, labor availability, etc.). For a crop such as oats which has a lower base temperature and where seedling diseases are less of a factor, soil temperature at planting is also less of an issue.

Table 1. Base temperatures for some plants and insects of interest.

Organism	Some Reported Base Temperatures*
Potatoes	45
Annual Ryegrass	32
White Clover	32
Small Grains	40
Canola	40
Peas	43
Soybean	50
Corn	50
Tomatoes	55
Barnyard Grass	44
Lambsquarter	48
Variegated Cutworm	45
Black Cutworm	50
Corn Borer	50
CPB	52

* For plants the base temperature given is for shoot growth or leaf appearance.



Got Grass?

Dee Potter, Extension Educator, UMCE

The findings of a trial funded by the Maine Agricultural Center conducted this past summer in Gardiner, Maine, showed a positive return on a small scale grazing project. The objective of the trial was to determine the economic feasibility and practicality of backgrounding cattle in Maine. Backgrounding is a livestock enterprise where light weight (350-450 lb) cattle are brought in during the spring and grazed throughout the summer. In the fall, the cattle are usually sold to feedlots where they are fed to slaughter weight and grade. The objective of backgrounding cattle is to utilize forage (grass) resources. Pounds gained by the animals during the grazing period are the production measure. The ability to put weight on the cattle efficiently and economically is one of the prime factors that determines level of profitability. Implications for potato producers are that, given their land resources, opportunities may exist for acreage utilization either as diversification or in

cooperation with livestock producers in close proximity through land swaps or forage acreage maintenance.

The trial ran 10 black steers (4,275 lbs total) bought in May and intensively rotationally grazed for 146 days on 3.5 acres. On October 13 the cattle (6,391 pounds) were sold through the Maine Beef Producers Association Fall Feeder Cattle Sale. The cattle were weighed every six weeks. The average daily gain (ADG) for the group was 1.3 pounds per day with a range of 0.8 to 1.6 pounds per day. The highest rate of gain was seen in the first half of the trial (average 1.96 lbs/day) which coincided with peak forage production.

The net return for the group of cattle was \$112.19 per head. The range was \$-105.57 to \$209.26 per head. Factors affecting net return were the ability of an animal to gain weight and animal health (the steer with a negative return had been very sick on arrival and was treated with antibiotics; he also had the lowest ADG). The price the animals sold for also affected the bottom line. Based on the sorting process at the sale, the 10 steers ended up in five different pens. The range on the price per pen was from \$.93 to \$1.16.

While the sample size was small, the performance and economic return of the animals covered the range expected across a larger group. The trial also helped identify issues which warrant consideration, such as the sourcing of animals. The steers came in with a larger group from Virginia. There was some stress with transport and the co-mingling of animals which likely led to some sickness. The ability to handle cattle is crucial. Animals need to be caught and, possibly, treated if they become ill. Also, a vaccination series is usually required prior to the sale to a feedlot. Marketing options and costs can also vary greatly depending upon the number of animals and location.

There are plans to conduct additional trials during the summer of 2005. For more information on backgrounding and a complete summary of the trial, please contact Dee Potter at dpotter@umext.maine.edu or 1-800-287-1421.



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Influencing Public Policy

Ron Beard, Extension Educator, UMCE

Have you ever seen a groove cut into stone by the steady drip of water? The stone is hard, but it does yield in time. Sometimes it seems like our public policy is like that stone (and it is that way for a reason) but policy yields to patient attention. And in this article, we will remind you about how to direct your attention in the most effective way.

Public policy is the whole set of decisions, programs and laws that direct how we do things as a people. We have policies that guide what we spend and do to provide people access to health care, others that assure we have good roads, and still others that address how we educate our children. And we have a whole set of policies that deal with specific economic sectors and trade of goods and services with other countries.

As a nation, we set up policies at three levels of government. In the U.S., each level derives its power to legislate from the one above it: towns are given certain powers by the state; states are given a set of responsibilities by the federal government; and the federal government, as are all of us, is guided by the basic principles set out in U.S. Constitution.

