**“mesonet.php”**

<?php

// Define Constants

$TabCrop=array('Winter Wheat, Oklahoma + US Grain Belt','Winter Wheat, South Central Great Plains','Spring Wheat-Rainfed (US, Canada, Mexico)','Winter Wheat Protein Optimizer','Spring Wheat-E.Australia R.Heath','Spring Wheat-India','Trigo Bajo-Riego (Mexico)','Trigo Baja California UABC-CIMMYT-Mexico' ,'Trigo-Región Pampeana Central y Norte (Argentina)', 'Maiz (Bolivia)','Winter Wheat (China)','Corn-Rainfed/Irrigated (Southern US Grain Belt)','Maíz sin Riego (Argentina)','Maíz bajo Riego (Argentina)','Maíz bajo Riego-Siembra de Segunda (Argentina)','Milho no Centro-Sul do Brasil (Brazil)','Canola (Canada)','Spring Wheat (Canada)','Bermudagrass-Forage','Wheat-Forage-Pasture','Sorghum-Great Plains','Sorghum-Kansas','Rice-India','Corn-Minnesota','Corn-Ohio','Cotton North Central','Cotton South West Irrigated','Corn-Zimbabwe','Rice-Dominion Farms Kenya','Generalized Algorithm','Winter Wheat - Phone','Spring Wheat-S.Australia D. Cox','Maíz sin Riego Zona Cafetera (Colombia)');

$TabSiteValue=array('ACME', 'ADAX','ALTU', 'ALV2','ANT2', 'APAC', 'ARD2', 'ARNE', 'BROK','BEAV', 'BEEX', 'BESS','BIXB','BLAC','BOIS','BOWL','BREC','BRIS', 'BUFF','BURB','BURN','BUTL','BYAR', 'HOLD', 'CAMA', 'TULN', 'CENT','CHAN','CHER','CHEY','CHIC', 'TALA', 'CLAY','CLOU','COOK','COPA','DURA', 'ELRE','ERIC','EUFA','FAIR', 'FORA','FREE','FTCB','GOOD', 'GRA2','GUTH','HASK', 'HECT', 'HINT','HOBA', 'HOLL','HOOK','HUGO','IDAB', 'JAYX','KENT','KETC', 'KIN2','LAHO','CARL','LANE','MADI','MANG','MARE', 'MRSH','MAYR','MCAL','MEDF','MEDI','MIAM','MINC', 'MTHE','NEWK', 'NINN', 'NRMN','NOWA', 'OILT', 'OKEM','OKMU','PAUL','PAWN','PERK', 'PORT', 'PRYO','PUTN','REDR', 'ELKC','RING','SALL','SEIL','SHAW','SKIA','SLAP','SPEN','STIG','STIL','STUA','SULP','TAHL', 'TALI','TIPT','TISH', 'TULL', 'VINI','WAL2','WASH','WATO','WAUR','WEAT', 'WEBR', 'WEST','WILB','WIST','WOOD','WYNO');

$TabSiteName=array('Acme', 'Ada', 'Altus', 'Alva', 'Antlers', 'Apache', 'Ardmore', 'Arnett', 'Broken Bow', 'Beaver', 'Bee', 'Bessie', 'Bixby', 'Blackwell', 'Boise City', 'Bowlegs', 'Breckinridge', 'Bristow', 'Buffalo', 'Burbank', 'Burneyville', 'Butler', 'Byars', 'Holdenville', 'Camargo', 'Tulsa', 'Centrahoma','Chandler','Cherokee','Cheyenne','Chickasha', 'Talala','Clayton', 'Cloudy','Cookson','Copan','Durant', 'El Reno','Erick','Eufaula','Fairview', 'Foraker','Freedom', 'Fort Cobb','Goodwell','Grandfield','Guthrie','Haskell', 'Hectorville', 'Hinton','Hobart', 'Hollis','Hooker','Hugo', 'Idabel', 'Jay','Kenton','Ketchum Ranch','Kingfisher','Lahoma', 'Lake Carl Blackwell', 'Lane','Madill','Mangum','Marena', 'Marshall','May Ranch','McAlester','Medford','Medicine Park','Miami','Minco', 'Mt Herman','Newkirk', 'Ninnekah', 'Norman', 'Nowata', 'Oilton', 'Okemah','Okmulgee','Pauls Valley','Pawnee','Perkins', 'Porter', 'Pryor','Putnam','Red Rock', 'Elk City', 'Ringling','Sallisaw','Seiling','Shawnee','Skiatook','Slapout','Spencer','Stigler','Stillwater', 'Stuart','Sulphur','Tahlequah', 'Talihina','Tipton','Tishomingo', 'Tullahassee', 'Vinita','Walters','Washington', 'Watonga','Waurika','Weatherford','Webbers Falls','Westville','Wilburton','Wister','Woodward','Wynona');

/\*

$count = 0;

foreach ($TabSiteValue as $site) {

 $xname = split("\+", $site);

 $TabSiteName[$count] = preg\_replace('/\\_/',' ',$xname[1]);

 $count++;

}

print\_r($TabSiteName);

