



Agri-News

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How Much Moisture Does a Crop Need?

Since the start of spring, it's been cooler and drier than normal across the province. Alberta Environment's precipitation maps for May this year show that Lethbridge was recording the best conditions with 56 per cent of normal precipitation, while Calgary was at 23 per cent, Red Deer - 42 per cent, Edmonton - 33 per cent, Drumheller - 25 per cent and Lloydminster - 28 per cent. Basically, across most of southern, central and even north-central Alberta, precipitation conditions were much drier than normal for the month of May and the trend continued into mid-June.

For crops such as wheat, barley or canola, a certain amount of moisture is needed to not only initiate germination, but to take the crop through the vegetative growth stages to the point where it will produce grain.

"It takes at least four inches (100 mm) and often closer to five inches (125 mm) of water to get a wheat or barley crop from germination to the point where it will head-out and produce grain, and it's about the same for canola," says Dr. Ross McKenzie, agronomy research scientist with Alberta Agriculture and Rural Development, Lethbridge. "The amount of moisture needed is a bit variable because if you have a cool spring, the crop doesn't need quite as much moisture for transpiration, and more moisture will go into vegetative growth."

While the province finally got some much-needed heat in mid-June, heat also means that the crops need to use some of the available moisture for transpiration to keep cool. Temperatures that stay around the 20° C range are ideal as crops are able to use more of the available moisture for growth as opposed to transpiration to keep cool.

"Cereal crops at the tillering stage will use approximately 2 to 3 mm of water per day. Most crops in Alberta are now at the stem elongating stage where they will need about 3 to 5 mm of water

a day," says McKenzie. "When the temperatures go up over 25° C, these crops will need more moisture, about 5 mm per day.

"If we assume 5 mm per day for a seven day period, that's 35 mm which is almost an inch and a half of water needed for one week at the stem elongation stage. When crops hit the heading stage, usually at the end of June to early July, they use up to 7 to 8 mm of water per day, so in a three-day period the crop will be using an inch of water under ideal conditions. That means that

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water use is fairly substantial from mid-June to late-July. If moisture is lacking during this period, significant yield reduction can occur.”

Once the crop is to the point where it starts producing grain, Alberta Agriculture research trials across the province have shown that for approximately every five to seven bushels of wheat a crop will produce it needs an additional inch of rain; for barley, calculations show that for every seven to nine bushels an inch of precipitation is needed; and, for canola, three and a half to four bushels will be produced for every inch of precipitation.

“During June, the first thing that water stress will demonstrate is a reduction in growth, in leaves and stem,” says McKenzie. “Once there is limited moisture available, cell expansion and division within the plant slows down. The effect is that plants will reduce the production of enzymes and proteins needed for growth. If the plant is lacking moisture, the stomata will close and wilting will start. If this becomes advanced, in some severe cases wheat and barley plants will start sloughing off tillers, which would translate into significant yield loss. Oilseed crops are affected by reduced branching. If moisture is limited when seed is filling, yield potential and seed quality can be greatly reduced.”

Cereal crops set their yield potential at the 5- to 6-leaf stage. The number of tillers that the plant will set and the actual size of the head, or number of potential seeds, is determined by environmental conditions at that stage of growth. If there is moisture stress at that stage, while yield potential is being set, the ultimate potential can be reduced. Oilseed crops such as canola or mustard are more adaptable and can adjust their yield potential later into the reproductive growth stages by increasing or decreasing the amount of branching and the amount of flowers produced in response to soil moisture conditions.

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Salvaging Biomass from Annual Crops and Reseeding Considerations

The dry conditions being experienced throughout the province have resulted in some producers looking for feed options. Depending on whether producers are dealing with barley, oats or triticale, there are different feed options producers can consider.

“The main considerations right now are to take the pressure off perennial forage crops, provide more days of grazing, and stockpile what can be salvaged if it starts to rain,” says Bill Chapman, crop business development specialist with Alberta Agriculture and Rural Development, Barrhead.

