MAXIMUM HEIGHT, WIDTH, LENGTH AND WEIGHT ALLOWANCES FOR AGRICULTURAL VEHICLES

Essentially, farm vehicles, implements of husbandry and trailers that are operated on roads must comply with the Vehicle Code's height, width, length and weight limitations prescribed in the Vehicle Code, unless an oversize permit is obtained for the vehicle from the Department of Transportation.

Maximum Height.

The maximum height allowed for a vehicle and its load is 13 feet 6 inches (PVC § 4922(a)).

Maximum Width.

Except for vehicles that are specifically provided greater width allowances, the maximum width for any vehicle operated on a road is 8 feet (PVC § 4921(a)).

Several special width allowances are provided for certain agricultural vehicles:

- An 11-foot width allowance is provided for a vehicle carrying vegetable produce or forage crops, if the vehicle is being driven, hauled or towed between sunrise and sunset on roads other than freeways (interstate highways and other limited access highways) (PVC § 4921(b)(1)).

- A 14-foot-6-inch allowance is provided for the operation, hauling or towing of an implement of husbandry between sunrise and sunset on roads other than freeways, if the implement is being operated, hauled or towed on:
  - Roads immediately adjoin the implement owner's farm (PVC § 4921(b)(2)(i));
  - Roads between the implement owner's farms not more than 50 miles apart (PVC § 4921(b)(2)(ii)); or
  - Roads between the implement owner's farm and a mechanic or farm equipment dealership not more than 150 miles away for the purpose of buying, selling, or servicing or repairing the implement (PVC § 4921(b)(2)(iii)).

- A 14-foot-6-inch allowance is provided for the nighttime operation of an implement of husbandry or vehicle used exclusively for "highly perishable crops for processing." This allowance only applies to the period between May 20 and October 15. While being used during nighttime hours, the vehicle must have two rotating yellow beacons and hazard signal lamps operating (PVC § 4921(b)(5)).

Keep in mind that for these wider allowances to apply, all of the conditions prescribed for the allowance must be met. For most farms this means that implements of husbandry operated on the roads during nighttime hours will be subject to the 8-foot allowance, rather than the 14-foot-6-inch allowance.

Maximum Length.

The maximum length allowed for any motor vehicle, including load and bumpers, is 40 feet (PVC § 4923(a)(1)).

For a combination comprised of a truck tractor and a single trailer, the maximum length allowed for the trailer is 53 feet or the trailer length that does not cause the distance between the kingpin and centerline of the rear axle or rear axle group to exceed 41 feet. (PVC § 4923(b.1)(1)).

For a combination comprised of a truck tractor and a double trailer, the maximum length allowed for each individual trailer is 28½ feet (PVC § 4923(b.1)(1)).

Limitations and Requirements for Projection of Loads from Vehicles.

A load may not extend more than 3 feet beyond the front of the vehicle or combination nor more than 6 feet beyond the rear of the vehicle or combination (PVC § 4924(a). No load may be projected in a manner that will cause the vehicle or combination to exceed the maximum total length allowed for vehicles and combinations (PVC § 4924(c).

If the load extends more than 4 feet beyond the rear of the vehicle, a red flag at least 12 square inches in area must be displayed on the rear of the load during daylight operation of the vehicle. If the vehicle is operated at night, the rear of the vehicle must display a red light on the rear of the load (PVC § 4924(b).

Maximum Gross Weight and Axle Weight of Vehicles and Combinations.

Limitations are established for both the total weight of the vehicle or combination and the weight that can be applied to each axle or group of axles of the vehicle or combination. To fully comply with the law, the vehicle must comply with both the total weight and the axle weight requirements. For combinations, the combination must meet these requirements. and each vehicle of the combination must individually meet these requirements.

The Vehicle Code establishes maximum gross weight limitations for trucks and truck-trailer and tractor-trailer combinations, regardless of whether or not the vehicle is registered. For trucks, the maximum gross weight limitations are:

For a 2-axle vehicle: 38,000 pounds

For a 3-axle vehicle:	54,400 pounds
For a 4-axle vehicle:	73,280 pounds
For a 5-axle vehicle:	73,280 pounds
For a 6-axle vehicle:	77,000 pounds
For a 7-axle vehicle:	80,000 pounds

(PVC § 4941(c))

For combinations, the maximum gross weight limitations are:

For a 2-axle truck tractor and a single-axle semitrailer:	54,400
For a 2-axle truck tractor and a 2-axle semitrailer:	73,280
For a 3-axle truck tractor and a single-axle semitrailer:	73,280
For a 2-axle truck tractor and a single-axle semitrailer:	54,400
For a 2-axle truck tractor and a single-axle semitrailer:	54,400
For a 2-axle truck and a 2-axle trailer:	73,280

(PVC § 4941(b))

If the sum of the manufacturer's rated axle capacity for all axles on the vehicle or combination is lower than the gross weight limitations described above, the actual weight of the vehicle or combination may not exceed that sum (PVC § 4943(c)).

