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AERIAL APPLICATION VS GROUND APPLICATION

OFTEN A FARMER WILL BE FACED WITH A DECISION AS TO WHETHER TO TREAT THEIR CROP BY GROUND APPLICATION OR AERIAL APPLICATION. AERIAL APPLICATION HAS A NUMBER OF ADVANTAGES OVER GROUND BASED APPLICATION.

As a general rule the more advanced the crop the greater the damage and the wetter the ground the greater the damage. When crops are more advanced the damage is multiplied, as the vehicle chassis tend to damage the crops as well as the wheels. Damage will be greatest as tire width increases and boom width decreases. Crops often recover visually from being run over but often these areas lag behind the rest of the paddock and grain ripens later or not at all. Damage will obviously vary with crop type, crop stage and other variables but a rule of thumb seems to be an average of 40% damage (i.e. yield loss) to areas that are run over.

When calculating total machinery wheel width, don't forget that if the front and rear types of the towing vehicle and the tires of the spray unit don't all run in the same wheel track, you will need to add these together. If they do run in the same wheel track, your total wheel track width will be less but the damage factor may be greater.

**WE ARE LOOKING
FORWARD TO
WORKING
WITH YOU DURING
THE COMING
SEASON!**

***Coffee is
always on,
stop on by!***

AERIAL ADVANTAGES

TIMELINESS OF OPERATION

ZERO SOIL COMPACTION

ZERO DISEASE TRANSFER

ZERO CROP DAMAGE

PROFESSIONAL ACCURATE APPLICATION



Photo courtesy of NAAA

CONSIDERATIONS FOR CONSTRUCTION OF TOWERS & POWER LINES

WIND, METEOROLOGICAL, CELL

IMPORTANT INFORMATION FOR RURAL MUNICIPALITIES

- Petitions to construct towers should be provided to local government zoning authorities, plus provincial and regional agricultural aviation associations, a minimum of 30 days prior to permit application approval for tower construction.
- Stakeholder consultations should be held on prospective tower sites, wind farms, and power lines in rural areas. Dimensions, heights, lighting, and routing should be included in the information provided to stakeholders.
- Power lines should not be erected in a diagonal pattern across arable or prime agricultural land.
- Towers should not be erected or inhibit aerial applicator access to arable or prime agricultural land.
- If a proposed tower is to be constructed on or near agricultural land, person(s) owning and /or farming the land should be informed that the proposed tower may result in the land no longer being accessible to aerial applicators. Lands within one mile may not be accessible due to the safe turning area required by aircraft.
- In the event a proposed tower is constructed on arable or prime agricultural land, or in the vicinity of such land, towers should be freestanding without guy wires and include lighting and marking to ensure they are clearly visible. Furthermore, towers should be constructed in a linear pattern, not a disordered

or clustered patterns that could make an area completely inaccessible by air.

- If a tower must be erected with guy wires it should be marked with two visible warning spheres on each guy wire, highly visible sleeves on the lower end of the cables, extending at least 8 feet above the height of the highest crop that may be grown there. **High visibility markings for meteorological testing towers are suggested as follows;**

THE TOP 5 SECTIONS OF THE TOWER MUST BE PAINTED IN ORANGE AND WHITE STRIPES

ONE HIGH VISIBILITY BALL MUST BE INSTALLED ON EACH OUTER GUY WIRE

FOUR HIGH VISIBILITY FLAGS MUST BE ATTACHED TO EACH OF THE OUTER GUY WIRES

HIGH VISIBILITY SLEEVES MUST BE USED IN THE LOWER PART OF THE GUY WIRES TO MARK THE ANCHORS AND THE LOWER PART OF THE OUTER GUY WIRE.

- Any proposed wind projects should be a Conditional Use, not a Permitted Use in the RM.
- The tax generated by these projects may be minimal in the future and become a net liability to the RM. Furthermore if the federal government issues green (tax exempt status) to these energy projects there will be no taxation revenue generated for the RM. The RM may be responsible for ongoing road maintenance and infrastructure issues relating to the project and may be responsible for emergency services, such as training the volunteer fire department and special equipment required in case of a wind tower fire. Prior to approval of towers, RM's should research other RM's with similar projects to determine future issues and concerns.

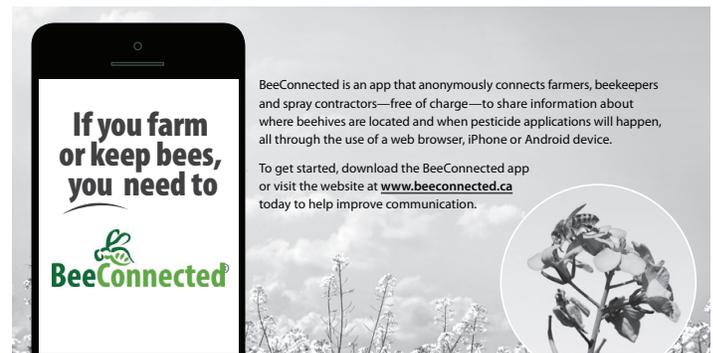
IMPORTANT POINTS FOR LAND OWNERS

- A wind project in the area will restrict aerial application within the footprint of the project plus a 1 mile buffer around the perimeter of the project. Land Owners not participating in the wind project will be affected if their land falls within this zone.
- A caveat can be placed on land with wind tower leases for up to 25 years which would prevent the land from being sold without the new owner agreeing to the conditions of the caveat or having the caveat discharged by the wind farm developers.
- An average canola crop, (\$9 per bu and 30 bu per acre), on a section of land that is lost to Bertha Armyworm if spraying could not be completed in time is worth \$172,800. That equates to the maximum revenue from approximately 35 wind towers for a farmer.
- Land containing a wind tower will be open for access by the wind company 24 hours a day, 7 days a week, 365 days a year. The farmer is liable for any complaints regarding pesticide exposure if someone gains access to the land following a pesticide application.