The level of crop growth will determine options that individual producers can consider. Realistically, if a producer has crop insurance coverage and there is limited or no crop growth, it is key that they talk to their crop insurance adjuster and have the inspection done. If reseeding is an option, it’s important to get the adjustment done so that arrangements for reseeding salvage crops can proceed properly. It is too late for a reseeding to meet the June 22 deadline for crop insurance.

“The fact that there are dry conditions and a lack of growth in a large part of the province this year means that forages, whether hay, greenfeed or silage prices are going to go up due to the demand,” says Chapman. “It is important to salvage as much as possible before proceeding to the next step.”

When it comes to reseeding options, producers will want to watch the depth of seeding (no more than an inch deep) and the seeding rate. “It may be a good idea to combine spring and winter varieties of these crops. Spring varieties will head out and give some energy in a swath grazing system or mixing spring and winter that will give swath grazing options as well as additional forage for cattle to graze on and something for the next spring to put cattle and calves out on,” says Chapman. “In some cases, it is better to seed a little lighter, from a bushel to a bushel and a half per acre seeding rate. There is research that shows that fewer plants will actually produce more grain and energy per acre when conditions are dry.

“Spring triticale is one crop that producers may want to consider as it seems to offer some good options under current conditions. Recent research has shown that spring triticale will give more growth and about 15 per cent more grain yield with the spring varieties, as well as some efficient weed control options. Forage growth will actually give more energy per acre than corn or other forage crops given the conditions this year.”

Alberta Agriculture and Rural Development is monitoring conditions daily, and reports are being sent to the Minister and management team as dry conditions continue. Farmers are encouraged to call the Ag-Info Centre at 310-FARM (3276) with questions or for more information.

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Vending at Alberta Approved Farmers’ Markets

The local food movement is booming in Alberta, and Alberta Approved Farmers’ Markets are at the heart of this movement in the province. Alberta Agriculture and Rural Development recently completed a study on alternative agricultural markets in Alberta. Farmers’ markets were valued at \$380 million, with 60 per cent of Alberta households indicating that they shop at local markets.

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“As the local market industry grows, many farmers and small food processors see farmers’ markets as a viable option for marketing their food products,” says Eileen Kotowich, farmers’ market specialist with Alberta Agriculture and Rural Development, Vermilion. “The top three products sought after by farmers’ market customers are vegetables, fruit and baking.”

Here are some tips for producers who are interested in selling at a farmers’ market, but don’t know where to start:

- check out markets in your area
 - see what products are available and how they are displayed
 - ask vendors how they got started in the business and the opportunities and challenges they encounter
- talk to the market manager about market operations, policies and procedures and special events
 - investigate the vendor application process, if any, and find out whether they have space available in the market for your product
 - ask if you could vend for a trial period to test market your product
- all Alberta Approved Farmers’ Markets must meet minimum guidelines established by Alberta Agriculture and Rural Development (each market incorporates those minimum requirements into their own rules and regulations)
- be strategic in both the product you are selling as well as where you are selling it
 - you want your product to be unique and differentiated from other vendors’ products in the market
 - you don’t need to be the only vendor with a specific product, but you do need to offer something different in your product, packaging or service than the other vendors selling similar items
- be strategic in choosing a market
 - sometimes the one closest to home doesn’t offer the best opportunity for you to maximize your sales
 - to make a wise choice you need to be aware of all your costs of production, charge an adequate price and make a realistic estimate of your sales
- if you are thinking of selling a food product, check with the local public health inspector before you start vending
 - some low risk foods offered for sale at approved farmers’ markets may be produced in a home kitchen, other products cannot
 - it is your responsibility to ensure that your product meets all the requirements
- research all applicable legislation and regulations and heed them

- for example, the *Food and Drug Act* and *Consumer Packaging and Labelling Act* must be followed regardless of where products are being sold

For more tips and great advice on vending at farmers’ markets, check out a recent presentation of the Alberta Farmers’ Market Association online at www.albertamarkets.com/Portals/0/HowBecomeVendorBusLinkMar09.pdf

“If you feel your community could benefit from having an approved farmers’ market consider starting one,” adds Kotowich. “The application procedure is administered by Alberta Agriculture and Rural Development. Approved farmers’ markets can be sponsored by community non-profit organizations, established as their own non-profit society or organized as a new generation cooperative set up on a reduced profit basis.”