The maximum gross weight of a vehicle may be further limited by the vehicle's registered gross weight. Under normal circumstances, the maximum gross weight that a vehicle owner will be authorized to register a vehicle at will not be higher than the gross vehicle weight rating assigned by the manufacturer of the vehicle. The law prohibits any vehicle from being operated at a weight that exceeds the vehicle's registered gross weight (PVC § 4942(a)).

Many farmers make a serious mistake when they use a pick-up truck to tow a trailer that weighs more than 10,000 pounds or a fully loaded trailer that is registered at greater than 10,000 pounds. When the trailer's actual weight or registered gross weight is greater than 10,000 pounds, the Vehicle Code prohibits the total weight of the truck-trailer combination to exceed the registered gross weight of the towing truck (PVC § 4942(c)).

For example, if a pick-up truck registered at 7,000 pounds and weighing 3,500 pounds is towing a trailer weighing 11,000 pounds, the Vehicle Code would prohibit the total weight of the truck-trailer combination from being greater than 7,000 pounds. Farmers are often unaware of this rule and have not increased the registered weight of pick-up trucks. Since the actual weight of the truck-trailer combination in the example is 14,500 pounds (3,500 pounds for the truck plus 11,500 pounds for the trailer), the

combination would be overweight by 7,500 pounds, resulting in a fine of $750 for the farmer.

To avoid this problem, the farmer must increase the registered weight of the towing truck to at least include the actual weight of the truck and the registered weight of the trailer when fully loaded. In the example, the farmer should increase the registered weight of the pick-up truck to at least 14,500 pounds. The farmer might not be able to do so if the truck does not have the acceleration and braking capacity to safely operate the combination at that weight. Another option might be to reduce the registered weight of the trailer to 10,000 pounds or less. Keep in mind, however, if the registered weight is reduced, the actual weight of the trailer and load may not be greater than the trailer's registered gross weight. And if the actual weight of the trailer is greater than 10,000 pounds, the problem reoccurs and the farmer will be subject to fines for having both an overweight trailer and an overweight combination.

The Vehicle Code prohibits the weight of the steering axle to be greater than 20,000 pounds (PVC §§ 4943(a) and (b)). For other axles:

- If the distance between adjacent axles is under 6 feet, the axle weight of each axle may not exceed 18,000 pounds

- If the distance between adjacent axles is between 6 and 8 feet, the axle weight of one axle may not exceed 18,000 pounds and the axle weight of the other axle may not exceed 22,400 pounds.

- If the distance between adjacent axles is greater than 8 feet, the axle weight of each axle may not exceed 22,400 pounds

(PVC § 4943(a))

If the manufacturer's rated axle capacity for any axle is lower, the vehicle's axle weight may not exceed the manufacturer's rated axle capacity (PVC § 4943(a))

Special rules apply to vehicles and combinations greater than 73,280 pounds gross weight. The maximum axle weight allowed for each axle is determined by application of a "bridge formula" established under federal law (PVC §§ 4943(b)(1)). This formula allows less axle weight for axles that are closer together. Section 185.3 of the Department of Transportation Regulations contains a table that identifies the maximum axle weights allowed under the federal bridge formula.

Enforcement of Gross Weight and Axle Weight Limitations.

A police officer or qualified DOT employee may require the driver to stop and submit his or her vehicle or combination for weighting (PVC § 4981(a)). If a stationary scale is within 2 miles of the place where the vehicle is stopped, the driver may be required by the officer or DOT employee to drive the vehicle or combination to that scale to be weighed (PVC § 4981(a)).

The vehicle may be weighed by either stationary or portable scales; however, if portable scales are used, they must have been calibrated and certified for accuracy within the previous 90 days (PVC § 4981(e)). The weighing must be done by a qualified person who has been trained in the use of weighing equipment under a state-approved training program (PVC § 4981(a)).