\*/

// <TITLE>Sensor Based Nitrogen Rate Calculator</TITLE>

?>

<HTML>

<HEAD>

 <TITLE>Sensor Based Nitrogen Rate Calculator, Improved Methodology for

 Nitrogen Fertilization in Corn, Wheat, Sorghum, and Bermudagrass, Nitrogen

 Use Efficiency</TITLE>

 <META http-equiv=Content-Type content="text/html; charset=windows-1252">

 <META content="Microsoft FrontPage 12.0" name=GENERATOR>

 <META content="Sensor Based Nitrogen Rate Calculator, Mid-Season Prediction of Nitrogen Fertilizer Rates for wheat, corn, sorghum, bermudagrass, nitrogen use efficiency, improved efficiency, precision nitrogen management, fertilizer source, sensor based technology, N cycle, nitrgoen, nitrogen fertilizers, foliar N, plant use efficiency" name=description>

 <META content="Nitrogen algorithms, Sensor Based Nitrogen Rate Calculator, Mid-Season Prediction of Nitrogen Fertilizer Rates for wheat, corn, sorghum, bermudagrass, nitrogen use efficiency, improved efficiency, precision nitrogen management, fertilizer source, sensor based technology, N cycle, nitrgoen, nitrogen fertilizers, foliar N, plant use efficiency, topdress N rates for wheat, corn, sorghum, bermudagrass" name=keywords>

</HEAD>

<SCRIPT language="JavaScript">

function openMap()

{

 WindowUrl="okmap.html";

 WindowName="TEST";

 WindowOptions="height=220,width=464,status=yes,menutoolbar=0,menubar=no,location=no";

 window.open(WindowUrl,WindowName,WindowOptions);

}

function openDay()

{

 WindowUrl="daycompute.php";

 WindowName="TEST";

 WindowOptions="height=180,width=330,status=yes,menutoolbar=0,menubar=no,location=no";

 window.open(WindowUrl,WindowName,WindowOptions);

}

function openDaySp()

{

 WindowUrl="daycomputesp.php";

 WindowName="TEST";

 WindowOptions="height=200,width=360,status=yes,menutoolbar=0,menubar=no,location=no";

 window.open(WindowUrl,WindowName,WindowOptions);

}

var action;

function initCheck(size,from)

{

 if (from.value.length != size) action=1; else action=0;

}

function checkData(size,from,to)

{

 if (from.value.length > size) from.value="";

 if (action == 1 && from.value.length == size) to.focus();

 action=0;

}

/\* function openGraph()

{

 var selectedlocation = <?php echo(json\_encode($selectedlocation)); ?>;

 WindowUrl="http://www.mesonet.org/index.php/weather/soil\_moisture/" + selectedlocation;

 //http://agweather.mesonet.org/common/db/library/functions/mcd/mcd.php?stid=STIL&year=2008&month=11&format=htm

 WindowName="MAP";

 WindowSize="height=450,width=650,status=yes,menutoolbar=0,menubar=no,location=no";

 myWindowchromeless=window.open(WindowUrl,WindowName,WindowSize);

 //myWindow.focus();

} \*/

function openTable()

{

 **WindowUrl="http://agweather.mesonet.org/public/products/degreedays.php?crop=cotton";**

 **WindowName="TABLE";**

 **WindowSize="height=390,width=525,status=yes,menutoolbar=1,menubar=yes,location=no";**

 **myWindowchromeless=window.open(WindowUrl,WindowName,WindowSize);**

**// window.open(['http://agweather.mesonet.org/public/products/degreedays.php?crop=cotton'],['Table'],['width=400,height=530,toolbar=1,resizable=1']);**

}

</SCRIPT>

<STYLE>

A:link {color:yellow ; text-decoration:none ; font-style:normal }

A:visited {color:yellow ; text-decoration:none ; font-style:normal }

A:hover {color:yellow ; text-decoration:none ; font-style:bold }

A:active {color:yellow ; text-decoration:none ; font-style:normal }

</STYLE>

</HEAD>

<?php

$ztUnit = $\_POST['ztUnit'];

$ztInsideOK = $\_POST['ztInsideOK'];

$ztPlantingDate\_Month = $\_POST['ztPlantingDate\_Month'];

$ztPlantingDate\_Day = $\_POST['ztPlantingDate\_Day'];

$ztPlantingDate\_Year = $\_POST['ztPlantingDate\_Year'];

$ztClear = $\_POST['ztClear'];

$ztGdd = $\_POST['ztGdd'];

$ztSensorDate\_Month = $\_POST['ztSensorDate\_Month'];

$ztSensorDate\_Day = $\_POST['ztSensorDate\_Day'];

$ztSensorDate\_Year = $\_POST['ztSensorDate\_Year'];

$ztYP0 = $\_POST['ztYP0'];

$ztYPN = $\_POST['ztYPN'];

$ztFarmerPractice = $\_POST['ztFarmerPractice'];

$ztCumulativeGDD = $\_POST['ztCumulativeGDD'];

$ztRichStrip = $\_POST['ztRichStrip'];

$ztNRate = $\_POST['ztNRate'];

$ztMaxYield = $\_POST['ztMaxYield'];

$ztProfYP0 = $\_POST['ztProfYP0'];

$ztGrainPrice = $\_POST['ztGrainPrice'];

$ztProfYPN = $\_POST['ztProfYPN'];

$ztFertPrice = $\_POST['ztFertPrice'];

$ztSubmit = $\_POST['ztSubmit'];

$ztDay = $\_POST['ztDay'];

$ztFarmerPractice = $\_POST['ztFarmerPractice'];

$ztEUN = $\_POST['ztEUN'];

$ztCrop = $\_POST['ztCrop'];

