Instructions for coding FluxI(t) into an M-file

To define your vector *FluxI*, that contains the values of *FluxI* for each time point in the time vector *t* produced by the *ode45* function, you need to fill in the values of *FluxI* one by one. The time vector *t* is the vector of time points for which *ode45* finds solutions for H_a and H_p. Your *FluxI* vector will have the same size as the *t* vector.

Remember that your conditions for *FluxI* are the following:

- FluxI=0, outside the irrigation period

- FluxI=E_o*C_{ag}*f_{ag}, within the irrigation period

Use a "for loop" to march through each element of *FluxI* and specify its value, according to the value of the corresponding element in the time vector *t*.

An example code for defining *FluxI* follows (the sentences following a % are comments):

```
n=size(t)        %  determines the size of the t vector.

for i=1:n
        if t(i)>=t1 & t(i)<=t2     % t1 is the day at which irrigation begins and t2 is the day at
                                      which the irrigating season ends.
        FluxI(i)= Eo*Cag*fag;
        else
        FluxI(i)= 0;
        end
end
```

Since Eo, C_{ag}, and f_{ag} are inputs for computing *FluxI*, you need to have defined them before using them in the *FluxI* equation.
C_{ag} and f_{ag} are easily defined as constants.
Eo, however, may be a function of time, depending on how you modeled it in part (*f-1*). So, once again, you need to specify the value for each element of the Eo vector depending on the value of the *t* element to which it corresponds. Just as in the example code for *FluxI*, use a “for loop” that steps through all the elements of Eo from i=1 to n=size(t), checks the value of t(i), and correspondingly assigns a value for Eo(i).