If the gross weight of the vehicle or combination does not exceed the maximum gross weight allowed but the axle weight for any axle or group of axles exceeds the maximum axle weight allowed, the driver is allowed a period of four hours to readjust the load in order to get the axle weights to comply with axle weight allowances (PVC § 4982(c)). If after the adjustment, the axle weights are within the axle weight allowances, the driver may not be cited for any violation that may have been indicated by the original weighing (PVC § 4982(c)). The person conducting the weighing of the vehicle or combination must inform the driver of his or her right to readjust or rearrange the load (PVC § 4981(a)).

The driver also has the right to witness the weighing procedure (PVC § 4981(a)). If a person other than a DOT employee conducts the weighing, the driver has the right to have the vehicle or combination reweighed at the nearest available scales certified by the Department of Agriculture. The lower reading must be used in the determination of violation and the penalties to be assessed (PVC § 4981(d))

The vehicle or combination is allowed 3% tolerance per axle in the determination of whether the vehicle is in violation of exceeding axle weights, except when the vehicle is weighed by stationary scales along interstate highways (PVC § 4981(c)).

Securing of Loads.

The Vehicle Code prohibits absolutely any portion of a load from leaking or escaping from the vehicle (PVC § 4903(a)). The only exception provided in the Vehicle Code is for the shedding or dropping of feathers or other matter from vehicles hauling live or slaughtered birds or animals (PVC § 4903(e)(2)). The Vehicle Code also requires the person who permits any “dangerous or detrimental substance” to drop onto a public highway or on public or private property to immediately remove the dropped substance (PVC § 3709(b)(1)). Farmers hauling manure, supplies or products in open bed trucks and trailers must be careful not to allow any of the material to leak or escape from the vehicle. If material does leak or escape, farmers must promptly respond to clean up this material. Although covering the open bed with a tarp or other secure cover is not specifically required, the farmer may practically need to do so in order to comply with the general requirements to prevent loads from escaping.

Pennsylvania farm registered vehicles and combinations with a registered gross weight of greater than 17,000 pounds operating within Pennsylvania and Pennsylvania farm registered vehicles and combinations with a registered gross weight of greater than 10,000 pounds operating outside the state must comply with the requirements prescribed in the Federal Motor Carrier Safety Regulations for securing of cargo and the

use of fastening devices to prevent falling or shifting cargo (PaDOTRegs §§ 231.311 through 231.314 and FedRegs §§ 393.100 through 393.114). Recently these regulations were revised. Among the requirements that are imposed under the regulations are requirements that:

- Cargo must be contained, immobilized or secured to prevent shifting upon or within the vehicle to such an extent that the vehicle's stability or maneuverability is adversely affected (FedRegs § 393.100(c)).
- The systems and devices used to secure cargo must be capable of withstanding specified forces during acceleration, deceleration, and lateral movement of the vehicle (FedRegs § 393.102(a)).
- For portions of the loads that are not contained within the structure of the vehicle, the system to secure cargo must provide a downward force equivalent to at least 20 percent of the weight of the article of cargo (FedRegs § 393.102(b)).

The above requirements are considered to have been met if loads are fastened in a manner that meets the guidelines for fastening cargo loads prescribed in Sections 393.104 through 393.136 of the Federal Motor Carrier Safety Regulations (FedRegs § 393.102(d)).

These guidelines specify the number of tiedown devices to be used based on the length and weight of articles of cargo (FedRegs § 393.110(b)). When the article of cargo is blocked or braced by a headboard, bulkhead or other device to prevent forward movement of cargo, one tiedown should be provided for each 10 feet in length of the article. When the article or cargo is not blocked or positioned to prevent forward movement:

- One tiedown should be provided for articles of cargo five feet or less in length and 1,100 pounds or less in weight.
- Two tiedowns should be provided for articles of cargo that are five feet or less in length and more than 1,100 pounds in weight or articles that are longer than 5 feet but less than 10 feet.
- Two tiedowns should be provided for articles of cargo that are longer than 10 feet and one additional tiedown should be provided for each 10 feet of article length or fraction thereof beyond the first 10 feet.

The tiedowns must, under normal circumstances, be capable of being tightened by the driver (FedRegs § 393.112), and must be in good working order and not have any weakened components, cracks or cuts (FedRegs § 393.104(b)). And the total number of tiedowns used on the entire load must ensure that the total sum of the working load limits for each tiedown equals at least one-half of the total weight of the cargo being secured (FedRegs § 393.106(d)). Most tiedowns are individually marked with a working load limit.

The federal guidelines also provide standards for specific items of cargo, including logs, heavy vehicles, equipment and machinery.