$ztBushelwt = $\_POST['ztBushelwt'];

$ztNUE = $\_POST['ztNUE'];

$ztPercentN = $\_POST['ztPercentN'];

$ztBSF = $\_POST['ztBSF'];

$ztCumulativeGdd = $\_POST['ztCumulativeGdd'];

$ztAvgTemp = $\_POST['ztAvgTemp'];

$ztCumGdd = $\_POST['ztCumGdd'];

$site = $\_POST['site'];

$ztDay = $\_POST['ztDay'];

$ztGrain = $\_POST['ztGrain'];

$ztNRndvi = $\_POST['ztNRndvi'];

$ztFPndvi = $\_POST['ztFPndvi'];

$ztBSF = $\_POST['ztBSF'];

$ztYldGoal = $\_POST['ztYldGoal'];

$graph\_button = $\_POST['graph\_button'];

switch($ztCrop)

 {

 **case $TabCrop[0]:**

 **echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Verdana' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";**

 **include("winter\_wheat.inc");**

 **break;**

 **case $TabCrop[1]:**

 **echo "<BODY bgcolor='#6600FF' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";**

 **include("winter\_wheatSCGP.inc");**

 **break;**

 case $TabCrop[2]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("spring\_wheat\_rainfed.inc");

 break;

 case $TabCrop[3]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("Wht\_prot.inc");

 break;

 case $TabCrop[4]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("Australia\_wheat2.inc");

 break;

 case $TabCrop[5]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Verdana' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("spring\_wheat\_india.inc");

 break;

 case $TabCrop[6]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h1><b><u>Calculadora De La Dosis de Nitrógeno Usando GreenSeeker-NDVI</b></u></h1>";

 include("spring\_wheat\_mexico.inc");

 break;

 case $TabCrop[7]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h1><b><u>Calculadora De La Dosis de Nitrógeno Usando GreenSeeker-NDVI</b></u></h1>";

 include("spring\_wheat\_mexicoBC.inc");

 break;

 case $TabCrop[8]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Calculadora De La Dosis de Nitrógeno Usando GreenSeeker-NDVI</b></u></h1>";

 include("spring\_wheat\_argentina.inc");

 break;

 case $TabCrop[9]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("maiz\_bolivia.inc");

 break;

 case $TabCrop[10]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include ("winter\_wheat\_china.inc");

 break;

 case $TabCrop[11]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_rainfed.inc");

 break;

 case $TabCrop[12]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_rainfedarg.inc");

 break;

 case $TabCrop[13]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_irrarg.inc");

 break;

 case $TabCrop[14]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_irrarg\_segunda.inc");

 break;

 case $TabCrop[15]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_rainfed\_brazil.inc");

 break;

 case $TabCrop[16]:

 echo "<BODY bgcolor='#CC000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("canola\_canada.inc");

 break;

 case $TabCrop[17]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("springwheat\_canada.inc");

 break;

 case $TabCrop[18]:

 echo "<BODY bgcolor='#0000CC' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("bermuda.txt");

 break;

 case $TabCrop[19]:

 echo "<BODY bgcolor='#0000CC' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("forage1.php");

 break;

 case $TabCrop[20]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("sorghum\_greatplains.inc");

 break;

 case $TabCrop[21]:

 echo "<BODY bgcolor='#6600FF' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("sorghum\_ksu.inc");

 break;

 case $TabCrop[22]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("rice\_india.inc");

 break;

 case $TabCrop[23]:

 echo "<BODY bgcolor='#FFa500' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_um.inc");

 break;

 case $TabCrop[24]:

 echo "<BODY bgcolor='#990000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_ohio.inc");

 break;

 case $TabCrop[25]:

 echo "<BODY bgcolor='#CC9933' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("cotton\_nc.txt");

 break;

 case $TabCrop[26]:

 echo "<BODY bgcolor='#996633' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("cotton\_sw.txt");

 break;

 case $TabCrop[27]:

 echo "<BODY bgcolor='#008000' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("corn\_zimbabwe.inc");

 break;

 case $TabCrop[28]:

 echo "<BODY bgcolor='#FFCC33' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("rice\_kenya.inc");

 break;

 case $TabCrop[29]:

 echo "<BODY bgcolor='#003300' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=3><CENTER><h1><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h1>";

 include("GA\_ww2.txt");

 break;

// case $TabCrop[27]:

// echo "<BODY bgcolor='#3B9C9C' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h2><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h2>";

// include("GA\_Phone.inc");

// break;

 case $TabCrop[30]:

 echo "<BODY bgcolor='#0000FF' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h3><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h3>";

 include("Winter\_wheat\_phone.inc");

 break;

 case $TabCrop[31]:

 echo "<BODY bgcolor='#0000FF' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h2><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h2>";

 include("Australia\_wheat.inc");

 break;

 **case $TabCrop[32]:**

 echo "<BODY bgcolor='#0000FF' text='#FFFFFF'><FONT face='Arial' color='#FFFFFF' size=2><CENTER><h2><b><u>Sensor-Based Nitrogen Rate Calculator</b></u></h2>";

 **include("Corn\_col.inc");**

 break;

 default:

 include("choose.inc");

// exit();

 }

?>

<!--

<table>

<tr>

<td><a href="http://www.soiltesting.okstate.edu/"><img src="swfal.jpg" border="0" alt="Back to SWFAL"></A></td>