So, we are used to seeing how policies are formed at the local level, mostly by voters having their say directly, at town meetings, or in meetings of boards of selectmen (and women). If we support or oppose part of the budget or a change in the land-use ordinance, we get to say so—directly to our neighbors... one person, one vote— or, to people whom we elect to manage the affairs of the town, who then vote. (If they are following the letter and the spirit of the law, these locally elected officials conduct all their business in full view of the public, and citizens and news media have full access to the process.) You probably know from personal experience if you don't show up at a town or select board meeting, your views won't be heard, and you have little chance of influencing the outcome—public policy.

At the state level, the process for setting public policy may seem a little more cloudy, at the same time more formal and less transparent to the average citizen. The basics are these: every citizen has a right to vote for candidates to serve in the Maine House of Representatives and the Maine Senate. Voting districts are determined by numbers of people, with one representative for every 8,100 people and one senator for every 32,000 people. With some exceptions, the discussion leading up to a vote on public policy is in Augusta, and the vote is taken in the chambers of the house and senate.

The process starts before the Legislature convenes in January, when citizens contact their elected representatives about a concern or opportunity, and the representative or senator fashions and submits a bill for consideration. Each bill is assigned to a committee, made up of both representatives and senators, where policy intent and impacts are discussed, before the committee makes a recommendation to the full Legislature, either for or against passage. Most of us have been in Augusta at one time or another and seen the process that is both orderly and chaotic at the same time.

We can influence state policy at several points, but most importantly, when the proposed bill is being discussed by its committee. You can arrange to testify, and in so doing, you are heard by other members of the committee, by the press and very often by representatives of the state department most directly affected by the proposal. In addition, you can call your (or any) representative or senator and leave a message. You can send an e-mail message. You can send a letter. All of these methods are very effective due to how few people actually use them. Elected representatives pay close attention to what their constituents are saying. One state legislator says that if she has 5 or 10 personal calls or e-mails on an issue, that represents a groundswell! (She is seldom impressed by mass mailed postcards or form letters, however.) And, she says that the most effective communication comes from people who know the issue well, both the pros and cons, and who can speak from direct experience about how the issue affects them. It is easier to make that kind of connection if you and your representative know each other. You don't even have to be in the same political party to establish a respectful and honest relationship. More hints for effective communication are noted below.

In addition, you can help shape policy (and the views of others) by making your concerns public: a letter to the editor in local or state newspapers, organizing a policy forum, to which you invite all who are affected, along with elected representatives. You can exercise the right to stand on a literal or figurative soapbox. You can engage in peaceful civil disobedience.

The process of making policy at the federal level is basically the same, but it feels more complex and mysterious, perhaps since Washington is so far away and there are so many more "sides" to consider when discussing particular policies. In this case, our U.S. representatives and senators have paid staff, often specializing in specific policy groupings, both in their offices here in Maine and in Washington. While it may be more difficult to find one-on-one time with your Senator or Representative, you can establish the same kind of effective relationship with their staff members

through phone calls and e-mails (though in this case, correspondence is still addressed to the elected official).

Can the hard surface of policy be changed by patient attention? Yes, and it happens every session. You can be a part of change and learn to be an effective communicator about policy issues that affect you, your business and your community.

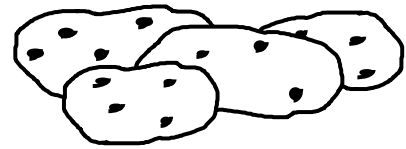
Tips for communicating with your Maine state legislator:

- Letters are extremely effective. Personal visits are also valuable. Personal postcards, phone calls, e-mail and well written letters all help. Be sure to tell your legislator why you support or oppose a measure.
- To reach your Representative:
House of Representatives, 2 State House Station, Augusta, Maine 04333-0002
- To reach your Senator:
Senate of Maine, 3 State House Station, Augusta, Maine 04333-0003

- Please include your name and address so the legislator can respond.
- You may leave a message for your Maine state legislators during sessions by calling a toll free number. If you would like a return call, please include your name and phone number in your message.

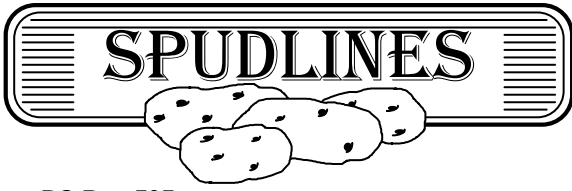
- To reach your state Representative:
1-800-423-2900
TTY number is 207-287-4469

- To reach your state Senator:
1-800-423-6900



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