- Land owners considering participation in the wind project should seek independent legal and financial advice on how wind leases could affect them.
- A land owner can lose their ability to conduct aerial application and have to change their present farming practices due to a neighbor's wind lease.
- A wind tower can lessen the landowner's ability to sell or rent the farmland.
- The average wind turbine only operates 33% of the time and the payment to the landowner is based on operation time.

IMPORTANT POINTS FOR HOME OWNERS

- Home owners may experience cordless telephone, radio and/or TV interference, and flickering of house lights. Furthermore, noise and vibration from the wind turbines is common with home owners.
- Home owners may have a view of turbines from their home for as long as they own the property so ensure the turbines are set back far enough from your home.
- Determine if these turbines will lessen your property value, and if so how much, to determine if the compensation will be adequate.



BeeConnected is an app that anonymously connects farmers, beekeepers and spray contractors—free of charge—to share information about where beehives are located and when pesticide applications will happen, all through the use of a web browser, iPhone or Android device.

To get started, download the BeeConnected app or visit the website at www.beeconnected.ca today to help improve communication.

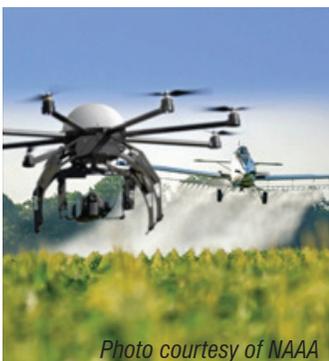


Photo courtesy of NAAA

SEE AND AVOID

MANNED AIRCRAFT MUST SEE A UAV TO AVOID IT

The ability to see and avoid obstructions and other aircraft is the backbone of safety for aerial applicators and all air traffic operating under visual flight rules. All aircraft, including UAVs, have a responsibility to abide by this aviation safety principle. Small UAVs can be virtually invisible – and potentially lethal – to agricultural pilots, emergency medical helicopters, law enforcement and other low-flying aircraft operating in the same airspace.

THINGS YOU DIDN'T KNOW ABOUT BEING A CROP DUSTING PILOT

IT'S NOT CALLED "CROP DUSTING" ANYMORE.

Because the term "crop dusting" automatically brings to mind the previously mentioned image, today's pilots generally prefer the term "aerial application" or "ag application." The pilots themselves are referred to as "ag pilots" or "aerial applicators."

THE FIRST AERIAL APPLICATION WASN'T FROM A PLANE.

The first aerial application of agricultural materials (that we know of) was done by a hot air balloon with mobile tethers in 1906 in Wairoa, New Zealand. It was flown by a man named John Chaytor, who spread seed over a swamped valley floor.

ORGANIZATIONS LIKE THE CANADIAN AERIAL APPLICATORS ASSOCIATION (CAAA) ARE WORKING TO CHANGE THE STEREOTYPE OF THE CAVALIER AG PILOT.

The primary objective of the CAAA is to promote safety and professionalism amongst its participating members. The CAAA works with federal and provincial government agencies to design policies that are fair and equitable and, above all, that protect both rural customers and urban dwellers. The CAAA advises regulatory agencies on matters pertaining to the safe and efficient aerial application of pesticides and other crop inputs. Education and training of members is high on the CAAA's priorities. Training programs, for ground crews right up to the pilot, are designed by members to ensure pesticides are safely applied.

AG PILOTS UNDERGO A GREAT DEAL OF TRAINING.

From the ground up, pilots who enter the aerial application industry are trained in all aspects of aerial application, safe pesticide use, and entomology. The idea behind this is to minimize the risk to the environment.

PLANES ARE EQUIPPED WITH STATE-OF-THE-ART EQUIPMENT.

We've come a long way from the days of the rickety old biplane. Recent technology developments such as GPS swath guidance, aerial imagine, and prescription mapping and dispersal systems have revolutionized the aerial application industry. Planes are equipped with GPS systems that provide guidance accuracy within three feet and guide the pilot using a light bar and electronic mapping system.

THE AIRCRAFTS AREN'T JUST USED FOR PESTICIDES.

In areas prone to wildfires, aerial application aircraft also serve double duty as water bombers.

FLYING IS DIFFICULT.

The flying involved in aerial application is technically challenging and occasionally hazardous, so it is imperative that pilots know what they're doing.

YOU PROBABLY WON'T START OUT AS A PILOT RIGHT AWAY.

Many Ag pilots begin their careers mixing chemicals and serving as loaders or mechanics for the plane. You may find that you need to gradually work your way up to a pilot position.

AG PILOTS ARE IN HIGH DEMAND.

Thanks to the recent farming boom, aerial application is a hot field. According to the Federal Aviation Administration, hours flown by crop-dusters rose 29% from 2003 to 2007. This is in sharp contrast to the majority of other aviation fields; most aircraft makers are in a slump, while leading aerial application manufacturer Air Tractor Inc. in Olney, Texas, is making more planes every year.

YOU WILL NEED A GREAT DEAL OF AVIATION TRAINING.

In order to work as an ag pilot, you will need to earn your commercial pilots license, as well as specific agricultural aviation training.