<td><a href="http://www.nue.okstate.edu/"><img src="NUE\_logo.jpg" border="0" alt="Click here for Comprehensive Information regarding Nitrogen Fertilization for Crop Production" ></A></td>

<td><a href="http://www.nue.okstate.edu/Hand\_Held/SBNRC\_Introduction.htm"><img src="SBNRC\_Help.jpg" border="0" alt="Back to SWFAL"></A></td>

<td><a href="http://www.agweather.mesonet.org/"><img src="agweather.jpg" border="0" alt="Back to SWFAL"></A></td>

</tr>

</table>

-->

</FONT>

</BODY>

</HTML>

**winter\_wheat\_in\_ok.inc**

<?php

// Get Submited value, exept on 1st load on the page or if "clear form" has been pressed

if (isset($ztUnit) && !isset($ztClear))

{

 $SensorDate\_Year = intval($ztSensorDate\_Year);

 $SensorDate\_Month = intval($ztSensorDate\_Month);

 $SensorDate\_Day = intval($ztSensorDate\_Day);

 $PlantingDate\_Year = intval($ztPlantingDate\_Year);

 $PlantingDate\_Month = intval($ztPlantingDate\_Month);

 $PlantingDate\_Day = intval($ztPlantingDate\_Day);

 $RichStrip = doubleval($ztRichStrip);

 $FarmerPractice = doubleval($ztFarmerPractice);

 $MaxYield = intval($ztMaxYield);

 $GrainPrice = doubleval($ztGrainPrice);

 $FertPrice = doubleval($ztFertPrice);

 $ProfYP0 = intval($ztProfYP0);

 $ProfYPN = intval($ztProfYPN);

 $Gdd = intval($ztGdd);

 $YPN = intval($ztYPN);

 $YP0 = intval($ztYP0);

 $NRate = intval($ztNRate);

// cumulative gdd calculation variables

 //$Temp1 = intval($ztTemp1);

 //$Temp2 = intval($ztTemp2);

 $AvgTemp = intval($ztAvgTemp);

 $CumGdd = intval($ztCumGdd);

 $CumulativeGdd = intval($ztCumulativeGdd);

}

// Analyse submited values

if (isset($ztSubmit))

{

 if ($PlantingDate\_Year=="" || $PlantingDate\_Month=="" || $PlantingDate\_Day=="")

 $error.="BAD PLANTING DATE!<BR>";

 if ($SensorDate\_Year=="" || $SensorDate\_Month=="" || $SensorDate\_Day=="")

 $error.="BAD SENSOR DATE!<BR>";

 if ($RichStrip=="" || $RichStrip<=0 || $RichStrip>1)

 $error.="BAD RICH STRIP!<BR>";

 if ($FarmerPractice=="" || $FarmerPractice<=0 || $FarmerPractice>1)

 $error.="BAD FARMER PRACTICE!<BR>";

 if ($MaxYield=="" || $MaxYield<=0)

 $error.="BAD MAXIMUM YIELD!<BR>";

 if ($GrainPrice=="" || $GrainPrice<=0)

 $error.="BAD Grain Price!<BR>";

 if ($FertPrice=="" || $FertPrice<=0)

 $error.="BAD Fertilizer Price!<BR>";

}

// Extract GDD from mesonet if GDD not specified in the form

if (isset($ztSubmit) && $error=="")

{

 if ($PlantingDate\_Month<10) $PlantingDate\_Month="0$PlantingDate\_Month";

 if ($PlantingDate\_Day<10) $PlantingDate\_Day="0$PlantingDate\_Day";

 $PlantingDate="$PlantingDate\_Year-$PlantingDate\_Month-$PlantingDate\_Day";

 if ($SensorDate\_Month<10) $SensorDate\_Month="0$SensorDate\_Month";

 if ($SensorDate\_Day<10) $SensorDate\_Day="0$SensorDate\_Day";

 $SensorDate="$SensorDate\_Year-$SensorDate\_Month-$SensorDate\_Day";

 **$connection=fsockopen("agweather.mesonet.org", 80, &$error\_number, &$error\_description);**

 **if ($connection)**

 **{**

 **//$idchain=":";**

 **//$idchain64=base64\_encode($idchain);**

 **set\_socket\_blocking($connection, true);**

 **fputs($connection, "GET /cgi-bin/public/evap.sitehist.cgi?$site HTTP/1.0");**

 **fputs($connection, "\r\n");**

 **fputs($connection, "Host: agweather.mesonet.org");**

 **fputs($connection, "\r\n");**

 **//fputs($connection, "Authorization: Basic $idchain64");**

 **//fputs($connection, "\r\n");**

 **fputs($connection, "\r\n");**

 **while (!feof($connection))**

 {

 $myline=fgetss($connection,2048);

 if (ereg("^([0-9]{4}).\*", $myline))

 {

 $myline=ereg\_replace(" "," ",$myline);

 $myline=ereg\_replace(" "," ",$myline);

 $myline=ereg\_replace(" "," ",$myline);

 $myline=ereg\_replace(" "," ",$myline);

 $line=explode(" ",$myline);

 if ($line[0]==$SensorDate)

 {

 //echo "<HR>";

 $Status="Searching";

 $Gdd=0;

 }

 // Calculating Cumulative GDD

 if ($Status=="Searching")

 {

 $AvgTemp = ($line[11]+$line[12])/2;

 if ($AvgTemp>40)

 {

 $Gdd++;

