

Abbreviations – Arranged Alphabetically

bd	broadcast method of seeding, usually cover crop
dc	double cropping such as corn or soybeans following small grain, or corn following hay harvest; mostly in south-central and south-eastern PA
dcnr	same as above but planted with a drill
fc1	field cultivator equipped with sweeps – one pass
fc2	field cultivator equipped with sweeps – two passes
fcst	chisel with straight shanks – moderately aggressive chisel
fcswp	chisel with sweeps – less aggressive chisel
fctw	chisel with twisted shanks – most aggressive
chisel fdos	offset disk – most aggressive disk
fds	light tandem disk – less aggressive disk
fdt	heavy tandem disk – moderately aggressive disk
fnts	strip till – no till where a strip of soil is disturbed by a chisel point in the fall prior to planting, and by coulters mounted on the planter or on a tool bar in front the planter
fp	fall moldboard plow
fs	fall seeded
gr	harvested for grain
inj	manure injected
int or intsd	inter-seeded by air into the standing crop
manb	manure bedded
maninjhd	manure liquid injected with high disturbance injector
maninjld	manure liquid injected with low disturbance injector
manl	manure liquid
manp	manure poultry
manss	manure slurry
nr	narrow row crops generally drilled at 7 inch spacing note: corn is wide row (30 inch spacing), unless specified as nr, which is 18 inches; small grains are always narrow row (and not specified)
nt	no till

Abbreviations – Arranged Alphabetically cont.

nts	strip till – no till where a strip of soil is disturbed by a chisel point in the spring prior to planting, and by coulters mounted on the planter or on a tool bar in front the planter
ntz	zone till – no till where a strip of soil is disturbed by fluted coulters mounted on the planter or on a tool bar in front of the planter
oatcc	oat cover crop
p	moldboard plow
pc	plastic culture for vegetables
rc	row cultivator used during the growing season, primarily for weed control
rt	ridge till – row crops are planted on ridges formed during the prior growing season; not common in PA
sc1	field cultivator equipped with sweeps – one pass
sc2	field cultivator equipped with sweeps – two
passes	
scst	chisel with straight shanks – moderately aggressive chisel
scswp	chisel with sweeps – less aggressive chisel
sctw	chisel with twisted shanks – most aggressive chisel
sdos	offset disk – most aggressive disk
sds	light tandem disk – less aggressive disk
sdt	heavy tandem disk – moderately aggressive disk
si or sil	harvested as silage
sp	spring moldboard plow
ss	spring seeded
wgcc	winter grain cover crop
wr	wide row crops generally planted with a planter at 30 inch spacing
	note: corn is wide row (30 inch spacing), unless specified as nr, which is 18 inches; small grains are always narrow row (and not specified)

Abbreviations – Arranged by Category

Crops and cropping

dc	double cropping such as corn or soybeans following small grain, or corn following hay harvest; mostly in south-central and south-eastern PA
dcnr	same as above but planted with a drill
gr	harvested for grain
pc	plastic culture for vegetables
si or sil	harvested as silage
oatcc	oat cover crop
wgcc	winter grain cover crop

Manure and manure management

inj	manure injected
manb	manure bedded
maninjhd	manure liquid injected with high disturbance injector
maninjld	manure liquid injected with low disturbance injector
manl	manure liquid
manp	manure poultry
manss	manure slurry

Planting and related operations

bd	broadcast method of seeding, usually cover crop
int or intsd	inter-seeded by air into the standing crop
fs	fall seeded
nr	narrow row crops generally drilled at 7 inch spacing note: corn is wide row (30 inch spacing), unless specified as nr, which is 18 inches; small grains are always narrow row (and not specified)
nt	no till
fnts	strip till – no till where a strip of soil is disturbed by a chisel point in the fall prior to planting, and by coulters mounted on the planter or on a tool bar in front the planter
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ntz	zone till – no till where a strip of soil is disturbed by fluted coulters mounted on the planter or on a tool bar in front of the planter
rc	row cultivator used during the growing season, primarily for weed control
rt	ridge till – row crops are planted on ridges formed during the prior growing season; not common in PA
ss	spring seeded
wr	wide row crops generally planted with a planter at 30 inch spacing note: corn is wide row (30 inch spacing), unless specified as nr, which is 18 inches; small grains are always narrow row (and not specified)

Tillage

Below the tillage types, are the codes and abbreviations in **bold**, i.e., **fp**, that are part of the crop template name. Primary tillage types are listed. Under the secondary tillage, are the operations used in preparation of the crop templates. A listing of the same piece of equipment more than one time indicates more than one pass over the field with that implement.

PRIMARY TILLAGE

SECONDARY TILLAGE

Moldboard Plow **fp** (fall) **sp** (spring)

Disk, tandem heavy primary
Disk, tandem light finishing
Harrow, coiled tine

Chisel, twisted **fctw** (fall) **sctw** (spring)
(high tillage/low residue)

Disk, tandem heavy primary
Disk, tandem light finishing

Chisel, straight **fcst** (fall) **scst** (spring)
(moderate tillage/moderate residue)

Disk, tandem heavy primary
Disk, tandem light finishing

Chisel, sweeps **fcswp** (fall) **scswp** (spring)
(low tillage/high residue)

Cultivator, field 6-12" sweeps

Disk, heavy/offset **fdos** (fall) **sdos** (spring)
(high tillage/low residue)

Disk, tandem heavy primary
Disk, tandem light finishing

Disk, tandem heavy **fdt** (fall) **sdtd** (spring)
(moderate tillage/moderate residue)

Disk, tandem heavy primary
Disk, tandem light finishing

Disk, tandem **fds** (fall) **sds** (spring)
(low tillage/high residue)

Disk, tandem secondary

Cultivator, field; 6-12" sweeps*
ffc1 (fall) **sfc1** (spring)

none

Cultivator, field; 6-12" sweeps*
ffc2 (fall) **sfc2** (spring)

Cultivator, field; 6-12" sweeps

*1 & 2 in symbol denotes the number of implement passes

Seedbed Conditioner – is Vertical-Till or Turbo-Till High residue crop

Manure Operations – Abbreviations and Descriptions

The following is a list of manure operation abbreviations and their descriptions, as used in the preparation of crop templates for Crop Management Zones 4.1, 62 (intermediate planting dates), and 65. The manure types are the codes that are part of the crop template name for all templates where manure is used. The spreaders are specifically selected because of the properties included in the databases. The manure types were selected to represent the most common types of manure used in each of the multi- state CMZs. The decomposition rates are included in the database. The table shows the average dry matter that is applied for each method. The dry matter rates are based on average N- and P-based nutrient management plan rates for typical yields of grain and silage corn.

MANURE	TYPE MANURE SPREADER	LBS. DRY MATTER
LIQUID		1000
manl	Liquid spreader (50% infiltration)	6000 gal @ 2% dry matter
maninjhd	Injector – high disturbance 30” (50%)	6000 gal @ 2% dry matter
maninjld	Injector – low disturbance 15” (30%)	6000 gal @ 2% dry matter
MANURE, MODERATE BEDDING		3000
manb	Manure spreader, solid & semi-solid	6 tons @ 25% solids
MANURE, POULTRY		3000
manp	Manure spreader, solid & semi-solid	6 tons @ 50% solids
MANURE, SEMI-SOLID & SLURRY		3000
manss	Manure spreader, slurry	10 tons @ 15% solids or 5000 gal @ 7% solids