For more information on the application process, go to: [www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/All/apa6620](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/All/apa6620) and click on *How do I start an Alberta approved farmers’ market*.

For more information about becoming a vendor or about starting an approved farmers’ market, contact Kotowich.

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Seven Steps to Marketing Success

Most small businesses get started because someone knows how to do something. Most entrepreneurs don’t start as marketers but once you’re open for business, you’re a marketer. “Every business is actually in the marketing business,” claims John Jantsch author of *Duct Tape Marketing*. “The failure to realize this is why many small businesses fail” continues John, “You simply can’t afford to be ‘no good’ at marketing if you plan to stick around and grow your business.”

An authorized *Duct Tape Marketing* Coach and owner of *Strategies for Success*, Cidnee Stephens promotes these seven steps to marketing success:

- **Narrow your focus** – change your marketing strategy from ‘anybody who’ to ‘somebody who’ by defining your target audience. Who is your ideal customer or which customers are your most profitable?
- **Find and communicate your core difference** – identify your hook, or what customers love about your product. Connect the dots between the product and customer needs.
- **Build the Know, Like and Trust Factors** – consumers taste and touch a product up to 27 times before buying. TRY-sumers have replaced consumers, so make it easy for

potential customers to sample, sample, sample. Selling is quick but marketing takes time.

- **Create marketing materials that educate** – try creating a marketing kit of materials that are flexible and can be changed easily. Don't print large quantities at one time; today's brochure is your website, kept it updated.
- **Lead generation trio** – or generate leads in three ways: *advertise* – it creates awareness and develops leads; *referral marketing system* – generates referrals through strategic alliances and partnerships; and, *public relations* – is a very powerful 'lead' generator, so develop local media contacts and use them.
- **Automate and dominate** – to increase sales, go online. A website adds credibility. Include a 'Refer Us' link. Find a student in the community to develop your website, take a course, or hire a web design company. A website doesn't have to cost a lot of money to be effective.
- **Live by the calendar** – marketing is the #1 client, so put it in the calendar. What ever part of the day works, set a schedule and stick to it. Decide on the target market, decide on which media to approach, and then slot in time to market.

For more information about these seven marketing strategies, visit Stephens' website at www.strategiesforsuccess.ca

Alberta Agriculture and Rural Development's Local Market Expansion Initiative explores new market opportunities for producers, improves market access and enhances profitability at the farm gate. For more information, call a new venture specialist at the Ag-Info Centre, toll-free at 310-FARM (3276) or visit www.agriculture.alberta.ca/localmarkets

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A New Approach to Woodlot Management

In decades past, forested land was often cleared to make room for agriculture. After all, the thinking went, what's the point of owning trees when the land can grow crops and pasture livestock?

Today, Peace Country landowners are increasingly aware of the social, environmental and economic value of their trees. A healthy stand of forest can be selectively harvested, and replanted to sustain its long-term viability. Trees, especially near water, can attract visitors seeking recreation. With climate change, owners of carbon-capturing trees may also earn a financial return for their forest management.

In fact, according to Doug Macaulay, woodlot and agroforestry specialist with the woodlot extension program, Alberta Agriculture and Rural Development, Peace River, woodlot owners have so many options these days that sound management demands long-term planning. A pilot project is underway that brings landowners together to explore their many options and chart a well-planned future.

"Typically, we have worked with individual landowners to plan for the future of their woodlots," explains Macaulay. "In many cases, however, the individual landowner doesn't have enough acres to fully address the opportunities that are out there."

In 2008, Macaulay and Juri Agapow, extension specialist with FP Innovations, Peace River, launched a two-year pilot project to assess how owners of contiguous forest land could explore opportunities together. Called the Weberville Community Forest Project, the project covers nearly 45,000 acres of land owned by 80 different owners. It's the first such effort in Western Canada, and could ultimately serve as a model for sustainable private forest management in Alberta and nationally.