 //$Temp1=$line[11];

 //$Temp2=$line[12];

 $CumGdd=$CumGdd+($AvgTemp-40);

 }

 //echo '</p>' . $site . ' \* ' . $line[11] . ' \* ' . $line[12] . '</p>';

 }

 if ($line[0]==$PlantingDate)

 {

 //echo "<HR>";

 if ($Status=="Searching") $Status="SearchStoped";

 }

 //echo "<H6>$myline";

 }

 }

 if ($Status!="SearchStoped") $error.="CRITICAL ERROR : OUT OF DATABASE -> Please Check Dates";

 **fclose($connection);**

 }

 else

 {

 $error.="UNABLE TO CONNECT TO THE MESONET WEBSITE!<BR>";

 $error.="Error Number : $error\_number<BR>";

 $error.="Description : $error\_description<BR>";

 }

}

//Prepare units rate converters and include javascript code

if (!isset($ztUnit)) $ztUnit=0;

if ($ztUnit==0)

{

 $radioEU="checked";

 $radioMU="OnClick='convert(); repost()'";

 $textUnit="bu/ac";

 $textUnit2="lb/ac";

 $textUnit3="$/ac";

 $textUnit4="$/lb actual N";

 $textUnit5="$/bu";

 $CRate1=1.1212;

 $CRate2=60;

 $CRate3=2.47;

 $CRate4=0.453;

}

else

{

 $radioEU="OnClick='convert(); repost()'";

 $radioMU="checked";

 $textUnit="kg/ha";

 $textUnit2="kg/ha";

 $textUnit3="$/ha";

 $textUnit4="$/kg actual N";

 $textUnit5="$/kg";

 $CRate1=1;

 $CRate2=1;

 $CRate3=1;

 $CRate4=1;

}

echo "<script language='javascript'>\n";

echo "function convert()\n"; //convert inputs

echo "{\n";

 if (isset($MaxYield))

 {

 echo " document.nitrogenform.ztMaxYield.value";

 if ($ztUnit==0) echo "\*=(67.2)\n"; else echo "/=(67.2)\n";

 }

 if (isset($GrainPrice))

 {

 echo " document.nitrogenform.ztGrainPrice.value";

 if ($ztUnit==0) echo "\*=(0.03675)\n"; else echo "/=(0.03675)\n";

 }

 if (isset($FertPrice))

 {

 echo " document.nitrogenform.ztFertPrice.value";

 if ($ztUnit==0) echo "\*=(2.207)\n"; else echo "/=(2.207)\n";

 }

echo "}\n";

echo "function repost()\n";

echo "{\n";

 if (isset($ztSubmit) && $error=="")

 {

 echo "document.nitrogenform.ztSubmit.click()\n"; //refresh form and recalculate outputs

 echo "document.nitrogenform.ztSubmit.disabled=true\n";

 echo "document.nitrogenform.ztClear.disabled=true\n";

 }

 else

 {

 echo "document.nitrogenform.ztSubmit.disabled=true\n"; //refresh form and keep inputs only

 echo "document.nitrogenform.ztClear.disabled=true\n";

 echo "document.nitrogenform.submit()\n";

 }

echo "}\n";

echo "</script>";

// initialising inputs

if ( !isset($ztSubmit))

{

 $SensorDate\_Year = '';

 $SensorDate\_Month = '';

 $SensorDate\_Day = '';

 $PlantingDate\_Year = '';

 $PlantingDate\_Month = '';

 $PlantingDate\_Day = '';

 $RichStrip='';

 $FarmerPractice='';

 $MaxYield='';

 $GrainPrice='';

 $FertPrice='';

}

// Compute results (output is NULL if error has been detected)

if ( !isset($ztSubmit)|| $error!="" )

{

 $RI=0;

 $Gdd=0;

 //$YP0=0;

 //$YPN=0;

 //$NRate=0;

 $YPNRS=0;

 //$ProfYP0=0;

 //$ProfYPN=0;

 //$GrainPrice=0;

 //$FertPrice=0;

 //$CumulativeGdd=0;

}

else

{

 //Calculating KG/HA

 //$NewRichStrip=$RichStrip;

 //$NewFarmerPractice=$FarmerPractice;

 //$RI = $RichStrip/$FarmerPractice;

 //$YP0 = (590\*exp(258.2\*$NewFarmerPractice/$Gdd))/1.12/60;

 //$YPN = $YP0\*$RI;

 //$YPNRS = (590\*exp(258.2\*$NewRichStrip/$Gdd))/1.12/60;

 //if ($YP0>$MaxYield) $YP0=$MaxYield;

 //if ($YPN>$MaxYield) $YPN=$MaxYield;

 //if ($YPNRS>$MaxYield) $YPNRS=$MaxYield;

 //$NRate = ($YPN-$YP0)\*60\*0.0239/0.5;

 //$ProfYP0=($YP0\*$GrainPrice);

 //$ProfYPN=(($YPN\*$GrainPrice))-(($NRate\*$FertPrice));

 **$NewRichStrip=$RichStrip;**

 **$NewFarmerPractice=$FarmerPractice;**

 **$RI = ($RichStrip/$FarmerPractice);**

 **$YP0 = (590\*exp(258.2\*$NewFarmerPractice/$Gdd))/$CRate1/$CRate2;**

 **$YPNRS = (590\*exp(258.2\*$NewRichStrip/$Gdd))/$CRate1/$CRate2;**

 **if (($RichStrip/$FarmerPractice)< 1.72) $RI = ($RichStrip/$FarmerPractice)\*1.69 - 0.7;**

 **if ($RI<1) $RI=1;**

 **$YPN = $YP0\*$RI;**

 **if ($YP0>$MaxYield) $YP0=$MaxYield;**

 **if ($YPN>$MaxYield) $YPN=$MaxYield;**

 **if ($YPNRS>$MaxYield) $YPNRS=$MaxYield;**

**// if ($YP0<$MaxYield) $YP0=$YP0\*1.2;**

**// if ($YPN<$MaxYield) $YPN=$YPN\*1.2;**

 **$NRate = ((($YPN-$YP0)\*$CRate2)\*0.0239/0.5);**

 **$ProfYP0=($YP0\*$GrainPrice);**

 **$ProfYPN=(($YPN\*$GrainPrice))-(($NRate\*$FertPrice));**

//Cumulative GDD Final Calculation...

 $CumulativeGdd=$CumGdd;

 $CumulativeGdd=number\_format($CumulativeGdd,2);

 //Rounding

 $RI = 0.01\*round($RI\*100);

 $YP0 = 0.1\*round($YP0\*10);

 $YPN = 0.1\*round($YPN\*10);

 $YPNRS = 0.01\*round($YPNRS\*100);

 $NRate=0.1\*round($NRate\*10);

 $GrainPrice=0.01\*round($GrainPrice\*100);

 $FertPrice=0.01\*round($FertPrice\*100);

 $ProfYP0=0.1\*round($ProfYP0\*10);

 $ProfYPN=0.1\*round($ProfYPN\*10);

}

echo "<table><tr>";

echo "<td> <img src='hand\_held\_2002.jpg' alt='Hand-Held GreenSeeker' align=center></td>";

if ($error!="")

{

 echo "<td width='600' bgcolor=red valign=middle>";

 echo "<CENTER><A STYLE='error'>$error</A></CENTER>";

 echo "</td>";

}

else

{

 echo "<td width='600' valign=middle>";

 echo "Developed by Oklahoma State University, INTA, and CIMMYT";

 echo "</td>";

}

echo "</tr></table>";

echo "<TABLE>";

echo "<FORM METHOD='POST' NAME='cropform'>";

echo "<tr>";

echo "<td><b><h1> <u>Inputs</u> </h1></td>";

echo "<td></td>";

echo "<td><b><h1><u>Outputs</u> </h1></td>";

echo "<td></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>Crop:</td>";

echo "<td><select name='ztCrop' onChange='submit()'>";

for ($i=0; $i<count($TabCrop); $i++)

{

 echo "<option value='$TabCrop[$i]'";

 if ($ztCrop==$TabCrop[$i]) echo " SELECTED";

 echo ">$TabCrop[$i]";

}

$fh = fopen("users.txt", "w+");

fwrite($fh, "OKLAHOMA STATE UNIVERSITY\n");

fwrite($fh, "DEPARTMENT OF PLANT AND SOIL SCIENCES\n");

fwrite($fh, "STILLWATER,OKLAHOMA-74078\n");

fwrite($fh, "SENSOR-BASED NITROGEN RATE CALCULATOR\n\n\n");

fwrite($fh, "Inputs\n\n");

fwrite($fh, "Crop : $ztCrop \n");

fwrite($fh, "Planting Date (mm/dd/yyyy) : $PlantingDate\_Month $PlantingDate\_Day $PlantingDate\_Year \n");

fwrite($fh, "Day Prior To Sensing (mm/dd/yyyy) : $SensorDate\_Month $SensorDate\_Day $SensorDate\_Year \n");

fwrite($fh, "Location : $site \n");

fwrite($fh, "NDVI Farmer Practice (FP) : $FarmerPractice \n");

fwrite($fh, "NDVI N-Rich-Strip (NRS) : $RichStrip \n");

fwrite($fh, "Maximum Yield for Region, $textUnit : $MaxYield \n");

fwrite($fh, "Expected Grain Price, $textUnit5 : $GrainPrice \n");

fwrite($fh, "Fertilizer Cost, $textUnit4 : $FertPrice \n\n");

fwrite($fh, "Outputs \n\n");

fwrite($fh, "Response Index (RI) : $RI \n");

fwrite($fh, "Days,GDD>0 : $Gdd\n");

fwrite($fh, "Yield Potential YP0, $textUnit : $YP0 \n");

fwrite($fh, "Yield Potential YPN, $textUnit : $YPN \n");

fwrite($fh, "Cumulative GDD(planting to sensing) : $CumulativeGdd \n");

fwrite($fh, "N Rate Recommendation, $textUnit2 : $NRate \n");

fwrite($fh, "Gross Return (no N fertilizer), $textUnit3: $ProfYP0 \n");

fwrite($fh, "Gross Return (using N Rec), $textUnit3 : $ProfYPN \n");

fclose($fh);

echo "</select></td>";

echo "</FORM>";

echo "<FORM METHOD='POST' NAME='nitrogenform'>";

echo "<td><b>Response Index (RI):</td>";

echo "<td><input size=8 name='ztRI' value=$RI readonly tabindex=99></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>Planting Date (mm/dd/yyyy):</td>";

echo "<td><input type='text' size=2 name='ztPlantingDate\_Month' value='$PlantingDate\_Month' onKeyUp='checkData(2, this, document.nitrogenform.ztPlantingDate\_Day)' onKeyDown='initCheck(2, this)'>";