Phase 1: understand values and inventory

From the start, the Weberville Community Forest Project has been a team effort. In addition to Macaulay, Agapow and the landowners, the project team consists of Lisa Ladd, Boreal Forest Research Centre; Hugh Bailey, Prairie Farm Rehabilitation Administration; and Martine Piebiak and Cindy Cuthbert, Alberta Agriculture and Rural Development. Funding was provided by Alberta Sustainable Resource Development and Ducks Unlimited Canada.

The first order of business was to understand the interests and values of the families themselves. This was achieved through group sessions and one-on-one meetings.

"We found four common interests among the landowners," says Agapow. "First, they shared an interest in harvesting the resource over time. Second, they were interested in planting more trees. Third, the wildlife features of the area were important to them. Finally, they were open to potential recreational opportunities, such as creating a trail through the property to the Peace River."

While the landowners were in broad agreement, important questions remained. What kinds of trees are on the land, and how much of each type? What is the long-term potential for harvesting, replanting, recreation and carbon credits? To answer these questions, Macaulay and Agapow designed an inventory project. Carried out by German exchange student Patrick Hiesl during 2008, the inventory determined soil types, timber types, eco-sites and the nature of forest stands for each of the landowners.

Phase 2: set goals and implement them

In a series of individual meetings with the landowners, Macaulay and Agapow presented the inventory findings. To Agapow, these meetings were a turning point for the project.

“Each landowner now has detailed information about what’s on their land and what its value is,” he says. “This knowledge is the basis for making decisions as individual landowners and potentially, as a community.”

Decision-making is at the heart of Phase 2 of the project, which began April 1, 2009, and will run for about 12 months. With continued guidance from Macaulay and Agapow, and the development of a more detailed forest inventory, the landowners will be in a better position to decide the future of their forest resource.

By the first quarter of 2010, the project will be captured in a report that will be widely available and, perhaps, widely imitated. After all, the ingredients behind the Weberville

Community Forest Project – multiple landowners, common goals and shared action – could have a fit anywhere there’s private forest land. If that happens, no one will be happier than Macaulay and Agapow.

“Traditionally in this part of the world, we have often thought of trees as obstacles that get in the way of agriculture,” says Macaulay. “Part of our job has been to sell the economic value of trees – for lumber, fuel sources, recreation and carbon credits – as well as their social and environmental value. With Weberville, thanks to terrific support from the landowners, we’ve made a great start on a more sustainable approach.”

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Agri-News Briefs

Alberta Hay & Pasture Directory

Many producers are looking for additional forage for their livestock. The Alberta Agriculture and Rural Development website has a hay and pasture page under the General Store section. The postings on this page provide information about for sale forage, making it easy to check into what is available in different areas of the province. Producers who have pasture or feed for sale can also use this site to list what they have available. Visit the site at www.agriculture.alberta.ca and click on *General Store* and then on *Alberta Hay & Pasture Directory*. Albertans without internet access are encouraged to call 310-3276 and ask Alberta Agriculture staff to either check for pasture or hay available in an area, or list pasture or feed that is for sale.

Two-Day Commercial Business Return Analyzer Workshop

The COBRA (Commercial Business Return Analyzer) workshop that will demonstrate how changes to a company can impact the financial risk that the company faces both positively and negatively is being held in Calgary on July 13 and 14, 2009. COBRA is a financial analysis and projection tool designed to help food processors do financial planning. These financial plans are necessary for reporting to financial institution to help obtain financing, investors and investment capital, and for the financial management of companies. COBRA is a decision making assistant that can help with decisions on new product development, capital purchases, product sale prices and margins, cash flows and financial risk ratings. Cost of the workshop is \$75 for the two days of training and to cover meals, snacks and beverages. To register, contact Melody Pashko at AFPA at 403-201-3657 Ext. 21 in Calgary.