echo "/<input type='text' size=2 name='ztPlantingDate\_Day' value='$PlantingDate\_Day' onKeyUp='checkData(2, this, document.nitrogenform.ztPlantingDate\_Year)' onKeyDown='initCheck(2, this)'>";

echo "/<input type='text' size=4 name='ztPlantingDate\_Year' value='$PlantingDate\_Year' onKeyUp='checkData(4, this, document.nitrogenform.ztSensorDate\_Month)' onKeyDown='initCheck(4, this)'></td>";

echo "<td><b>Days,GDD>0:</td>";

echo "<td><input size=8 name='ztGdd' value=$Gdd tabindex=99></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>Day Prior To Sensing (mm/dd/yyyy):</td>";

echo "<td><input type='text' size=2 name='ztSensorDate\_Month' value='$SensorDate\_Month' onKeyUp='checkData(2, this, document.nitrogenform.ztSensorDate\_Day)' onKeyDown='initCheck(2, this)'>";

echo "/<input type='text' size=2 name='ztSensorDate\_Day' value='$SensorDate\_Day' onKeyUp='checkData(2, this, document.nitrogenform.ztSensorDate\_Year)' onKeyDown='initCheck(2, this)'>";

echo "/<input type='text' size=4 name='ztSensorDate\_Year' value='$SensorDate\_Year' onKeyUp='checkData(4, this, document.nitrogenform.site)' onKeyDown='initCheck(4, this)'></td>";

echo "<td><b>Yield Potential YP0, $textUnit </td>";

echo "<td><input size=8 name='ztYP0' value=$YP0 readonly tabindex=99></td></tr>";

echo "<tr>";

echo "<td><b>Location: <a href='javascript:openMap()'>(click to select from map)</a></td>";

echo "<td><select id='site' name='site'>";

/\*echo "<option value='ACME'>Acme</option>";

echo "<option value='ADAX'>Ada</option>";

echo "<option value='ALTU'>Altus</option>";

echo "<option value='ALV2'>Alva</option>";

echo "<option value='ANT2'>Antlers</option>";

echo "<option value='ANTL'>Antlers</option>";

echo "<option value='APAC'>Apache</option>";

echo "<option value='ARD2'>Ardmore</option>";

echo "<option value='ARDM'>Ardmore</option>";

echo "<option value='ARNE'>Arnett</option>";

echo "<option value='BBOW'>Broken Bow</option>";

echo "<option value='BEAV'>Beaver</option>";

echo "<option value='BEEX'>Bee</option>";

echo "<option value='BESS'>Bessie</option>";

echo "<option value='BIXB'>Bixby</option>";

echo "<option value='BLAC'>Blackwell</option>";

echo "<option value='BOIS'>Boise City</option>";

echo "<option value='BOWL'>Bowlegs</option>";

echo "<option value='BREC'>Breckenridge</option>";

echo "<option value='BRIS'>Bristow</option>";

echo "<option value='BROK'>Broken\_Bow</option>";

echo "<option value='BUFF'>Buffalo</option>";

echo "<option value='BURB'>Burbank</option>";

echo "<option value='BURN'>Burneyville</option>";

\*/

for ($i=0; $i<count($TabSiteValue); $i++)

{

 echo "<option value='$TabSiteValue[$i]'";

 if ($site==$TabSiteValue[$i]) echo " SELECTED";

 echo ">$TabSiteName[$i]";

}

echo "</select></td>";

echo "<td><b>Yield Potential YPN, $textUnit</td>";

echo "<td><input size=8 name='ztYPN' value=$YPN readonly tabindex=99></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>NDVI Farmer Practice (FP) </td>";

echo "<td><input size=8 name='ztFarmerPractice' value=$ztFarmerPractice></td>";

//echo "</tr>";

echo "<td><b>Cumulative GDD(planting to sensing):</td>";

echo "<td><input size=8 name='ztCumulativeGdd' value=$CumulativeGdd readonly tabindex=99></td>";

//echo "<td><input size=8 name='ztCumulativeGdd' value=$CumulativeGdd></td>";

echo "<tr>";

echo "<td><b>NDVI N-Rich-Strip (NRS) </td>";

echo "<td><input size=8 name='ztRichStrip' value=$RichStrip></td>";

echo "<td><b>N Rate Recommendation, $textUnit2 </td>";

echo "<td><input size=8 name='ztNRate' value=$NRate readonly tabindex=99></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>Producer Estimate of Max Yield, $textUnit: </td>";

echo "<td><input size=10 name='ztMaxYield' value=$MaxYield></td>";

echo "<td><b>Gross Return (no N fertilizer), $textUnit3:</td>";

echo "<td><input size=8 name='ztProfYP0' value=$ProfYP0 readonly tabindex=99></td>";echo "<tr>";

echo "<td><h6>(avg. last 5 years + 30%)</h6></td>";

echo "</tr>";

//echo "<td><b>Data: <a href='javascript:openTable()'>(click for data summary table)</a></td>";

//echo "<td><input size=10 name='ztMaxYield' value=$MaxYield></td>";

echo "<tr>";

echo "<td><b>Expected Grain Price, $textUnit5 </td>";

echo "<td><input size=8 name='ztGrainPrice' value=$GrainPrice></td>";

echo "<td><b>Gross Return (using N Rec), $textUnit3:</td>";

echo "<td><input size=8 name='ztProfYPN' value=$ProfYPN readonly tabindex=99></td>";

echo "</tr>";

echo "<tr>";

echo "<td><b>Fertilizer Cost, $textUnit4 </td>";

echo "<td><input size=8 name='ztFertPrice' value=$FertPrice></td>";

echo "<td></td>";

echo "<td><h6>(Cost of N fertilizer is already subtracted from this estimate)</h6></td>";

echo "<td></td><td></td>";

echo "</tr>";

echo "<td></td><td></td>";

echo "</tr>";

echo "<tr><td colspan=2 align=center>";

echo " <table><tr>";

echo " <td><input type ='radio' name ='ztUnit' value=0 $radioEU>English Units</td>";

echo " <td><input type ='radio' name ='ztUnit' value=1 $radioMU>Metric Units</td>";

echo " </tr><tr>";

echo " <td><input type ='radio' name ='group' checked>Within Oklahoma</td>";

echo " <td><input type ='radio' name ='group' OnClick='document.nitrogenform.ztInsideOK.value=0; repost()'>Outside Oklahoma</td>";

echo " </tr></table>";

echo "</td>";

echo "<td colspan=2 align=center>";

echo "<INPUT TYPE='hidden' NAME='ztInsideOK' value=$ztInsideOK>";

echo "<INPUT TYPE='hidden' NAME='ztCrop' value='$ztCrop'>";

echo "<INPUT TYPE='submit' NAME='ztSubmit' VALUE=' Submit '>";

echo "<INPUT TYPE='submit' NAME='ztClear' VALUE='Clear Form'>";

//echo "<a href='download.php?download\_file=users.txt'>Print</a> ";

echo "<a href='download.php?download\_file=users.txt'><button onclick='location.href=this.parentNode.href; return false;'>Print</button></a>";

echo "</td></tr>";

echo "<tr>";

//echo "<td><b> <a href='javascript:openGraph()'>see soil moisture graphs</a></td>";

echo "<td> <input type='submit' NAME='graph\_button' onClick=openGraph() value='See Soil Moisture Graphs'></td>";

//echo "<td> <input type='submit' NAME='graph\_button\_1' onClick=openGraph() value='See Soil Moisture Graphs'></td>";

echo "</FORM>\n";

echo "</TABLE>";

echo "<P ALIGN=RIGHT><FONT SIZE=1>";

echo "(\*) Yield Prediction and N Fertilization Rates are Based on Sensor Measurements<BR>";

echo "Collected between Feekes 4 and 6 (pre dormancy to pre first node)<BR>";

echo "<BR>";

echo "<b>Caution</b> active growing days <80 can produce high yield estimates. <BR>";

echo "In this case, the RAMP analysis may better estimate the correct fertilizer rates.<BR>";

echo "Use good agronomic judgement when making fertilizer recommendations. <BR>";

echo "(@)Number of Days where GDD>0: Days from planting to sensing where<BR>";

echo "the average daily temperature exceeds 40F or 4.4C<BR>";

echo "<P ALIGN=RIGHT><FONT SIZE=1>";

echo "(1) YP0 : Yield Potential Achievable with no Added N Fertilization<BR>";

echo "(2) YPN : Yield Potential Achievable with Added N Applied (using the rate recommended)<BR>";

echo "(3) YPNRS : Yield Potential Achievable in the Nitrogen Rich Strip with No N Applied<BR>";

echo "(4) This is generally 2 times the Average yield<BR>";

echo "</FONT></P>";

echo "<table>";

echo "<tr>";

echo "<td><a href='http://www.soiltesting.okstate.edu/'><img src='swfal.jpg' border=0 alt='Back to SWFAL'></A></td>";

echo "<td><a href='http://www.nue.okstate.edu/'><img src='NUE\_logo.jpg' border=0 alt='Click here for Comprehensive Information regarding Nitrogen Fertilization for Crop Production' ></A></td>";

echo "<td><a href='http://www.nue.okstate.edu/Hand\_Held/SBNRC\_Introduction.htm'><img src='SBNRC\_Help.jpg' border=0 alt='Back to SWFAL'></A></td>";

echo "<td><a href='http://www.agweather.mesonet.org/'><img src='agweather.jpg' border=0 alt='Back to SWFAL'></A></td>";

echo "</tr>";

echo "</table>";

?>

<SCRIPT language="JavaScript">

function openGraph()

{

 //document.nitrogenform.action = 'http://nue.okstate.edu/SBNRC/soilmoisturegraphs.php';

 //document.nitrogenform.reset();

 //document.nitrogenform.submit();

 //var selectedlocation = <?php echo(json\_encode($\_POST['site']));?>;

 var selectedElement = document.getElementById("site");

 var selectedElementValue = selectedElement[selectedElement.selectedIndex].value;

 WindowUrl="http://www.mesonet.org/index.php/weather/soil\_moisture/" + selectedElementValue;

 //http://agweather.mesonet.org/common/db/library/functions/mcd/mcd.php?stid=STIL&year=2008&month=11&format=htm

 WindowName="MAP";

 WindowSize="height=450,width=650,status=yes,menutoolbar=0,menubar=no,location=no";

 myWindowchromeless=window.open(WindowUrl,WindowSize,WindowName);

 //myWindow.focus();}

 //window.location = "http://www.google.com/";

}

</SCRIPT>